BATTLETECH™

TOTAL WARFARE

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CORE GAME RULES

THE FUTURE OF WARFARE!

It is the 31st century, a time of endless wars that rage across human-occupied space. As star empires clash, these epic wars are won and lost by BattleMechs,® 30-foot-tall humanoid metal titans bristling with lasers, autocannons and dozens of other lethal weapons; enough firepower to level entire city blocks. Your elite force of MechWarriors® drives these juggernauts into battle, proudly holding your faction's flag high, intent on expanding the power and glory of your realm. At their beck and call are the support units of armored vehicles, power armored infantry, aerospace fighters and more, wielded by a MechWarrior's skillful command to aid him in ultimate victory. Will they become legends, or forgotten casualties? Only your skill and luck will determine their fate!

The product of more than twenty years of gaming experience, *Total Warfare*™ presents the rules of the *BattleTech*® game system as never before. For the first time, all the rules for various units that have a direct impact on the deadly battlefields of the thirty-first century appear in a unified rules set: from BattleMechs to ProtoMechs, Combat Vehicles to Support Vehicles, infantry to aerospace fighters and DropShips. Interwoven and meticulously updated, *Total Warfare* provides the most detailed and comprehensive rules set published to date for *BattleTech*—the perfect companion for standard tournament play.

Total Warfare is the single-source rulebook for people who play *BattleTech*. It is not intended to teach new players the game, but rather to serve as a reference work for people who know the game, while introducing more technologies and expansive rules than appear in the basic box set. The introductory game in the *BattleTech* line is the *A Game of Armored Combat* box set. New players should pick up that product before diving into this one.

Construction rules for the various units presented in *Total Warfare* can be found in *TechManual*.™

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Colonel John Marik-Johns leads an assault against 'Emperor' Baranov's Fourth Tikonov Republican Guards on the contested world of Hall.

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Playtesters/Proofers/Fact Checkers

The playtesters for any game line are a necessary component in the creation of a solid product. However, when tackling something on the scope of *Total Warfare*, which involves the melding of twenty years worth of rules into a unified whole that far exceeds it constitute parts (particular when set against the millions-of-words background of the vast scale of *BattleTech* history and continuity) their roles are not only greatly expanded, but become vital. A testament to the strength of the *BattleTech* community, their dedication knew no bounds: the product is far superior due to their significant contributions.

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And to all the players that fought through the endless delays to get on-line questions answered over the years; your questions generated numerous FAQs off of which much clarification came about in this book.

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Randall's Thanks and Dedication

Friends have always meant the world to me. While I add new friends that are as close as family as the years move on, I'm blessed to still stay in touch with friends from twenty years ago. While there are so many who have touched my life, when it comes to *BattleTech*, two in particular were there twenty years ago when I first pulled the cover off the *BattleTech* box set: Chad Dean and Tony Liddle. Thanks for all the years we've had and all the years to come

To my magnificent family and wife…there wouldn't be a *Total Warfare* without Tara's unflagging support.

Finally, this book is dedicated to Bryan Nystul: thanks for being a great sensei when my work in the industry began and for showing me the possibilities. I hope you find what you're looking for.

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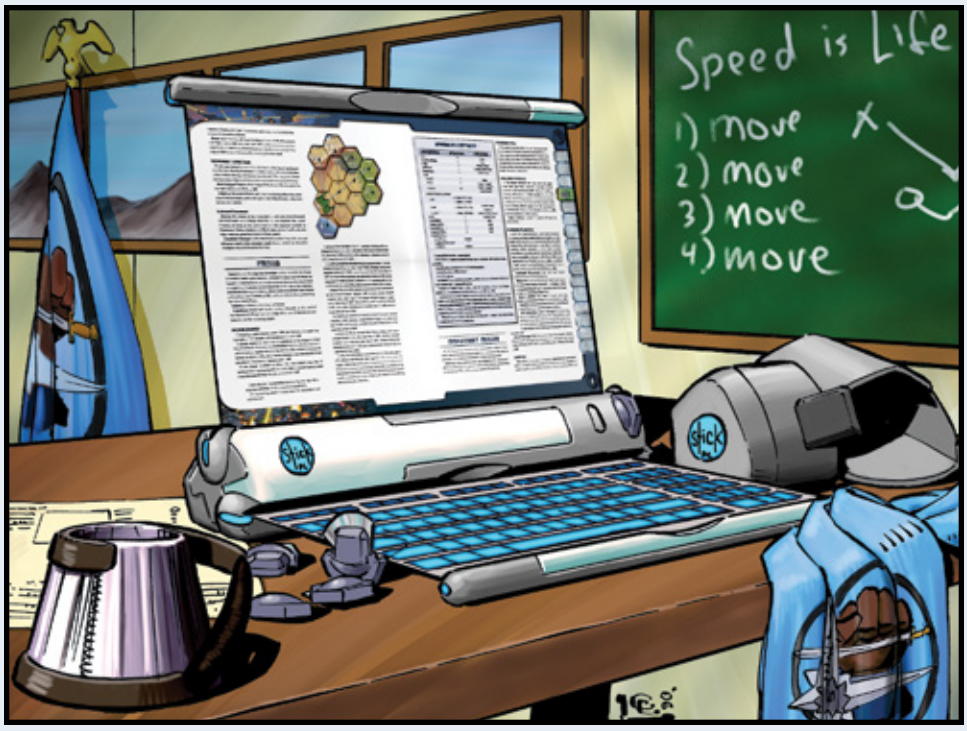


Total Warfare (*TW*) has been carefully reworked from previous *BattleTech* rules (*BT*) editions to clarify confusing or contradictory information, folding in many years of Frequently Asked Questions (FAQs), play testing and game play. In addition, for the first time in well over a decade, all the various rules sets that directly affect *BattleTech* ground warfare—including aerospace rules covering units that can enter a planet's atmosphere—appear in a single volume, woven together to make sure that all rules function seamlessly with one another. *Total Warfare* also includes additional material to expand and enhance game play. Along with the rules of *BattleTech*, this book contains an easy-to-use scenario creation system, as well as a painting section that will have players quickly painting the plastic miniatures in the *A Game of Armored Combat* and *Clan Invasion* box sets, the *ForcePack*s, as well as priming them for the complete *BattleTech* line of metal miniatures from Iron Wind Metals.

This book contains a number of rules changes from previous editions. We feel confident that these are the most complete, clear and concise rules for *BattleTech* ever presented.

As noted in the back cover text of this book, unlike previous editions of the *BattleTech* rulebook, no construction rules appear in *Total Warfare*; those rules are in the *TechManual* (see *Core Rulebooks*, p. 10).

The rules in this book supersede all previously published rules, including the *BattleTech Manual*, the *BattleTech Compendium*, *BattleTech Compendium: The Rules of Warfare*, *BattleTech Master Rules* (standard and revised editions) and older editions of the *BattleTech* boxed set. Where applicable, these rules also supersede sections of various other rules expansions, including *AeroTech 2, Revised*; *Maximum Tech, Revised;* and so on. In other words, if a rule in *Total Warfare* directly conflicts with rules in a previously published rulebook or expansion, *Total Warfare* takes precedence.

To play *BattleTech*, players will need dice, maps and counters or miniatures to represent the BattleMechs and/or other units used by each side. All of these items can be found in the *BattleTech: A Game of Armored Combat* box set, the recommended product for beginning *BattleTech* players. For more information about the availability and use of these items, see *Components*, page 20 of this book.

FICTION

Fiction has always played an important role in *BattleTech*, with more than a hundred novels published to date (and hundreds of sourcebooks) fleshing out and expanding the universe into its current, vibrant form.

BattleTech uses two different types of fiction to convey its story. "Story fiction" includes novels, novellas, short stories and so on; fiction that puts the reader inside the heads of the characters that populate the universe. "Sourcebook fiction"—which appears in the various *Handbooks*, *Historicals*, *Technical Readouts* and so on (see *BattleTech: More Than a Game*, p. 10)—presents story elements as though the reader were a character transplanted into the game universe, reading military documents, historical texts, secret security briefs, intercepted personal communications, local newspapers and so on. These two methods work hand-in-hand to bring the *BattleTech* universe to life.

Most *BattleTech* sourcebooks include a short story. In addition, Catalyst publishes novels, novellas, short stories, and more, nearly every month, that support other book releases, as well as the current ilClan story arc (see p. 11).

Because it hurls the players directly into the *BT* universe, *Total Warfare* includes more "story fiction" than any core rulebook previously published for *BattleTech*. Twelve short stories offer a taste of the core factions with which players will come to associate, while conveying the theme of a given section of the rulebook; players can also use these stories to launch endless games and campaigns, whether set in the current ilClan era or in the rich history of *BattleTech*.

Finally, *A Time of War* (see p. 14) and *Military Organization* (see p. 34) provide two examples of the many different types of "sourcebook fiction" players will discover in the various sourcebooks published for *BattleTech*.

FICTION VS. RULES

It is important to note that fiction, though essential in making the game universe come alive, should never be construed as rules. While *BattleTech* fiction usually attempts to adhere to the aesthetics established by the rules, authors often use creative license to accomplish the needs of a given story.

To eliminate confusion in *Total Warfare* about which sections are fiction and which are rules, the fiction sections have a unique look. In addition, all fiction sections are italicized in the Table of Contents.

FICTION AND ART

From the moment of *BattleTech*'s inception, it was conceived as a visually intensive universe. Though the *Technical Readout* series is one of the better examples of the importance of art in conveying the universe to a reader, every sourcebook employs art to work hand-in-hand with the fiction to bring the universe to life: from a stunning cover to the smallest illustration buried on a last page.

Even the graphic layout of rulebooks and sourcebooks—the borders around the edges of a page, how the words are placed on the page and so on—are specifically designed to accentuate the universe.

For *Total Warfare*, the graphic design concept is that of a computer interface. Specifically speaking, it is a computer from House Steiner's (see *A Time of War*, p. 14) Nagelring; one of their premier military academies (for more information on House Steiner and specifically on the Nagelring, players should check out *Handbook: House Steiner*).

To further cement this concept directly into a reader's mind, the art at the beginning of this section shows the very Nagelring military computer represented "in universe" by the text and layout of this rulebook.

Note that as with fiction, players should never construe art as rules. In a similar vein, while the diagrams used throughout this book are rules, players should note that the graphic icons within each diagram only represent specific unit types ('Mechs, vehicles, infantry and so on). As such, players should not be confused by a specific unit image (such as the *Mad Cat* for the 'Mech) used in an example, when its game stats do not mirror the example.

3-D TERRAIN VS. PAPER MAPS

BattleTech at its core is a board game; players move pieces on a hex-grid mapsheet. Unlike tabletop miniatures games, which use three-dimensional (3-D) terrain and rulers to approximate movement and combat, the core *BattleTech* game rules use specific, codified movement and combat ranges within a mapsheet's hex grid.

Nevertheless, any game system that uses three-dimensional miniatures (such as the plastic miniatures available in the various *ForcePacks*) looks better when played on 3-D terrain—hence the photos in this rulebook. Three-dimensional terrain also enhances the feel of the game. When using 3-D terrain, however, players should note that *BattleTech* requires hex-grids.

While *Total Warfare* and other rulebooks all require the playing area (whether mapsheets or 3-D terrain) to be a hex grid, some players may wish to learn how to play *BattleTech* as a table-top miniatures game (using rulers and without the hex grid on 3-D terrain). Players can visit bg.battletech.com to download a free conversion rules set—*BattleTech Miniatures Rules*—covering the differences between the two types of play. Or players can use *Alpha Strike*, the fast-playing rules designed for the modern wargammer.

STANDARD VS. ADVANCED RULES

The rules presented in *Total Warfare* are considered the standard rules of *BattleTech*. They represent all tournament-appropriate rules: the "big" *BattleTech* tournaments run directly by Catalyst Game Labs at the Origins International Games Expo®, any Gen Con Game Fair® and many other conventions all use the rules presented in *Total Warfare*.

Advanced rules—as found in *Tactical Operations*, *Strategic Operations* (see *Core Rulebooks*, at right) and so on—provide more depth for virtually every aspect of play. However, the additional complexity makes such rules inappropriate for tournament play.

RULE LEVELS

Previously, *BattleTech* split its rules into levels. However, with the introduction of several new units and their construction systems (notably IndustrialMechs and Support Vehicles), the lines between the levels became blurred. The current rules are simply classified as standard or tournament and advanced or non-tournament, as appropriate.

BATTLETECH: MORE THAN A GAME

BattleTech is much more than a board game as presented in the *A Game of Armored Combat*. Vibrant, strong and still growing after twenty years, the fictional universe and the valiant struggles of its dynamic human characters, set against a far-future battlefield, has endeared it to millions of fans and will continue to do so into the future.

To convey the universe to the *BattleTech* community (as well as demonstrate how players can take that universe and integrate it into the game system), Catalyst publishes several different lines of rulebooks, sourcebooks, campaign packs and so on. While not an all-inclusive list, the following provides an overview of the primary series of products published by Catalyst for *BattleTech*.

BattleTech has been in continuous publication for over thirty-five years across numerous companies. As such, in digital and brick-and-mortar stores, players may encounter a variety of looks, whether "*BattleTech*," "*Classic BattleTech*," "*MechWarrior: Dark Age*," and more. It's all just different iterations of the amazing game and universe that is *BattleTech*.

PDF: Because of that publishing history, many books—including some of those noted here—are no longer in print. However, most of that catalog is available as PDFs at store.catalystgamelabs.com (see *E-Publications* on the following page).

FORCEPACKS

Catalyst has begun releasing a series of *ForcePack*s that contain high-quality, fully-assembled plastic 'Mechs, ready to play out-of-the-box.

The *Clan Invasion* box includes Force Building rules that make it easy to take the various *ForcePack*s and craft the force you're looking to deploy during any scenario.

CORE RULEBOOKS

Following the introduction to the game through *A Game of Armored Combat*, the core rulebooks are the foundation of game play (and the universe) for the various aspects of *BattleTech*. *Total Warfare* is the first in this series of core rulebooks, delivering a breadth and a visual presentation never before achieved, while *TechManual* (construction rules for the various units found in *Total Warfare*) is the second in this series. These two core rulebooks are followed by additional core rulebooks, which act as the bedrock for any type of game players may wish to undertake: two *Tactical Operations* books (advanced rules, equipment and units, including construction rules, for planetary conquests), *Strategic Operations* (advanced rules and units, including construction rules, for system conquests and campaigns) *A Time of War: The BattleTech RPG* (a complete game system for roleplaying) and *Interstellar Operations* (a rules framework for building and running any type of force through everything from small-scale campaigns to multiwar clashes between stellar empires).

MAPPACKS

The *A Game of Armored Combat* and *Clan Invasion* box sets each contain two playing map-sheets, each with a different map printed on either side. Once players begin using the maps, they'll quickly find that one of the easiest ways to make an already played scenario fresh and new is to play it on a different map. In addition, the style of a playing map (mountain, forest, desert, and so on) can reinforce the flavor of a given scenario or campaign.

Several new *MapPacks*—*Grasslands*, *Desert*, *Battle of Tukayyid*, and *Alien Worlds*—have massively increased the quality of the art for extra immersion during a scenario, while enhancing the play of any game.

BATTLEMATS

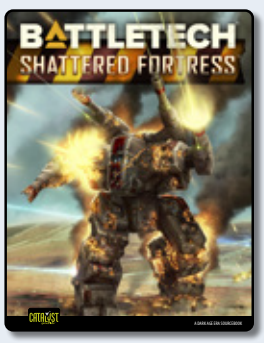
These 34" x 22" neoprene mats are high-resolution with great color quality, making them some of the most beautiful and durable *BattleTech* maps ever produced. The neoprene is also thin for ease of storage, and double-sided for versatility. More than a dozen have been released, with more on the way.

TECHNICAL READOUTS

The ultimate guidebooks to the weaponry and war machines of the 31st century, *BattleTech* technical readouts describe the BattleMechs, Combat Vehicles, Support Vehicles, aerospace fighters, DropShips, WarShips, infantry and more of the *BattleTech* universe. Each fully illustrated entry in these reference books contains complete *BattleTech* game statistics.

Pre-filled record sheets for the various units found in the technical readouts are published separately (see *Record Sheets*).

THE ILCLAN



BattleTech has always been a dynamic universe with progressing storylines that shake things up, uniting and shattering factions, developing characters into beloved (or despised) icons that wage a valiant struggle or die a glorious death. Such events breathe life not only into the fiction players read, but the games they play.

BattleTech has moved through five universe-shaking storylines over the last thirty-five years. And is wrapping up the last storyline, the Dark Age, while moving firmly into the new ilClan era. Look for future books that will continue to shock, amaze and entertain for years to come.

HANDBOOKS

The *BattleTech Primer* booklet in *A Game of Armored Combat* provides a taste of the Great Houses of the Inner Sphere. Each House represents a fully fleshed-out star-spanning realm, with its own history, cultural identity, fighting style and so on. Each volume in the series is filled with the essential histories, politics, culture and industry that makes up the Great Houses as well as other factions, such as the wild frontiers of the Periphery; the books include rules for personal equipment, creatures, campaign ideas and more for *BattleTech* and either the *A Time of War* or *MechWarrior: Destiny* RPGs.

SOURCEBOOKS

BattleTech sourcebooks delve into the pivotal wars of the Inner Sphere's thousand-year history, with important personalities, maps of individual attack waves and regiment listings, along with a campaign framework that allows players to enact every aspect of each of these important events.

RECORD SHEETS

While players can use the blank record sheets found in *TechManual* to fill out any number of units, pre-filled record sheets (such as those found in *A Game of Armored Combat*) allow players to jump directly into the action.

Players can order various pre-filled, PDF record sheets from store.catalystgamelabs.com. Record Sheets corresponding to the *Clan Invasion* crowd funding *ForcePack* releases use the new art from that project. Older PDFs use older art, but are still 100% compatible with the game.

E-PUBLICATIONS

Beyond the printed source material for *BattleTech*, a host of electronic publications further expands the universe in a host of directions, available at store.catalystgamelabs.com. From out-of-print vintage products now available in PDF format, to brand new PDF-only series such as Experimental Technical Readouts, Turning Points, and Field Reports, to classic *BattleTech* novels now available in epub format for use on any electronic reader: a galaxy of electrons is available to explore!

WHERE TO ORDER

Visit your local game store to purchase the item you're looking for; if they do not have an item, order it through them. If you cannot find a local store, then feel free to order off our website at store.catalystgamelabs.com.

BATTLETECH ERAS

The *BattleTech* universe is a living, vibrant entity that grows each year as more sourcebooks and fiction are published. A dynamic universe, its setting and characters evolve over time within a highly detailed continuity framework, bringing everything to life in a way a static game universe cannot match.

However, the same dynamic energy that makes *BattleTech* so compelling can also make it confusing, with so many sourcebooks published over the years. As people encounter *BattleTech*, get hooked and start to obtain sourcebooks, they need to know where a particular sourcebook is best used along the *BattleTech* timeline.

To help quickly and easily convey the timeline of the *BattleTech* universe—and to allow a player to easily "plug in" a given sourcebook—we've divided *BattleTech* into seven major eras.

STAR LEAGUE (2571–2784)

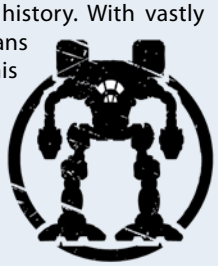
Ian Cameron, ruler of the Terran Hegemony, concludes decades of tireless effort with the creation of the Star League, a political and military alliance between all Great Houses and the Hegemony. Star League armed forces immediately launch the Reunification War, forcing the Periphery realms to join. For the next two centuries, humanity experiences a golden age across the thousand light-years of human-occupied space known as the Inner Sphere. It also sees thecreation of the most powerful military in human history.

SUCCESSION WARS (2785–3048)

Every last member of First Lord Richard Cameron's family is killed during a coup launched by Stefan Amaris. Following the thirteen-year war to unseat him, the rulers of each of the five Great Houses disband the Star League. General Aleksandr Kerensky departs with eighty percent of the Star League Defense Force beyond known space and the Inner Sphere collapses into centuries of warfare known as the Succession Wars that will eventually result in a massive loss of technology across most worlds.

CLAN INVASION (3049–3061)

A mysterious invading force strikes the coreward region of the Inner Sphere. The invaders, called the Clans, are descendants of Kerensky's SLDF troops, forged into a society dedicated to becoming the greatest fighting force in history. With vastly superior technology and warriors, the Clans conquer world after world. Eventually this outside threat will forge a new Star League, something hundreds of years of warfare failed to accomplish. In addition, the Clans will act as a catalyst for a technological renaissance.



CIVIL WAR (3062–3067)

The Clan threat is eventually lessened with the complete destruction of a Clan. With that massive external threat apparently neutralized, internal conflicts explode around the Inner Sphere. House Liao conquers its former Commonality, the St. Ives Compact; a rebellion of military units belonging to House Kurita sparks a war with their powerful border enemy, Clan Ghost Bear; the fabulously powerful Federated Commonwealth of House Steiner and House Davion collapses into five long years of bitter civil war.

JIHAD (3067–3079)

Following the Federated Commonwealth Civil War, the leaders of the Great Houses meet and disband the new StarLeague, declaring it a sham. The pseudo-religious Word of Blake—a splinter group of ComStar, the protectors and controllers of interstellar communication—launch the Jihad: an interstellar war that will ultimately pit every faction against each other and even against themselves, as weapons of mass destruction are used for the first time in centuries while new and frightening technologies are likewise unleashed.

DARK AGE (3080–3150)

Under the guidance of Devlin Stone, the Republic of the Sphere is born at the heart of the Inner Sphere following the Jihad. One of the more extensive periods of peace begins to break out as the 32nd century dawns. The factions, to one degree or another, embrace disarmament and the massive armies of the Succession Wars begin to fade. However, in 3132 eighty percent of interstellar communications collapses, throwing the universe into chaos. Wars almost immediately erupt and the factions begin rebuilding their armies.

ILCLAN (3151+)

The once-invulnerable Republic of the Sphere lies in ruins, torn apart by the Great Houses and the Clans as they wage war against each other on a scale not seen in nearly a century. Mercenaries flourish once more, selling their might to the highest bidder. As Fortress Republic collapses, the Clans race toward Terra to claim their long-denied birthright and create a supreme authority that will fulfill the dream of Alexsandr Kerensky and rule the Inner Sphere by any means necessary: the ilClan.

If a Catalyst Game Labs *BattleTech* product does not contain an era logo, then it is considered a rulebook or supplement to be used across all eras, such as *A Game of Armored Combat, Total Warfare*, and so on.

OTHER AVENUES

From the moment of *BattleTech*'s inception, it proved flexible and dynamic enough to spawn a host of related products and services that provide additional support to the gaming community. Below are just a few of the most important.

IRON WIND METALS

Iron Wind Metals produces a complete line of metal miniatures for almost any type of *BattleTech* play; all the miniatures shown in this book are part of that line. As players have discovered for years, assembling and painting miniatures is a joy unto itself. The feel of a weighted, beautifully painted miniature provides a whole new level of play experience.

For more information, visit www.ironwindmetals.com.

CATALYST DEMO TEAMS

The Catalyst Demo Team is the group of fans that work directly with retailers worldwide to help promote the *BattleTech* game system and universe. Whether running games at conventions or at local retail stores, Catalyst Demo Teams help the gaming community stay in touch through worldwide events and tournaments, as well as supporting local retailers. Visit the Catalyst Demo Teams website to find whether a local retailer in your area is a "Firebase" and how *you* can become a Catalyst Demo Teams member.

For more information, visit www.catalystdemos.com.

BATTLETECH.COM

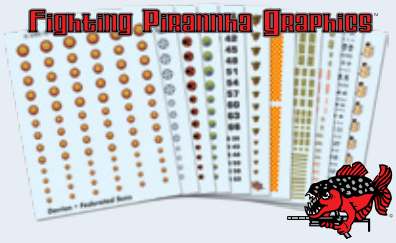
This is the official website for *BattleTech*, where players can get the lowdown on what's happening in the *BattleTech* universe, be the first to preview new products, download exclusive *BattleTech* files, exchange ideas with other fans from around the world and more!

For more information, visit battletech.com.

CAMO SPECS ONLINE

Camo Specs Online is the official source for the camo specs of the *BattleTech* universe. See more than 600 different schemes already represented, with frequent updates; talk directly to the artists; view never-before-seen canon schemes; submit your own art and become a CSO artist!

For more information, visit www.camospecs.com.



FIGHTING PIRANNHA GRAPHICS

Fighting Piranha Graphics ships high quality, *BattleTech* waterslide decals worldwide, with more than 600 Clan, House, Periphery and mercenary insignias already available. They'll even take original artwork and create custom decal sheets!

For more information, visit fightingpirannhagraphics.com.

COMPUTER GAMES

Few properties lend themselves better to electronic entertainment than the concept of piloting a giant walking 'Mech in combat. Since 1988, the *BattleTech* license has had a grand tradition in electronic gaming history. Worked on by hundreds of talented designers, programmers, and artists, and enjoyed by millions of gamers, *BattleTech* has pushed the boundaries of computer and video games from then up until the present. Of particular note are both the *BattleTech Centers*, which appeared in 1990—the first multiplayer, networked, immersive world available to the public—and *MechWarrior 2*, published in 1995, which remains one of Activision's all-time highest unit sellers.

The most recent games available to play are the *BATTLETECH* series by Harebrained Schemes (http://harebrained-schemes.com/battletech/), *MechWarrior 5: Mercenaries* by Piranha Games (https://mw5mercs.com) and *MechWarrior Online*, also by Piranha Games (https://mwomercs.com). Additionally, at conventions and select locations around the world, players can still enjoy the world's most sophisicated civilian combat simulator in the Virtual World *BattleTech* pods (mechjock.com).

A TIME OF WAR

—Excerpt from *Humanity's Destiny* (first year geopolitical curriculum text, condensed by Misha Auburn from *Manifest Destiny: Humanity's Star Empires*, by Misha Auburn, Commonwealth Press, 3067/3054)

For almost a thousand years, humans have journeyed into the far reaches of space, colonizing thousands of worlds and forming star-spanning nations. From these grew the five vast star empires that make up the Inner Sphere.

But the Inner Sphere was divided. Its ruling dynasties warred constantly over colony worlds with valuable resources. These titanic struggles led to the development of BattleMechs: gigantic, humanoid battle machines bristling with lethal weapons. From the twenty-fifth century onward, these walking tanks ruled the battlefields. BattleMechs and their skilled pilots changed combat forever.

As the price of conflict grew, the Inner Sphere tired of war. In 2571, the five ruling Houses joined together with the Terran Hegemony in the Star League, a federation led by a Hegemony First Lord and served by its own army: the Star League Defense Force. For nearly two hundred years, the Star League brought the Inner Sphere peace and prosperity.

In 2751, the sudden death of its First Lord left the Star League in the care of a child. Young Richard Cameron ruled in name, but the real power lay with the five Council Lords, each a sovereign of the original five Great Houses. Ambitious and distrustful, they plotted against one another, while a Machiavellian prince from the Periphery named Stefan Amaris wormed his way into Richard's trusting heart. In 2766, Amaris assassinated the young First Lord and took control of the Star League in a bloody coup d'etat.

The Star League Defense Force, commanded by the brilliant General Aleksandr Kerensky, refused to accept Amaris' rule. For thirteen years, they fought him in a bitter civil war that was the largest conflict yet fought by humanity. Kerensky's forces won, but at a terrible price. In the chaos that followed, the Council Lords were each determined to step in as First Lord. Despite Kerensky's efforts to hold the failing Star League together, it dissolved amid mutual hostility in 2781.

Unable to halt the impending conflict between the five Great Houses, Kerensky appealed to his soldiers to join him in leaving the Inner Sphere. Nearly eighty percent of the Star League army heeded Kerensky's call to build a new Star League far beyond the explored universe. In 2784, Kerensky and his followers abandoned their homes and headed into uncharted space, presumably never to return.

War followed war in the wake of Kerensky's dramatic departure. For nearly three centuries, the Houses of the Inner Sphere fought in vain for the right to rule over all humanity. These Succession Wars brought ever-shifting alliances and cost the Inner Sphere precious, irreplaceable technology. Constantly maneuvering for position—including the grand alliance of Houses Davion and Steiner signed in 3022 that would eventually lead to the formation of the fearsome Federated Commonwealth—the House Lords assumed that the most dangerous enemy they would ever face was each other.

They were wrong.

Even as the Inner Sphere was blowing back its technological and industrial base almost a thousand years, Kerensky's followers built a new society in the harsh environs beyond known space. They developed a rigid caste system, designed to produce the ultimate warriors. For nearly three centuries, the separate castes of Kerensky's Clans were unified by one burning ideal: that when the time was right, they would return home and conquer the Inner Sphere. They would become the saviors of humanity, rebuilding the Star League in their own image.

In 3048, the warlord Khans of the Clans decided the time had come to launch their invasion. With their powerful 'Mechs and MechWarriors, they drove straight toward Terra, the birth world of humanity.

Faced with a common enemy, the empires of the Inner Sphere united against the threat, establishing a new Star League. Finally victorious in 3060, the Star League halted the Clan invasion. A new era of peace beckoned, but it was not to be. Before long, war once again swept through every House and Clan, with the most vicious fighting centered around the FedCom Civil War between Houses Davion and Steiner.

Following the FedCom Civil War, the leaders of the Great Houses met, declared their Star League a sham and disbanded. The pseudo-religious Word of Blake—a splinter group of ComStar, the protectors and controllers of interstellar communication—had been on the verge of joining the Star League in fulfillment of their ancient prophecies. Cheated of their dream, they took swift vengeance and launched the Jihad: an interstellar war that would ultimately pit every faction against each other and even against themselves.

GREAT HOUSES

The Great Houses have dominated most of the Inner Sphere's two thousand star systems for centuries. Each House is ruled by a single individual who wields immense power, shaping the futures of trillions of people. These dictatorships, benign or otherwise, sprang up in direct response to humankind's expansion to the stars. After the collapse of the central government that supported humanity's first wave of expansion, regional power brokers arose. They wrought the empires that exist today, binding nearby planets together with various forms of feudalism.

The vast distances between planets made interstellar travel a rarity. Until humans developed the HPG system in 2630, interstellar communication was extremely difficult and unreliable. This meant that each world enjoyed considerable autonomy. The warlords who ruled the planets rarely faced the risk of overthrow by an invading military force. Variations on this feudal system remain in place today, resulting in a patchwork of mostly independent local governments overseen by a neo-feudal lord.

In keeping with their feudal origins, all the Inner Sphere nations include a noble class. Many noble titles are common to several nations. Terran nobility originated with the feudal system of government most prevalent in the European Middle Ages, when a sovereign delegated responsibility and authority over an area to select subjects in exchange for a personal oath of fealty. These subordinate leaders received a patent of nobility allowing them to use a title commensurate with their importance.

Nobility in the thirty-first century is largely hereditary, with the designated heirs of nobles inheriting their parents' rights, estates and responsibilities. Though most sovereigns can grant titles to their subjects, this practice is relatively rare—even for MechWarriors, the modern equivalent of knights.

THE CLANS

While most of the peoples and social groups in the Inner Sphere are culturally descended from ancient forebears that originated on Terra and brought their cultures with them (along with attendant ideologies, passions, bigotry and more) during the colonization of space over the past thousand years, the Clans are culturally unique. Made up of descendants from the original Star League Defense Force, the warriors of the Clans excel in battle and all things military.

The Clans came into being when the Star League Defense Force fled the Inner sphere almost 300 years ago, following the fall of the Star League. Under the direction of General Aleksandr Kerensky and his son Nicholas, the army left and formed its own society on what we now call the Clan homeworlds, located approximately one thousand light-years from the edge of the Inner Sphere. Clan society resembles that of ancient Sparta, focusing on the warrior ethic and dedicated to advancing the technology of war, specifically the BattleMech.

Each of the different Clans has its own flavor—all bound to honor, some more, some less. In general, the Clans divide into two camps: the Crusaders, who believe it their destiny to conquer the Inner Sphere and Terra, and the Wardens, who believe their role is to protect the Inner Sphere against an as yet unrealized threat. While most of the Clans are secular, a few are given to mysticism. The common spoken tongue among the Clans is based on Star League English, but they have enhanced it with a rich collection of unique words. Clansmen also rarely use contractions, considering such shortened speech vulgar and lazy.

The most powerful Crusader Clans returned to the Inner Sphere in the year 3050, in hopes of conquering it and reestablishing the Star League. The combined armies of the Great Houses stopped them, and they have since gradually become permanent inhabitants of many Inner Sphere worlds. Other Clans, not wanting to be kept from the planets they see as paradise, have contrived to return to the Inner Sphere as well.

Though these Inner Sphere Clans strive to retain their unique ways, various elements of Clan life have begun to erode through continued contact with the Inner Sphere.

PERIPHERY STATES

Beyond the boundaries of the Inner Sphere lie the endless reaches of the Periphery, traditionally home to independent-minded souls who sought escape from the often repressive regimes of the Great Houses. The Periphery is the Inner Sphere's frontier, keeping the spirit of exploration and discovery alive and well. The less savory aspects of frontier living are equally abundant; numerous pirate bands and petty bandit kingdoms thrive in this almost lawless region of space. Largely unexplored and sparsely populated compared with the Inner Sphere, the Periphery has nonetheless played a pivotal role in several major interstellar events, including the fall of the Star League.

The Periphery's reputation as backward and technologically inferior is only partly true. Though many areas in it are underdeveloped industrially and well behind the technology curve compared with the Inner Sphere, it includes scattered regions that boast cultural and technological advancement. The Taurian Concordat is well known for its excellent educational system and high literacy rate, while the Magistracy of Canopus exemplifies some of the most progressive views on human rights in known space.

PIRATES

Throughout humankind's history, rogue elements have always lived outside the confines of civilization, willing to do whatever it takes to survive. In practice, that usually means taking what they need from someone else.

Though pirates are generally associated with the Periphery, interested readers can dig into the history of any Great House and find small-time, planet-bound pirates, or pirates that made a name for themselves in a few close star systems. Some pirates have become legends, feared and reviled (and sometimes romanticized) across known space: Lady Death, the Band of the Damned and the New Belt Pirates are a few examples.

MERCENARIES

In a universe at war, some will always be willing to sell out to the highest bidder and fight someone else's battles. From the legendary (Wolf's Dragoons, the Kell Hounds, the Eridani Light Horse, the Northwind Highlanders) to the unknown (the Medusans, the Stone Ponies), from mere ad-hoc lances to multi-regiment commands, mercenaries are a staple of the Inner Sphere. Though not technically a power unto themselves, they—perhaps more than any private army—have raised and toppled empires.

Inner Sphere: General term used to describe a region of space roughly one thousand light-years across, composed of more than two thousand populated planets, with Terra (Earth) at the center. This area is further divided into geopolitical regions, where one power or another holds sway. For most of the centuries since humankind took to the stars, the vast majority of these worlds have belonged to one of the five Great Houses. Smaller powers have come and gone over this same time period. Any world or geopolitical power outside the Inner Sphere is said to lie in the Periphery, considered the frontier of the known universe.

—Encyclopedia Galactica

CLAN JADE FALCON OCCUPATION ZONE

RULER:	Khan Marthe Pryde
GOVERNMENT:	Clan (Caste-driven, Warrior-dominant hierarchy)
CAPITAL (CITY, WORLD)	Hammarr, Sudeten
DOMINANT LANGUAGE(S):	English (official)
DOMINANT RELIGION(S):	None
Inhabited Worlds: 59	**Founding Year:** 3050
	Currency: Kerensky

CLAN

HOUSE STEINER (LYRAN ALLIANCE)

RULER:	Archon Peter Steiner-Davion
GOVERNMENT:	Constitutional Monarchy (with German Feudal stylings)
CAPITAL (CITY, WORLD)	Tharkad City, Tharkad
DOMINANT LANGUAGE(S):	English and German (official), Scottish Gaelic, Italian, French
DOMINANT RELIGION(S):	Christianity (protestant), Judaism, Islam
Inhabited Worlds: 368	**Founding Year:** 2341
	Currency: Kroner

GREAT HOUSE

CLAN WOLF (IN-EXILE)

RULER:	Khan Phelan Kell
GOVERNMENT:	Clan (Caste-driven, Warrior-dominant hierarchy)
CAPITAL (CITY, WORLD)	Wolf City, Arc-Royal
DOMINANT LANGUAGE(S):	English (official)
DOMINANT RELIGION(S):	None
Inhabited Worlds: N/A	**Founding Year:** 3057
	Currency: Kerensky

CLAN

CLAN DIAMOND SHARK

RULER:	Khan Barbara Sennet
GOVERNMENT:	Clan (Caste-driven, Warrior-dominant hierarchy with mercantile stylings)
CAPITAL (CITY, WORLD)	Camora, Twycross
DOMINANT LANGUAGE(S):	English (official)
DOMINANT RELIGION(S):	None
Inhabited Worlds: 3	**Founding Year:** 3067
	Currency: Kerensky

CLAN

HOUSE MARIK (FREE WORLDS LEAGUE)

RULER:	Captain-General Thomas Marik
GOVERNMENT:	Parliamentary Confederacy (operating under military rule)
CAPITAL (CITY, WORLD)	Atreus City, Atreus
DOMINANT LANGUAGE(S):	English (official), Spanish, Greek, Romanian, Urdu
DOMINANT RELIGION(S):	Christianity (Catholic), Judaism, Islam
Inhabited Worlds: 334	**Founding Year:** 2271
	Currency: Eagle

GREAT HOUSE

LEGEND

30 LIGHT YEARS

120 LIGHT YEARS OR 26,8 PARSECS

MAXIMUM JUMP: APPROXIMATELY 30 LIGHT YEARS

Coreward

Anti-spinward

Spinward

Rimward

Map compiled by COMSTAR.
From information provided from the COMSTAR EXPLORER CORPS and the STAR LEAGUE ARCHIVES on Terra.

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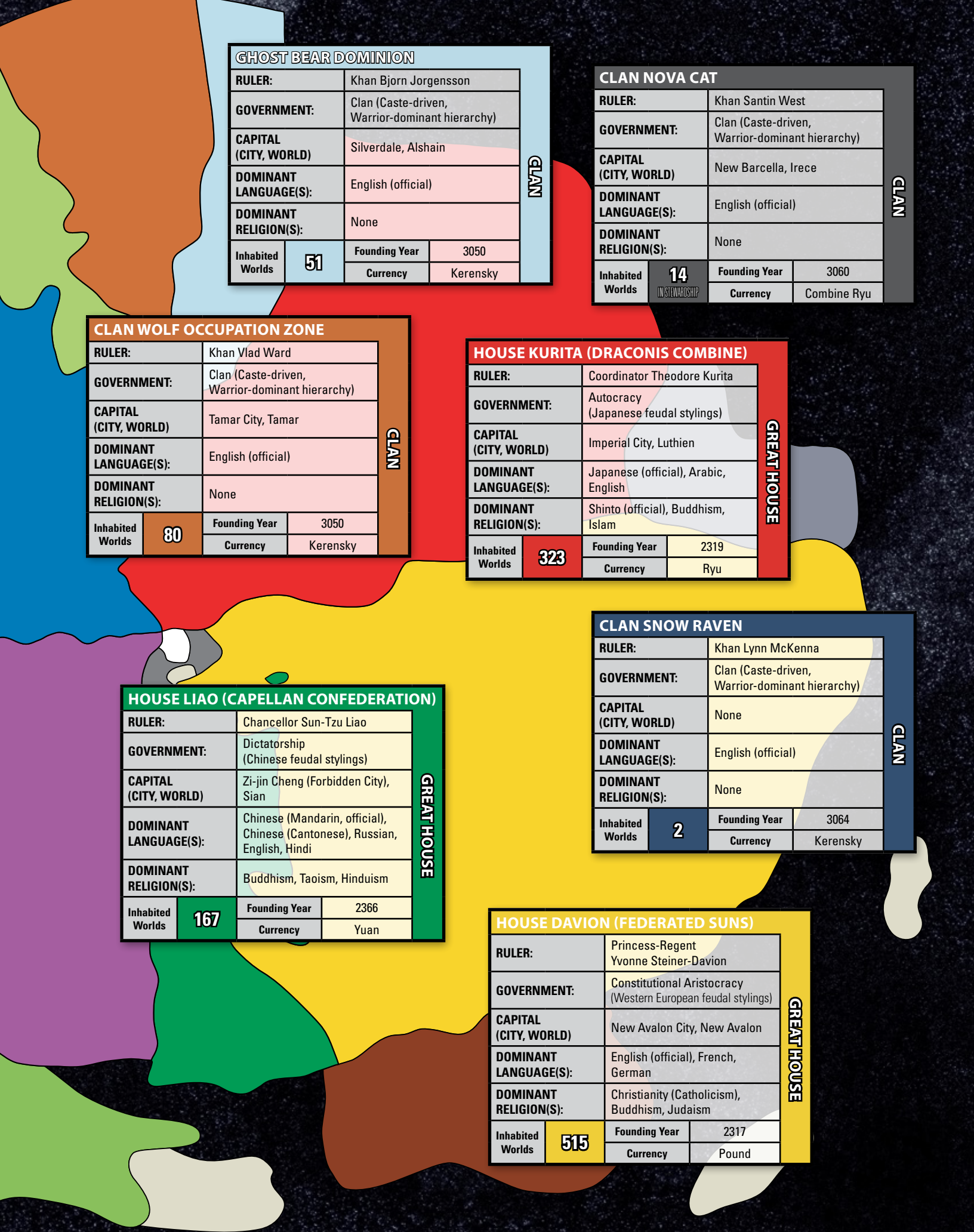
GHOST BEAR DOMINION
RULER: Khan Bjorn Jorgensson
GOVERNMENT: Clan (Caste-driven, Warrior-dominant hierarchy)
CAPITAL (CITY, WORLD): Silverdale, Alshain
DOMINANT LANGUAGE(S): English (official)
DOMINANT RELIGION(S): None
Inhabited Worlds 51
Founding Year 3050
Currency Kerensky
CLAN
CLAN NOVA CAT
RULER: Khan Santin West
GOVERNMENT: Clan (Caste-driven, Warrior-dominant hierarchy)
CAPITAL (CITY, WORLD): New Barcella, Irece
DOMINANT LANGUAGE(S): English (official)
DOMINANT RELIGION(S): None
Inhabited Worlds 14 IN STEWARDSHIP
Founding Year 3060
Currency Combine Ryu
CLAN
CLAN WOLF OCCUPATION ZONE
RULER: Khan Vlad Ward
GOVERNMENT: Clan (Caste-driven, Warrior-dominant hierarchy)
CAPITAL (CITY, WORLD): Tamar City, Tamar
DOMINANT LANGUAGE(S): English (official)
DOMINANT RELIGION(S): None
Inhabited Worlds 80
Founding Year 3050
Currency Kerensky
CLAN
HOUSE KURITA (DRACONIS COMBINE)
RULER: Coordinator Theodore Kurita
GOVERNMENT: Autocracy (Japanese feudal stylings)
CAPITAL (CITY, WORLD): Imperial City, Luthien
DOMINANT LANGUAGE(S): Japanese (official), Arabic, English
DOMINANT RELIGION(S): Shinto (official), Buddhism, Islam
Inhabited Worlds 323
Founding Year 2319
Currency Ryu
GREAT HOUSE
CLAN SNOW RAVEN
RULER: Khan Lynn McKenna
GOVERNMENT: Clan (Caste-driven, Warrior-dominant hierarchy)
CAPITAL (CITY, WORLD): None
DOMINANT LANGUAGE(S): English (official)
DOMINANT RELIGION(S): None
Inhabited Worlds 2
Founding Year 3064
Currency Kerensky
CLAN
HOUSE LIAO (CAPELLAN CONFEDERATION)
RULER: Chancellor Sun-Tzu Liao
GOVERNMENT: Dictatorship (Chinese feudal stylings)
CAPITAL (CITY, WORLD): Zi-jin Cheng (Forbidden City), Sian
DOMINANT LANGUAGE(S): Chinese (Mandarin, official), Chinese (Cantonese), Russian, English, Hindi
DOMINANT RELIGION(S): Buddhism, Taoism, Hinduism
Inhabited Worlds 167
Founding Year 2366
Currency Yuan
GREAT HOUSE
HOUSE DAVION (FEDERATED SUNS)
RULER: Princess-Regent Yvonne Steiner-Davion
GOVERNMENT: Constitutional Aristocracy (Western European feudal stylings)
CAPITAL (CITY, WORLD): New Avalon City, New Avalon
DOMINANT LANGUAGE(S): English (official), French, German
DOMINANT RELIGION(S): Christianity (Catholicism), Buddhism, Judaism
Inhabited Worlds 515
Founding Year 2317
Currency Pound
GREAT HOUSE

THE HANSEATIC LEAGUE

DEEP PERIPHERY STATE

RULER:	The Council of Merchants		
GOVERNMENT:	Mercantile Alliance (with German feudal stylings)		
CAPITAL (CITY, WORLD)	Commerce, Bremen		
DOMINANT LANGUAGE(S):	German (official), English, Spanish		
DOMINANT RELIGION(S):	Christianity (Protestant), Judaism		
Inhabited Worlds	**24 (EST)**	**Founding Year**	2891
		Currency	None (Barter)

RIM COLLECTION

MINOR PERIPHERY STATE

RULER:	President William Roberts		
GOVERNMENT:	Democracy		
CAPITAL (CITY, WORLD)	New Promise, Gillfillan's Gold		
DOMINANT LANGUAGE(S):	English, German, Scottish Gaelic, Italian, Greek		
DOMINANT RELIGION(S):	Christianity (Protestant), Judaism, Islam		
Inhabited Worlds	**6**	**Founding Year**	3048
		Currency	Lyran Kroner

NUEVA CASTILE

Umayyad Caliphate (C) & Castilian Principalities (P)

DEEP PERIPHERY STATE

RULERS:	Caliph Lise Burrill (C) King Joseph Noye (P)		
GOVERNMENTS:	Feudal Monarchy (C) Monarchy (with Spanish stylings, P)		
CAPITAL (WORLDS)	Granada (C) Asturias (P)		
DOMINANT LANGUAGE(S):	Arabic, English & Russian (C) Spanish & German (P)		
DOMINANT RELIGION(S):	Islam (C) Christianity (P)		
Inhabited Worlds	**2 (C) 7 (P)**	**Founding Year**	2830 (C) 2392 (P)
		Currency	None (Barter)

CIRCINUS FEDERATION

MINOR PERIPHERY STATE

RULER:	President Calvin McIntyre		
GOVERNMENT:	Military Dictatorship		
CAPITAL (CITY, WORLD)	Zachariah, Circinus		
DOMINANT LANGUAGE(S):	English, German, Spanish, Greek		
DOMINANT RELIGION(S):	Christianity, Judaism, Islam		
Inhabited Worlds	**8**	**Founding Year**	c. 2775
		Currency	Skull

MARIAN HEGEMONY

PERIPHERY STATE

RULER:	Caesar Julius O'Reilly		
GOVERNMENT:	Dictatorship (with Romanesque republican stylings)		
CAPITAL (CITY, WORLD)	Nova Roma, Alphard		
DOMINANT LANGUAGE(S):	English and Latin (official), German, Spanish, Greek		
DOMINANT RELIGION(S):	Christianity (Lutheran), Judaism, Islam		
Inhabited Worlds	**26**	**Founding Year**	2920
		Currency	Talent

MAGISTRACY OF CANOPUS

PERIPHERY STATE

RULER:	Magestrix Emma Centrella		
GOVERNMENT:	Monarchy (Matriarchal)		
CAPITAL (CITY, WORLD)	Crimson, Canopus IV		
DOMINANT LANGUAGE(S):	English (official), Spanish, Greek, Romanian, Chinese (Mandarin)		
DOMINANT RELIGION(S):	Buddhism, Christianity, Wicca, Judaism		
Inhabited Worlds	**44**	**Founding Year**	2530
		Currency	Dollar

LEGEND

30 LIGHT YEARS

120 LIGHT YEARS OR 26,8 PARSECS

MAXIMUM JUMP: APPROXIMATELY 30 LIGHT YEARS

Coreward

Anti-spinward

Spinward

Rimward

Map compiled by COMSTAR.
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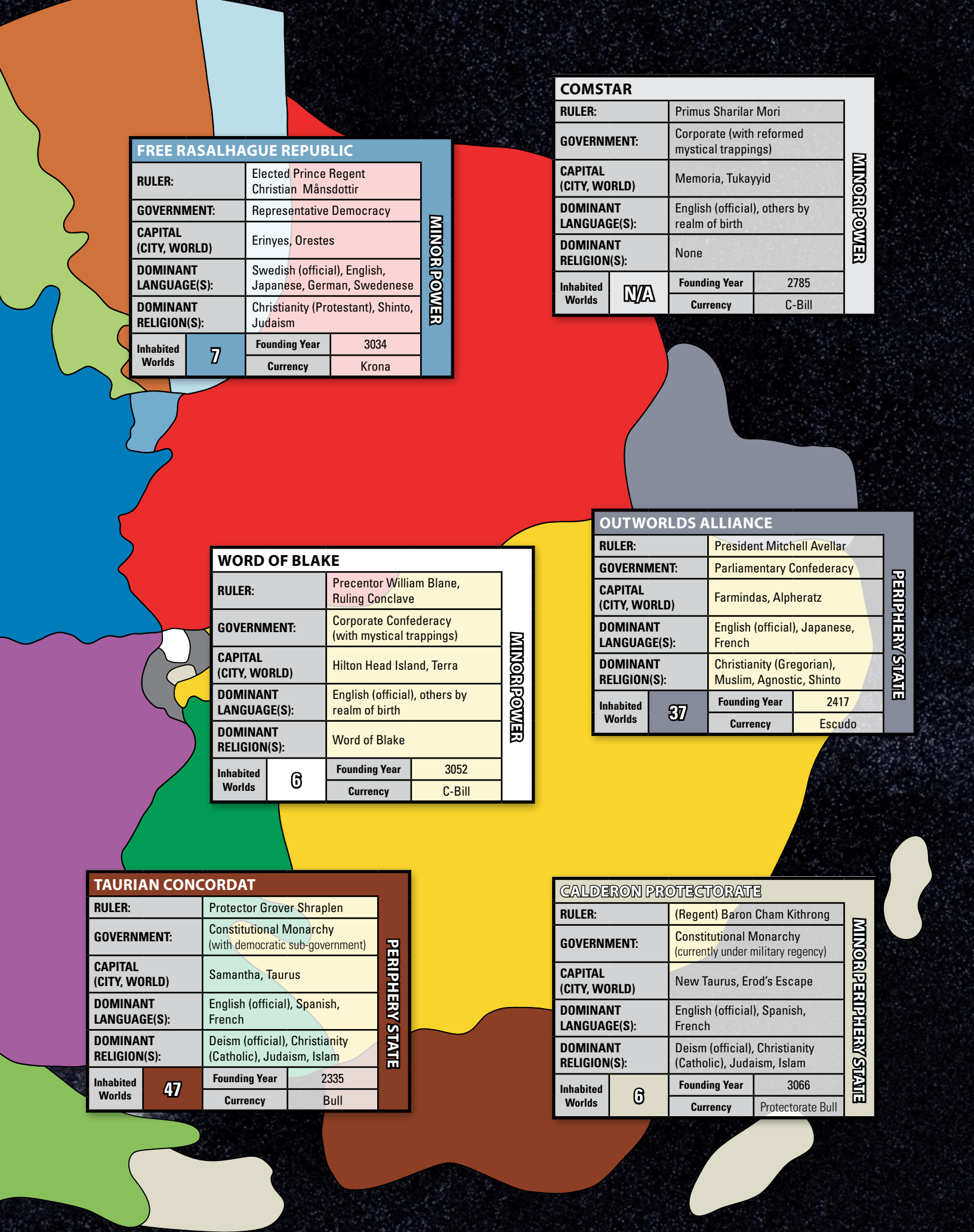


FREE RASALHAGUE REPUBLIC

RULER:	Elected Prince Regent Christian Månsdottir
GOVERNMENT:	Representative Democracy
CAPITAL (CITY, WORLD)	Erinyes, Orestes
DOMINANT LANGUAGE(S):	Swedish (official), English, Japanese, German, Swedenese
DOMINANT RELIGION(S):	Christianity (Protestant), Shinto, Judaism
Inhabited Worlds: 7	Founding Year: 3034
	Currency: Krona

MINOR POWER

COMSTAR

RULER:	Primus Sharilar Mori
GOVERNMENT:	Corporate (with reformed mystical trappings)
CAPITAL (CITY, WORLD)	Memoria, Tukayyid
DOMINANT LANGUAGE(S):	English (official), others by realm of birth
DOMINANT RELIGION(S):	None
Inhabited Worlds: N/A	Founding Year: 2785
	Currency: C-Bill

MINOR POWER

WORD OF BLAKE

RULER:	Precentor William Blane, Ruling Conclave
GOVERNMENT:	Corporate Confederacy (with mystical trappings)
CAPITAL (CITY, WORLD)	Hilton Head Island, Terra
DOMINANT LANGUAGE(S):	English (official), others by realm of birth
DOMINANT RELIGION(S):	Word of Blake
Inhabited Worlds: 6	Founding Year: 3052
	Currency: C-Bill

MINOR POWER

OUTWORLDS ALLIANCE

RULER:	President Mitchell Avellar
GOVERNMENT:	Parliamentary Confederacy
CAPITAL (CITY, WORLD)	Farmindas, Alpheratz
DOMINANT LANGUAGE(S):	English (official), Japanese, French
DOMINANT RELIGION(S):	Christianity (Gregorian), Muslim, Agnostic, Shinto
Inhabited Worlds: 37	Founding Year: 2417
	Currency: Escudo

PERIPHERY STATE

TAURIAN CONCORDAT

RULER:	Protector Grover Shraplen
GOVERNMENT:	Constitutional Monarchy (with democratic sub-government)
CAPITAL (CITY, WORLD)	Samantha, Taurus
DOMINANT LANGUAGE(S):	English (official), Spanish, French
DOMINANT RELIGION(S):	Deism (official), Christianity (Catholic), Judaism, Islam
Inhabited Worlds: 47	Founding Year: 2335
	Currency: Bull

PERIPHERY STATE

CALDERON PROTECTORATE

RULER:	(Regent) Baron Cham Kithrong
GOVERNMENT:	Constitutional Monarchy (currently under military regency)
CAPITAL (CITY, WORLD)	New Taurus, Erod's Escape
DOMINANT LANGUAGE(S):	English (official), Spanish, French
DOMINANT RELIGION(S):	Deism (official), Christianity (Catholic), Judaism, Islam
Inhabited Worlds: 6	Founding Year: 3066
	Currency: Protectorate Bull

MINOR PERIPHERY STATE

A rare Davion BattleMech Repair Facility on Marlette is abuzz with activity.

BattleTech simulates combat between BattleMechs, Combat Vehicles, ProtoMechs, infantry and aerospace units (and any other vehicles that might get caught in the crossfire) on a variety of terrain. This chapter describes the various combat units that compete on the *BattleTech* battlefield and the record sheets and maps needed to play the game.

While *Total Warfare* provides a comprehensive rules set for all unit types detailed within this section, players should remember they are free to select which ever forces they wish to use in any given game.

UNITS

In these rules, the term "unit" refers to any mobile element that can be fielded in a *BattleTech* game—BattleMech, IndustrialMech, ProtoMech, Combat Vehicle, conventional infantry platoon/Point, battle armor squad/Point, small craft, conventional fighter, aerospace fighter, DropShip or any Support Vehicle. Each unit moves and attacks individually on the map.

During game play, each unit is represented by a counter or miniature. A complete line of *BattleTech* miniatures is available from Iron Wind Metals (see *Iron Wind Metals*, p. 12), not to mention the plastic miniatures available in the various *BattleTech* box sets. If the correct miniature is unavailable, players may use whatever miniature they have on hand or any other counter or item to represent each unit, as long as it is clear what unit the counter represents and which direction it is facing (if it has a facing).

Terminology: Unless specifically stated otherwise, the following terminology applies where appropriate (i.e., wherever the rules allow the specific unit types to be used):

- The word "'Mech" refers to BattleMechs/OmniMechs and IndustrialMechs (bipedal and four-legged). "'Mech" never refers to ProtoMechs.
- The word "Omni" refers to OmniMechs and OmniVehicles.
- The word "fighter" refers to conventional and aerospace fighters.
- The word "vehicle" refers to all Combat and Support vehicles.
- The word "infantry" refers to conventional and battle armor infantry.
- The term "aerospace unit" refers to all types of aerospace units: conventional fighters, aerospace fighters, small craft, DropShips and Fixed-Wing/Airship Support Vehicles.
- The term "ground unit" refers to 'Mechs (BattleMechs, OmniMechs and IndustrialMechs); ProtoMechs; hover, tracked, VTOL, wheeled and WiGE Combat Vehicles; hover, tracked, VTOL, wheeled and WiGE Support Vehicles; battle armor and conventional infantry.
- The term "ground vehicle" refers to hover, wheeled and tracked Combat and Support vehicles.
- "Large Craft" is a general description used to refer to any aerospace unit that weighs more than two hundred tons.

BATTLEMECHS

BattleMechs—the most powerful ground-based war machines ever built—dominate the battlefields of the thirty-first century. These huge, mostly humanoid vehicles stand eight to fourteen meters tall and weigh as much as one hundred tons. They are faster, more maneuverable, better armored and more heavily armed than any other ground combat unit. Equipped with particle projector cannons, lasers, rapid-fire autocannons and missiles, these behemoths pack enough firepower to flatten city blocks.

Armies of the thirty-first century field two classes of BattleMechs: those used primarily by the Inner Sphere, representing variations of and improvements on the original 'Mech

Light ´Mechs

Medium ´Mechs

Heavy ´Mechs

Assault ´Mechs

IndustrialMechs

ProtoMechs

technology, and the modular machines known as OmniMechs that gave the Clans their initial edge. ´Mechs are classified as light, medium, heavy or assault.

BattleMechs also come in two primary chassis configurations: the significantly more common bipedal (humanoid) design and a four-legged (quad) design.

Light 'Mechs

Light 'Mechs range in weight from 20 to 35 tons. On the battlefield, light 'Mechs serve most often in reconnaissance roles. Their above-average speed and jump capability make them well suited to efficiently avoiding heavy fighting while maneuvering to assess enemy troop formations. Despite their many assets, however, light 'Mechs rarely manage to stand against heavier units, even with the advantage of numerical superiority.

Medium 'Mechs

The workhorses of the Inner Sphere armies, medium BattleMechs range in weight from 40 to 55 tons. On the battlefield, medium 'Mechs form the core of almost every unit or formation. While light 'Mechs scout out battlefield terrain and enemy forces, medium 'Mechs wade in and slug it out with opposing troops until the heavy and assault units arrive.

Heavy 'Mechs

Heavy 'Mechs weigh from 60 to 75 tons. Usually piloted by commanders and experienced MechWarriors, they play a major role on the battlefields of the Inner Sphere. Heavy 'Mechs can dish out and take immense amounts of damage, and so only another heavy or an assault 'Mech usually can successfully take on a typical heavy BattleMech.

Assault 'Mechs

Assault 'Mechs, weighing from 80 to 100 tons, are the kings of the 31st-century battlefield. So fearsome are these behemoths in battle that one assault 'Mech is often equal to an entire lance of lighter 'Mechs. The pilot of a well-designed assault 'Mech fears no opponent in the field, and the 'Mech's physical attacks can cripple nearly any target.

INDUSTRIALMECHS

BattleMechs are the best-known 'Mechs of the thirty-first century, but other types of 'Mechs still exist. During the Star League era, IndustrialMechs played a role in various aspects of life, from farming to loading DropShip cargo bays, from construction to police work and so on. After the fall of the Star League, these IndustrialMechs (also known as UtilityMechs or WorkMechs) fell into disuse, their parts often scavenged to repair BattleMechs. As the Succession Wars raged on, the technology needed to build and repair 'Mechs declined and the Successor States concentrated their dwindling technological resources on the BattleMechs they needed to continue fighting. However, with the technological renaissance of the past few decades finally reaching beyond the military sector, these rare machines are making a comeback, as the civilian demand for their use drives the market and companies rush to fill the void.

It is not unheard of for poorer worlds, and the militias that struggle to keep them safe, to jury-rig weapons on IndustrialMechs for that last-ditch, desperate measure. While no match for a BattleMech, such modified IndustrialMechs can prove effective against infantry and even many Combat Vehicles.

IndustrialMechs use the same weight classifications as BattleMechs, except that light IndustrialMechs weigh from 10 to 35 tons.

PROTOMECHS

Fielded exclusively by the Clans, ProtoMechs stand four to six meters tall and weigh from two to nine tons. The pilot rides in a small compartment in the upper chest of the the torso contains the engine, weapons and motive systems.

Larger than a battle armor suit but smaller than a BattleMech, a ProtoMech has abilities in common with both types of units. Their small stature permits them to hide where BattleMechs cannot, and they can even move through buildings without causing excessive collateral damage.

Though tiny compared to even the smallest BattleMech, ProtoMechs can carry an impressive arsenal. Because they operate in Points of five, their coordinated fire compensates for each Proto's individual shortcomings. ProtoMechs are also extremely durable. Though they carry little armor compared to BattleMechs, they can survive the loss of limbs and even the head and remain effective.

The pilot controls the ProtoMech through a direct neural interface as though it were his own body, and so all ProtoMech designs are humanoid. To supplement their firepower, ProtoMechs often carry large hand-held weapons called main guns. These weapons are braced to the torso but fired with both hands, allowing the pilot accurate control of the gun, as if firing a large support weapon by hand. Because the weapon fires similarly to standard infantry weapons, plus the integration between ProtoMech and pilot

through the Clans' enhanced imaging technology, ProtoMech pilots enjoy a significant advantage in training and combat accuracy. While BattleMech and battle armor pilots must learn to accurately fire weapons directly mounted on their war machine's "body"—which is not a natural state of affairs—ProtoMechs wield the main gun almost as easily as a person uses a handgun or rifle, allowing for a more flexible firing arc.

COMBAT VEHICLES

Most armies use their BattleMech resources sparingly when they can, and so maintain forces of Combat Vehicles to serve in low-intensity conflicts and as auxiliaries to BattleMech units. Like BattleMechs, vehicles can be constructed as modular OmniVehicles. Vehicles are classified by weight in the same manner as BattleMechs, and also by type of locomotion.

Light Vehicles: Light vehicles have a maximum weight of 35 tons. Primarily used for reconnaissance, the light vehicle is almost exclusively designed for speed. Though tracked and wheeled light vehicles exist on the battlefield, hovercraft—with their greater speeds—dominate this weight class.

Medium Vehicles: Medium vehicles weigh from 36 to 55 tons. Used as skirmishers, medium vehicles are fielded by the various House militaries of the Inner Sphere to harass and pin down an enemy until heavier forces can be brought to bear.

Heavy Vehicles: Heavy vehicles range from 56 to 75 tons. Mirroring the medium 'Mech weight class, heavy vehicles are the workhorse vehicle of all Successor State armies. Packing a serious punch with armor to match, a heavy vehicle can stay in the fight longer than some medium 'Mechs.

Assault Vehicles: Assault vehicles weigh from 76 to 100 tons. Though they lack the mobility of their 'Mech counterparts, the sheer volume of firepower that an assault vehicle carries can be the downfall of even a heavy 'Mech if the MechWarrior piloting it fails to exercise caution.

Ground Vehicles

The armies of the thirty-first century deploy three types of ground vehicles: tracked, wheeled and hovercraft.

Not all types of ground vehicles can be built using the full weight gamut of 5 to 100 tons. As such, though a vehicle's name might include the word "heavy" (for example, the Condor Heavy Hover Tank), unless it falls within the 56- to 75-ton weight range, it is not considered a heavy vehicle.

Tracked: A tracked vehicle's maximum weight is 100 tons. Because they move using caterpillar treads, these vehicles are normally referred to as tanks, though the original meaning of this term has been lost in antiquity. Commonly armed with turret-mounted heavy weapons, some of the heaviest vehicles of this class can inflict a great deal of damage, even on a BattleMech.

Wheeled: A wheeled vehicle's maximum weight is 80 tons. Wheeled vehicles move faster than tracked vehicles while still mounting effective weapons. These vehicles suffer serious terrain restrictions, however, so commanders usually assign them to relatively open terrain and cities to serve as convoy escorts or fire-support vehicles for dismounted infantry.

Hovercraft: A hovercraft's maximum weight is 50 tons. Hovercraft are designed for speed and rely on that feature for protection rather than their weak armor and light armament. Hovercraft also cost more and require a more advanced technological base than tracked or wheeled vehicles. Their ability to rapidly close with the enemy and just as rapidly break contact, however, makes these units highly valued for reconnaissance and screening missions.

Vertical Takeoff and Landing (VTOL)

The maximum weight of a VTOL vehicle is 30 tons. Fast, deadly and highly vulnerable to damage, VTOLs and their pilots suffer the highest mortality rate of any Combat Vehicle type. The term VTOL refers to a variety of vertical takeoff and landing vehicles whose primary mission is to support the battle on the ground, including conventional rotary-wing craft (helicopters) and tilt-rotor aircraft (the engine mountings rotate in a 90-degree arc). Because of the high torque required for their operation, VTOL rotors cannot be heavily armored and so cannot absorb much combat damage. More VTOLs are destroyed by rotor hits than by any other type of damage.

WiGE

A WiGE (Wing in Ground Effect) vehicle's maximum weight is 80 tons. Wing in ground effect—or near ground effect—describes a phenomenon first observed in the twentieth century, where a craft flying close to a surface receives additional lift from the cushion of air trapped between that surface and the craft's lifting surfaces, making them almost a cross between a hovercraft and a true aircraft.

While more common in its support role, a combat version has begun to see deployment, though it remains a rare sight on the battlefield.

Naval Vessels

High-tonnage military naval vessels long ago gave way to superior conventional and aerospace fighters. However, small combat naval vessels still serve in counterinsurgency missions and defending underwater command posts. The maximum weight of a naval vehicle (surface or

Tracked Vehicle

Wheeled Vehicle

Hovercraft

Vertical Takeoff and Landing (VTOL)

Wing in Ground Effect (WIGE)

Surface Naval Vessel

Submarine

Foot Infantry

Motorized Infantry

Jump Infantry

Mechanized Infantry

Battle Armor

submarine) is 300 tons, except for hydrofoils, which have a maximum weight of 100 tons.

Surface Naval Vessels: As the name implies, this class of vessel operates only on bodies of water. Surface vessels come in two types: those with a displacement hull and hydrofoils. Vessels built with a displacement hull represent the cheapest, best protected and best armed naval vessels, but their conventional rounded hull prevents them from attaining the speed necessary to close quickly with an elusive enemy. Hydrofoils offer speed with firepower that displacement-hulled vessels lack. Featuring wings that lift the vessel's hull out of the water, these naval assets usually patrol coastlines and guerrilla-infested river deltas.

Submarines: Technological advances allowed manufacturers to create ever-smaller submarines over the past several centuries, and these underwater vessels still reign supreme in the oceans of most worlds. In their home environment, these expensive and specialized vessels can reasonably expect to defeat an equivalent-weight BattleMech. Their commanders usually assign them to protect underwater installations and command centers.

INFANTRY

The Inner Sphere and the Clans deploy two types of infantry: conventional and battle armor.

Conventional Infantry

Both the Clans and Inner Sphere deploy platoons of varying size depending on type, weapon use and so on; the Inner Sphere's standard maximum size platoon is 28-man, while the Clans is a 25-man Point. Conventional infantry units fall into one of the following categories: foot, motorized, jump and mechanized.

Foot: Foot infantry have no transportation beyond their own legs, carry light arms, and cannot hope to successfully assault or defend against even the lightest 'Mech. Foot infantry generally provide population control, man city garrisons and mount counterinsurgency operations. Though the start-up price for such units seems relatively high, they cost very little to maintain. In addition, most planets can call up and arm thousands of foot infantry on short notice.

Motorized: Equipped with a variety of light unarmored vehicles, motorized infantry move around the battlefield more readily than foot infantry, but are still no match for BattleMechs. Motorized infantry units serve the same duties as foot infantry and also serve as forward observers or reconnaissance personnel.

Jump: Jump infantry troopers are equipped with jump packs. In open, flat terrain, this equipment makes jump infantry as mobile as motorized troops. In built-up areas, jump-capable troops are more mobile than any other type of infantry. Their jump capabilities allow these troops to close quickly with enemy units, but a close assault of this type can devastate defender and attacker equally.

Mechanized: These troops work in close conjunction with vehicles and rely on them to move around the battlefield. A wide variety of mechanized forces see battlefield service from hover-sleds or armored jeeps to intrinsic APC or IFV transport, providing mechanized infantry with unprecedented maneuvering capabilities.

Battle Armor

Battle-armored infantrymen wear powered suits of armor equipped with various weapons. Clan battle armor troopers, known as Elementals, are organized into 5-man Points. Their individually powered battle suits mount missiles, small lasers and anti-personnel weapons. Because Elemental armor can survive direct hits from BattleMech-class weapons, a single Point of battle armor can often disable or destroy a 'Mech.

Inner Sphere forces also field battle-armored infantry in 4- to 6-man squads, depending on faction. Such equipment, though more diverse, remains rare and less powerful than Clan battle armor.

Most battle-armored infantry soldiers receive extensive anti-'Mech training.

CONVENTIONAL FIGHTERS

Conventional fighters weigh from 10 to 50 tons. Though weak compared to aerospace fighters, and unable to fly in the vacuum of space, conventional fighters are considerably cheaper to build and require a much lower base technology level. This means that most worlds, especially backwater planets, field at least a small conventional fighter force.

AEROSPACE FIGHTERS

Often possessing the firepower of a BattleMech, the aerospace fighter is far more resilient than its conventional counterpart, and its ability to operate both in-atmosphere and in space gives it a versatility that commanders have used for centuries. Able to screen for or participate in an incoming assault, aerospace fighters

play an integral role in any objective raid or full-blown planetary invasion. Only their extreme expense, high technology level and relative fragility compared with BattleMechs keep aerospace fighters from unseating BattleMechs as the kings of the battlefield.

In the thirty-first century, two classes of aerospace fighters are used: those employed primarily by the Inner Sphere, representing variations of and improvements on the original aerospace fighter technology, and the modular OmniFighters that gave the Clans their initial edge. Both are divided into light, medium and heavy weight categories.

Light Fighters

Light fighters weigh between 20 and 45 tons. Their incredible speed and agility enables them to fill a variety of roles, from reconnaissance to surgical strikes to dogfights. The first to deploy and the last to return to base, the light fighter is the workhorse of aerospace fighters.

Medium Fighters

Ranging in weight from 50 to 70 tons, the medium fighter specializes in dogfights. Though flexible enough to fill multiple combat roles, the medium fighter excels at attacking and defeating an enemy's air support.

Heavy Fighters

Heavy fighters weigh from 75 to 100 tons. Too large and cumbersome for dogfights, the heavy fighter can be equally well employed as a long-range bomber or as an escort for DropShips. Additionally, their superior armor and firepower enable heavy fighters to attack DropShips and WarShips, where protection and firepower rather than speed and agility are the keys to victory.

SMALL CRAFT

"Small craft" is a catchall category for any spacegoing vessel weighing from 100 to 200 tons. Ranging from near orbit to far, shuttling between DropShips and JumpShips and even between planets and moons within a system, small craft represent a myriad of vessels of every type and size not covered by aerospace fighters or DropShips. Like DropShips, small craft are categorized by shape, either aerodyne or spheroid.

DROPSHIPS

DropShips fill a broad range of mission roles, ranging from simple cargo supply ships to massive assault craft. Many military DropShips serve as specialized troop transports that can bridge the gulf between a JumpShip and a target planet during a military campaign to land a substantial combined-arms force. Most DropShips also mount an impressive array of weaponry and armor, making them mobile weapons platforms in their own right. Whether for military conquest or simple commerce, DropShips are a key link in humanity's interstellar empires. They are categorized by the frequently extreme differences in their design, size and use.

Size: Primary size designations are small, medium or large, though assault ships fall outside these standard size categories.

Role: The intended role of a DropShip results in six classifications: troop carriers, BattleMech carriers, fighter carriers, assault ships, cargo carriers and passenger liners.

Shape: DropShips can be aerodyne (relying on wings and aerodynamic hull shapes to provide lift for atmospheric flight) or spheroid (so named for their distinctive spherical hulls, relying on their fusion drives to provide lift).

Small DropShips

Weighing from 200 to 2,499 tons, small DropShips are employed during small-unit actions. Small DropShips can quickly insert or redeploy forces—a company of infantry or a lance of 'Mechs or vehicles—when a long distance must be covered quickly.

Medium DropShips

Weighing from 2,500 to 9,999 tons, medium DropShips are the mainstay of any naval fleet and can be found in every navy of the Inner Sphere and Clans. Medium DropShips enable every military to transport significant assets to any target.

Large DropShips

Weighing from 10,000 tons to a gargantuan 100,000 tons, large DropShips enable a military to transport massive quantities of assets, personnel and supplies between the stars. With only three or four of these monstrous ships needed to transport an entire regiment, they are primarily employed in planetary assaults. Because of practical limitations, military/combat DropShips weigh 20,000 tons or less.

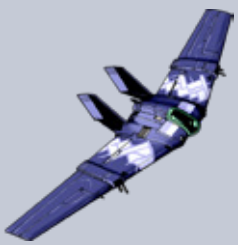
Assault Ships

Not a true weight-class designation (meaning that they can weigh any tonnage), Inner Sphere militaries employ assault ships to destroy enemy DropShips before they can land and disembark their troops. Exceptionally powerful, some assault ships pack enough firepower to even threaten small WarShips.

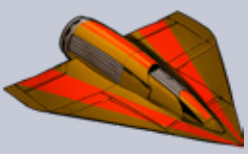
Conventional Fighter

Light Fighter

Medium Fighter

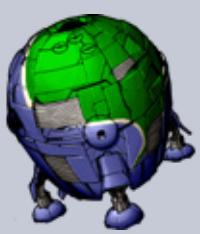


Heavy Fighter



Small Craft

Small DropShip



Medium DropShip

Large DropShip

Wheeled Support

Tracked Support

Hover Support

VTOL Support

Airship Support

Fixed Wing Support

Naval Support

SUPPORT VEHICLES

No battle can be waged or won without the mammoth numbers of Support Vehicles that feed the war machines of the Great Houses. From cargo trucks to tanker airships, from airborne M.A.S.H. units to communication satellites, from armored transport trains to coastal patrol boats, from hauler exoskeletons to LoaderMechs, and even hover and wheeled police cruisers or civilian vehicles conscripted into the military, the Support Vehicle is the backbone of any military machine. Support Vehicles may be custom-designed for inclusion in the support apparatus of a military organization or conscripted into service as the need arises. Though usually not intended for direct use in combat, Support Vehicles often end up there.

Support Vehicles belong to one of eight chassis types: wheeled, tracked, hover, VTOL, WiGE, Airship, Fixed-Wing and Naval vehicles. Within each chassis type, all Support Vehicles fall into one of three size classes: small, medium and large.

Aerospace Units: For game purposes, Airship and Fixed-Wing Support Vehicles are considered types of conventional fighter (aerospace unit).

Ground Vehicles: For game purposes, wheeled, tracked and hover Support Vehicles are also defined as ground vehicles (see p. 22).

Wheeled Vehicles

Wheeled Support Vehicles weigh from 0.1 to 160 tons. Simple and inexpensive, wheeled units operate most efficiently on established road networks, though some special models possess off-road capabilities.

Tracked Vehicles

Tracked Support Vehicles weigh from 0.1 to 200 tons. A vehicle equipped with tracks has a distinct advantage over a wheeled vehicle when crossing soft or rough terrain. The expense, maintenance requirements and oversized tonnage that can inflict damage on roads sometimes limit the use of tracked vehicles.

Hover Vehicles

Hover Support Vehicles weigh from 0.1 to 100 tons. Supported on a cushion of air, hovercraft can cross land and water with equal ease. Sometimes referred to as "skimmers," hover vehicles see extensive use on water-rich planets.

VTOLs

VTOL Support Vehicles weigh from 0.1 to 60 tons. Rotary wings or vectored-thrust vehicles can achieve Vertical Take Off and Landing (VTOL). The high thrust-to-weight ratio required limits the maximum weight of such flying machines.

WiGE Craft

WiGE Support Vehicles weigh from 0.1 to 240 tons. With a larger frame than its military counterpart, the WiGE Support Vehicle can achieve a larger overall size and carrying capacity. Though not common, this type of Support Vehicle still sees use.

Airships

Airship Support Vehicles weigh from 0.1 to 1,000 tons. These vehicles use lighter-than-air gases (usually inert helium) to fill lifting cells that keep them aloft, and propellers for maneuvering and station keeping. Airships are an attractive form of low-tech bulk cargo transport for locations that lack rail or sea links.

Only small and medium Airships are covered in these rules. Large Airships (weighing from 300.5 to 1,000 tons) are covered in *Tactical Operations*.

Fixed-Wing Craft

Fixed-Wing Support Vehicles weigh from 0.100 to 200 tons. Lacking the flexibility of VTOLs because of their need for prepared runways, Fixed-Wing Support Vehicles can operate at higher altitudes, are more rugged and can be larger.

Naval Vessels

Naval Support Vessels weigh from 0.1 to 100,000 tons. Often eclipsed by the DropShip, these naval vessels are nonetheless a cost-effective means of transporting bulk cargo. Primitive paddle-wheel steamers still exist, their unsophisticated design an asset on backwater worlds. Elsewhere, more advanced (and efficient) propulsion methods are employed.

These rules cover only Small and Medium Naval Support Vessels. Large Naval Vessels (weighing from 300.5 to 100,000 tons) are covered in *Tactical Operations*.

OTHER UNITS

Additional units—combat, support and otherwise—exist in the *BattleTech* universe. However, these units are generally outside the scope of one-off games played on mapsheets, and are either space-only units or are better suited for campaign play. Rules for using these aerospace units appears in *Strategic Operations* while rules for using these Support Vehicles (and Mobile Structures) appears in *Tactical Operations,* but this book provides a brief description for interested players.

AEROSPACE UNITS

JumpShips, WarShips and space stations also exist in the *BattleTech* universe.

JumpShips

JumpShips provide the only means of transportation between the far-flung star systems of the Inner Sphere, the Periphery and beyond. These vessels make interstellar leaps of 30 light-years at a time by harnessing the radiant energy of the stars with their huge solar-energy sails and Kearny-Fuchida hyperdrive technology. JumpShips are primarily used to transport DropShips between star systems.

WarShips

Heavily armored, massively armed and highly mobile, the military JumpShips known as WarShips generally have the firepower to destroy even an assault DropShip with a single volley. They usually need only fear another WarShip.

Space Stations

Numerous orbital facilities, colloquially known as space stations, serve multiple functions throughout the Inner Sphere. From factories to habitats, shipyards to system-defense stations, all of these facilities fall into one of three broad groups: low-orbit, geosynchronous-orbit or stable-point stations.

SUPPORT VEHICLES

In addition to the Support Vehicles already described, the *BattleTech* universe also includes satellites and rail systems.

Satellites

Used for communications, surveying and information-gathering, satellites rely on station-keeping drives and lack the powerful propulsion systems that would make them true spacecraft.

Rail

Rail systems transport cargo and passengers over land. Standard rail requires little technology to produce or maintain, but advanced maglev systems (which require a much higher level of technology) achieve far greater speed by suspending the train above the track and propelling it with powerful magnetic fields.

MOBILE STRUCTURES

An exceptionally rare sight in the *BattleTech* universe, mobile structures represent super-large units and mobile buildings. Such unique constructs are usually reserved for specialized planetary environments, where the costs of construction and maintenance are outweighed by the needs of survival, or the desire to plumb harsh environmental locations for rare minerals and so on.

RECORD SHEETS

Players use the following record sheets to track various types of information while playing *BattleTech*. Each type of unit ('Mech, ProtoMech, Combat Vehicle, infantry, battle armor, aerospace fighter, and so on) uses a unique record sheet, while the Support Vehicles use Combat Vehicle record sheets appropriate to the unit type. A complete description of each record sheet appears below.

Total Warfare introduces a new look to all the record sheets for the various unit types of *BattleTech*. While the following descriptions cover the layout of the new record sheets, in form and function they are similar enough that players should have no problems utilizing older record sheets.

Finally, new pre-generated record sheets include an illustration of the unit represented by the record sheet. However, the illustrations on each record sheet do not represent the exact variant of the unit detailed. Instead, those illustrations are from various

The FWLS Santorini *and FWLS* Galahad *(*Athena- *and* Eagle-*class WarShips) of House Marik deploy for maneuvering exercises.*

technical readouts and represent the stock design of the unit in question (i.e., while weapons and equipment may change, the basic look of a given unit always stays the same).

Note: Record sheets are not provided with this rulebook. Players will find blank, generic record sheets for the units presented in *Total Warfare* in the *TechManual*. Alternatively, players can find pre-generated record sheets for various units in other sourcebooks, or online (see *Record Sheets*, p. 11).

'MECH RECORD SHEET

Players use the 'Mech Record Sheet to track damage done to a BattleMech during combat. The same record sheet represents regular 'Mechs and OmniMechs. A different record sheet is provided for four-legged 'Mechs. The following paragraphs describe each section of the record sheet.

Armor Diagram

The Armor Diagram on the top right-hand side of the record sheet shows the arrangement of a BattleMech's armor plating, while the Internal Structure Diagram directly below it shows the arrangement of a 'Mech's internal structure. Each circle on the Armor Diagram represents a point of armor. Circles in excess of a specific BattleMech's armor rating are filled in prior to play. As weapon hits destroy the armor, the player checks off the appropriate circles. When all the circles in one location are filled in, damage transfers to the appropriate internal structure location, as shown on the Internal Structure Diagram. When all the circles in an internal structure location are filled in, that location is destroyed.

The Armor Diagram also shows the front and rear armor of the BattleMech's torso (the arms, legs and head do not have rear armor locations). The Damage Transfer Diagram, which appears at the bottom of the Critical Hit Table, shows where the player must transfer damage when an already destroyed location takes additional damage.

For ease of reference during game play, next to the name of each location on both the armor diagram, as well as the internal structure diagram, a line is provided to fill in that section's starting Armor Value (or in the case of the internal structure, the starting internal structure value).

'Mech Data

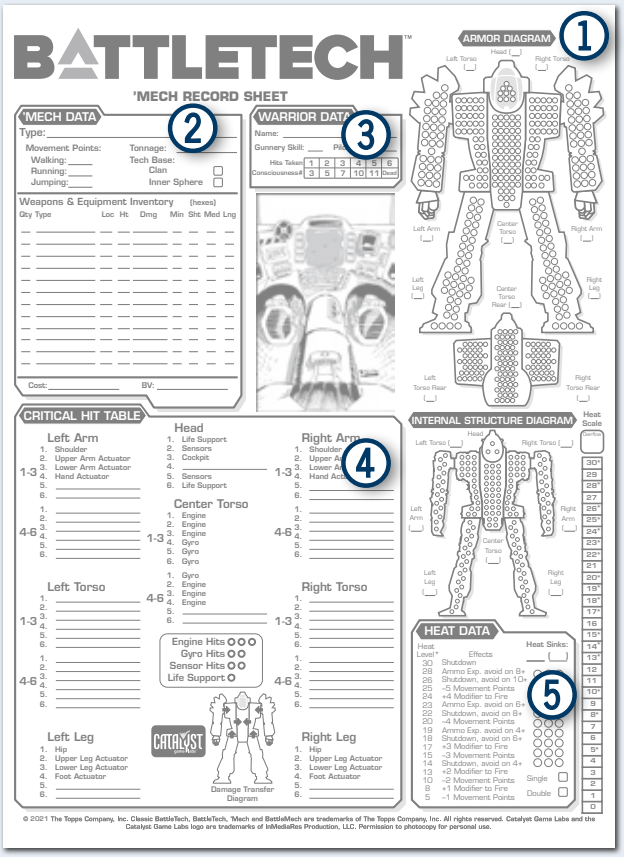
Located in the upper left-hand corner, this section of the record sheet lists the BattleMech's most important statistics, including type, tonnage, movement, and weapons inventory.

Warrior Data

This section lists the name, skills and condition of the MechWarrior piloting the BattleMech.

Critical Hit Table

The Critical Hit Table shows the physical location of the BattleMech's critical equipment, weapons and ammunition. Each part of the 'Mech's body, such as the left arm, right leg or center torso, is referred to as a location. Each line in a location



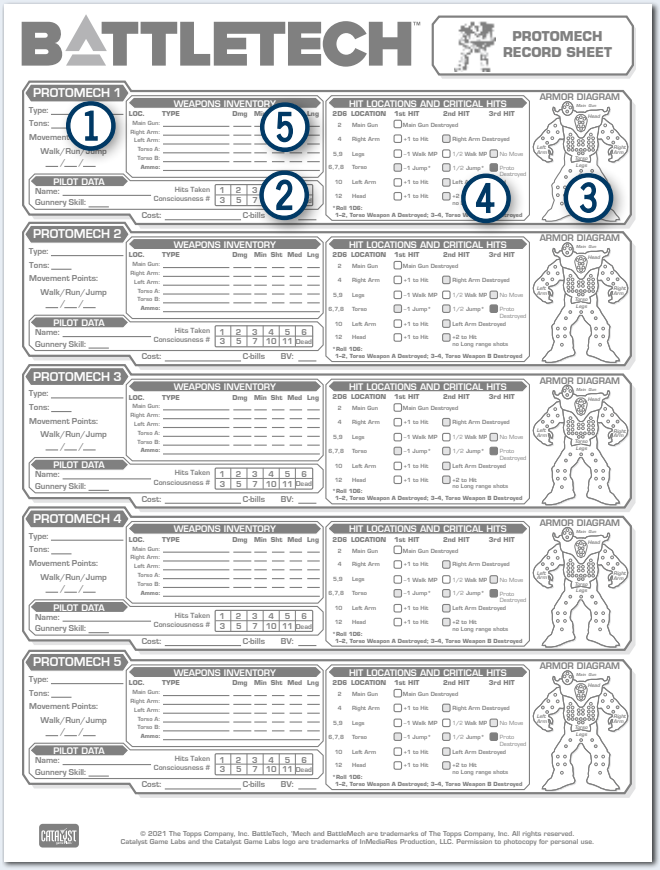
(six in the head and legs, twelve in other locations) is referred to as a critical slot, or a slot. Each slot usually represents a particular weapon or other piece of equipment susceptible to destruction. Most equipment occupies so much space in the 'Mech that it requires multiple slots on the table.

Heat Data and Heat Scale

Located in the bottom right-hand corner, the Heat Data and Heat Scale help the player track each 'Mech's internal heat buildup, as well as indicate how many heat sinks a 'Mech mounts (circles underneath the numerical value in the Heat Data section allow players to mark off heat sinks as they are damaged). As heat builds up, the player checks off the boxes in the Heat Scale from low to high (usually with a pencil, as heat will fluctuate up and down the Heat Scale all through a game). At certain levels of heat buildup (those heat levels with asterisks), corresponding information in the Heat Data describes the heat's effect on the 'Mech's operation. The blank space marked Heat Overflow at the top of the Heat Scale is used to record heat generated in excess of 30 points.

INDUSTRIALMECH RECORD SHEET

IndustrialMechs use 'Mech record sheets.



PROTOMECH RECORD SHEET

ProtoMech record sheets come five to a page, allowing players to track damage done to each individual ProtoMech in a Point.

ProtoMech Data

Though not named specifically on the record sheet, this section—located at the left-hand side of each ProtoMech record sheet—lists the ProtoMech's type, tonnage, and movement.

Pilot Data

This section lists the name, gunnery skill and condition of the pilot.

Armor Diagram

The Armor Diagram on the right-hand side of the record sheet shows the arrangement of each ProtoMech's armor plating and internal structure. Each circle represents a point of armor; white circles represent armor, while shaded circles represent internal structure. Circles in excess of a specific ProtoMech's armor rating are filled in prior to play. As weapon hits destroy the armor, the player checks off the appropriate circles. When all the circles in one location are filled in, that location is destroyed.

Hit Locations and Critical Hits

This section includes a Hit Location Table for each ProtoMech, as well as a list of specific effects from multiple critical hits to each location on the ProtoMech. The player marks off the boxes by each effect when a critical hit occurs. Shaded boxes represent damage to the MechWarrior.

Weapons Inventory

Located in the middle of each record sheet, this section includes a detailed inventory of weapons carried by each ProtoMech.

COMBAT VEHICLE RECORD SHEETS

Vehicle record sheets allow players to track damage done to individual vehicles during combat. Each type of vehicle (ground, VTOL and naval) uses a different record sheet, but they all share the features described below (with the exceptions of the Elevation and Depth tracks, as noted below).

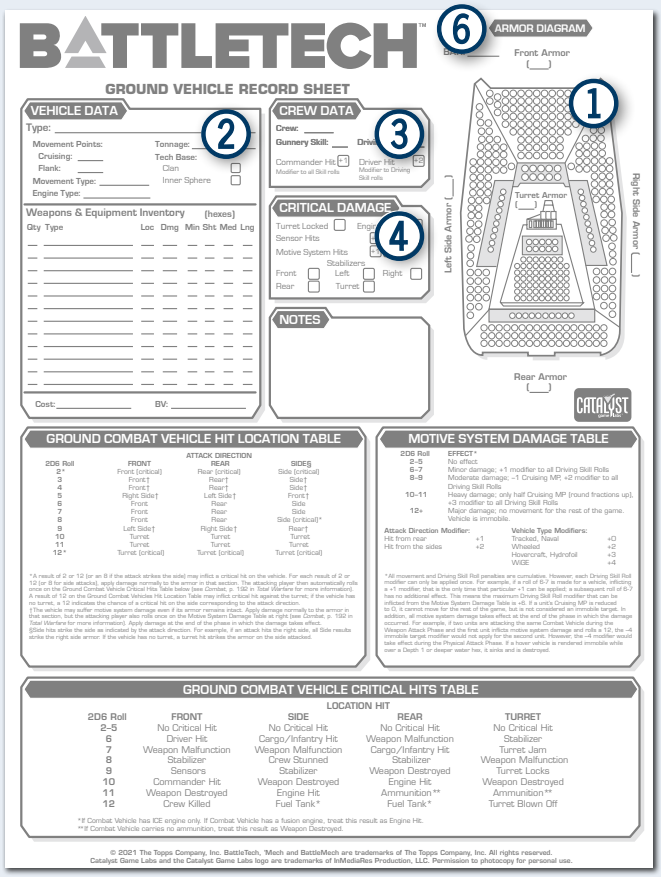
Armor Diagram

The Armor Diagram on the right-hand side of the record sheet shows the arrangement of the vehicle's armor plating and internal structure. Each circle represents a point of armor. Circles in excess of a specific vehicle's armor rating are filled in prior to play. As weapon hits destroy the armor, the player checks off the appropriate circles. When all the circles in one location are filled in, damage transfers to the adjacent internal structure, indicated on the sheet by shaded areas.

For ease of reference during game play, next to the name of each location on the armor diagram, a line is provided to fill in that section's starting Armor Value.

Vehicle Data

The Vehicle Data section lists the vehicle's other important statistics, including its tonnage, movement, weapons inventory and other components.



Crew Data

This section lists the name, skills and condition of the vehicle crew.

Critical Damage

This section allows players to track the critical damage that occurs to a vehicle during a game.

Elevation and Depth Tracks

Located on VTOL and naval record sheets (for use on submarines), this sections includes a Turn Row and an Elevation/Depth Row, which the player uses to track the VTOL's elevation or the submarine's depth at the end of the vehicle's movement. The current elevation of a VTOL cannot be lower than the level of the terrain over which the VTOL is moving, nor can the current depth of a submarine be greater than the water's depth or water's surface (see *VTOL Movement* and *Naval Movement*, pp. 54 and 56 respectively).

BAR

Barrier Armor Rating (BAR) is only used for support vehicles (see *Support Vehicle Record Sheets*, p. 31), and represents the fact that support vehicles are more susceptible to critical damage than Combat Vehicles (see *Damage*, p. 206, in the *Support Vehicles* section).

GENERIC CONVENTIONAL INFANTRY RECORD SHEET

Each generic conventional infantry record sheet includes five infantry platoons and are used for all conventional (non-battle armor) infantry types, with each box representing an individual trooper. Any excess armor boxes (i.e. troopers) are crossed off based upon the standard size of the platoon type used.

Movement MP and Type

This area of the record sheet covers the specific movement and type of infantry: i.e. 3 Ground MP, LRM (mechanized/wheeled); 1 Ground MP, Rifle, Ballistic (foot); and so on.

Skills

This area lists the specific skills of each infantry platoon.

Tables

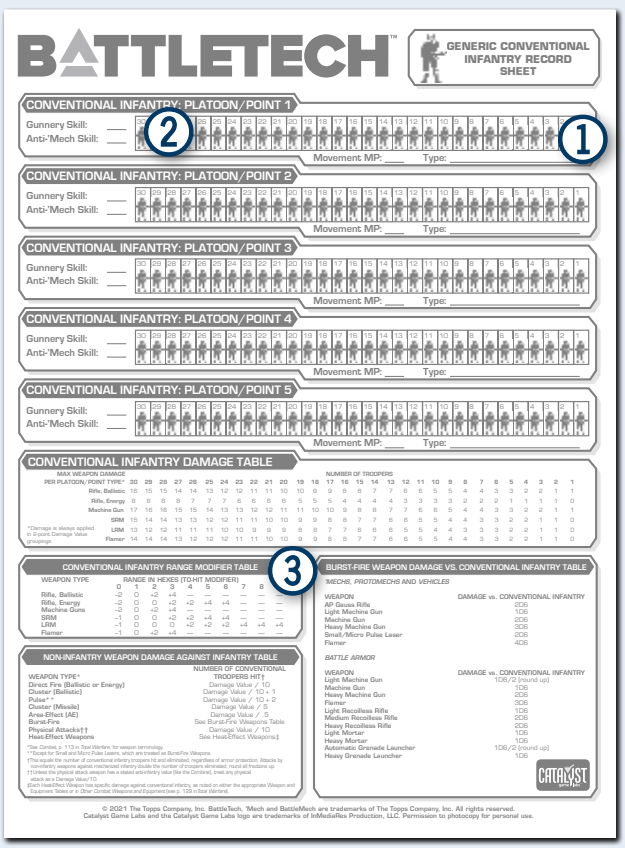
A series of tables are located on every record sheet and provide the data for all generic conventional infantry types; players are free to highlight specific sections of each table once infantry types have been assigned to aid in quick referencing during a game.

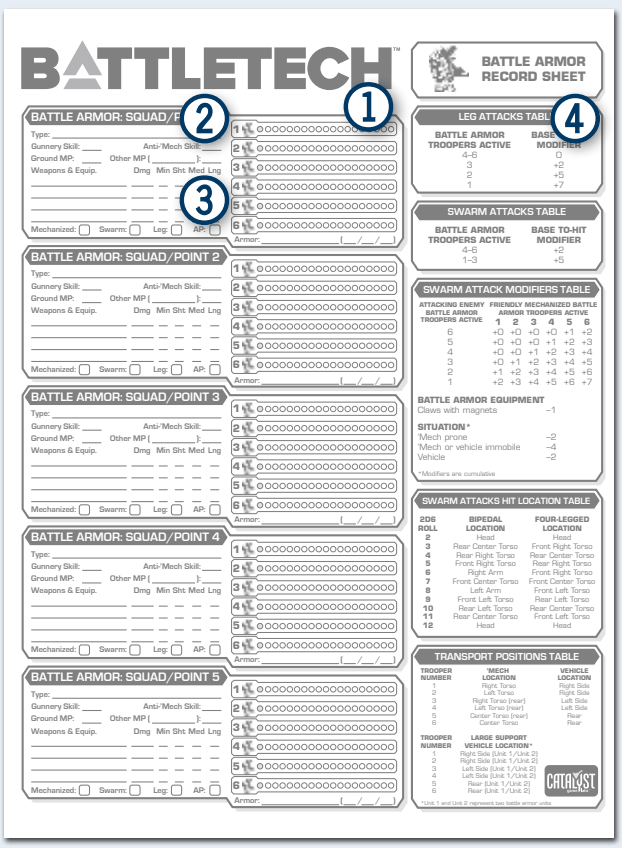
BATTLE ARMOR RECORD SHEET

Each battle armor record sheet can record the information for five Points or squads of battle armor. Each of the Point/squad's six rows represents a single trooper.

Armor

Each circle represents a point of armor. As a trooper takes damage, the player checks off the circles in that trooper's row, right to left, with the final shaded circle representing the trooper. When all the circles (including the shaded circle) are checked off, that trooper is out of the game (eliminated).





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Circles in excess of a specific battle armor's armor rating are filled in prior to play; excess troopers are also crossed off if using a faction that deploys less than six troopers per battle armor unit.

Underneath the rows of armor representing each trooper, players can note the specific armor type mounted, as well as any to-hit modifiers that might apply.

Data

This area lists the battle armor unit's other important statistics, including type, movement, skills, weapons inventory and other components.

Mechanized and Anti-'Mech Attacks

For ease of referencing during a game, players check the boxes indicating whether the battle armor unit can make Swarm or Leg Anti-'Mech attacks, an AP attack or can mount other units using the Mechanized Battle Armor rules.

Tables

A series of tables applicable to the specific abilities of battle armor units are included on every sheet.

AEROSPACE RECORD SHEETS

Though conventional and aerospace fighters, small craft and DropShips all use different record sheets, the forms share common features.

Armor Diagram

The Armor Diagram on the top right-hand side of the record sheet allows players to track damage sustained by the armor plating on the various facings of each unit. Each circle on the Armor Diagram represents a point of armor. Circles in excess of a specific aerospace unit's armor rating are filled in prior to play. As weapon hits destroy the armor, the player checks off the appropriate circles. When all the circles in a location are filled in, that location is destroyed.

The number of armor sections varies by ship class.

Each armor facing has a Damage Threshold. If the damage from a successful attack exceeds this threshold, critical damage may result (see *Damage Thresholds*, p. 239).

Critical Damage

The Critical Damage section allows players to record the status of various vital components that are vulnerable to weapons fire. Most systems have a number of boxes, one of which is crossed off each time the system suffers a critical hit. In most cases, a system's abilities deteriorate as boxes are crossed off, as noted by the modifiers printed in each box. When all the boxes for a system have suffered critical damage (the system has taken multiple hits), the system is destroyed.

Fighter Data

The Fighter Data section contains important statistics, such as Safe and Maximum thrust values and Structural Integrity, as well as the weapons carried by each unit and their firing arcs, heat build-up (for aerospace fighters and small craft), range and damage. This section also lists the name(s), skills and conditions of the pilot/crew piloting the aerospace unit.

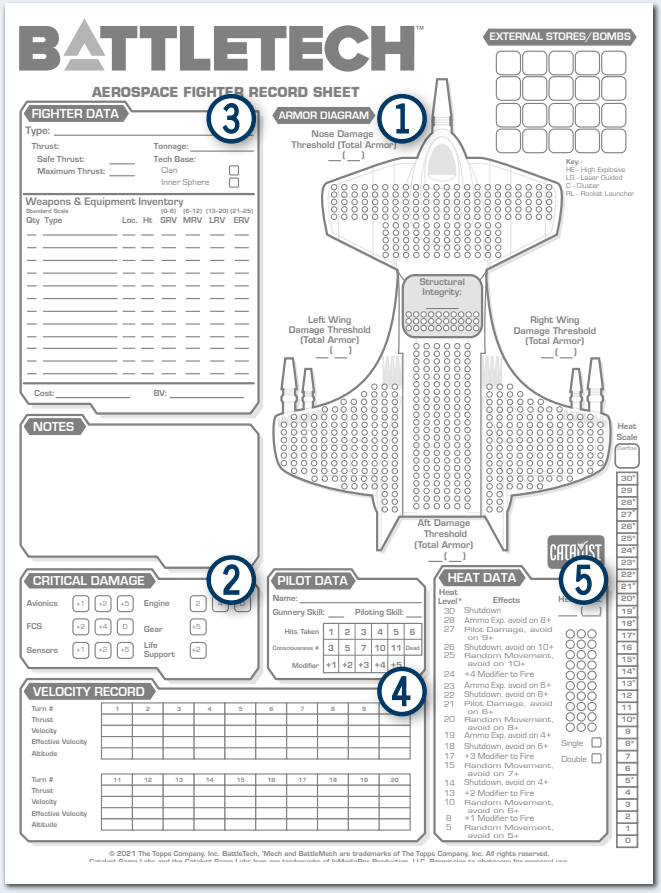
Velocity Record

This section provides space to record the thrust spent each turn, the current Velocity, as well as altitude when operation on a low-altitude map.

Heat Scale

Only aerospace fighters and Small Craft track heat and so have a Heat Scale on their record sheets.

Located in the bottom right-hand corner, the Heat Data and Heat Scale help the player track each aerospace's internal heat buildup, as well as indicate how many heat sinks an aerospace unit mounts (circles underneath the numerical value in the Heat Data section allow players to mark off heat sinks as they are damaged). As heat builds up, the player checks off the boxes in the Heat Scale from low to high (usually with a pencil, as heat will fluctuate up and down the Heat Scale all through a game). At certain levels of heat buildup (those heat levels with asterisks), corresponding information in the Heat Data describes the heat's effect on the aerospace unit's operation. The blank space marked Heat Overflow at the top of the Heat Scale is used to record heat generated in excess of 30 points.



SUPPORT VEHICLE RECORD SHEETS

Support Vehicle record sheets, depending on the unit in question, are identical in usage to the various record sheets described above (see *Barrier Armor Rating* below for the exception). Use the appropriate descriptions above when reviewing a Support Vehicle record sheet for use.

Barrier Armor Rating (BAR)

As described under Combat Vehicle Record Sheets, the armor of a Support Vehicle has a unique Barrier Armor Rating (BAR). This rating represents the fact that Support Vehicles are not Combat Vehicles and so their armor is more susceptible to damage (see *Damage*, p. 206).

MAPSHEETS

The 18-by-22 inch mapsheets used in *BattleTech* are divided into six-sided areas called hexes (short for hexagon); whether paper or game board-style, both are called "mapsheets" and treated identically in the rules. The players use these hexes to regulate movement and combat by moving units from hex to hex during a turn. Each hex on the mapsheet represents an area of ground 30 meters across (roughly 100 feet).

The forests, rivers, hills, buildings and rough areas on a *BattleTech* mapsheet represent a typical mixture of terrain found on the habitable worlds of the Inner Sphere. The following symbols represent each type of terrain as described, and the accompanying text gives an overview of the terrain's effects in the game. Specific rules regarding the effect of terrain on movement and combat appear in the *Movement* and *Combat* sections.

Note: Only full hexes are considered legal in game play. Players may not move into or through, or end their movement in, a half hex. Units that do so (voluntarily or not) are considered destroyed for the remainder of the scenario.

Level

The level of a hex is the height to which it rises above the prevailing terrain. All terrain has a level, but each hex's level is independent of the type of terrain it contains, such as woods or water. Hexes with levels higher than 0 are also referred to as hills. If it is not marked on the map, assume a hex's level is 0.

This height is expressed in terms of levels. Level 1 is approximately six meters high, waist-high to a 'Mech. A 'Mech (bipedal or four-legged) standing behind a Level 1 hill may be partially hidden, and a vehicle, ProtoMech or infantry unit behind a Level 1 hill is completely hidden. Level 2 terrain is approximately twelve meters high, roughly the same height as a 'Mech. A 'Mech standing behind Level 2 terrain is completely hidden. Level 3 terrain is approximately eighteen meters high, and so on. The level of a hex is considered equal to the highest level present in it.

Sublevels: Hexes with levels lower than 0 are referred to as sinkholes. These hexes are marked in sublevels that correspond to levels in reverse. For example, a Sublevel 1 hex is six meters deep, while a Sublevel 2 hex is twelve meters deep, and so on.

The forces of the Allied Mercenary Command and the rogue "Emperor" Baranov clash on the planet Hall.

If any part of a hex contains a sublevel, the entire hex is considered to be the deepest sublevel marked in it. The exception to this rule occurs if the hex also contains a level greater than 0, in which case the level of the hill takes precedence as described above.

CLEAR

Clear terrain represents fields, meadows and other grasslands. The ground is firm and may be gently rolling, but its level does not change significantly from one side of the hex to the other.

If a hex is not clearly marked as containing another terrain type, assume it is clear.

LIGHT WOODS

Light woods terrain is covered with sparse trees up to twelve meters tall. Most units cannot cross this terrain as easily as clear terrain. Unless the wood is relatively large (i.e., covers numerous hexes), units may have line of sight through light woods. When light woods affect line of sight, they do so for 2 levels above the level of their hex. (See *Intervening Terrain*, p. 100.)

HEAVY WOODS

Heavily wooded terrain is covered thickly with twelve-meter-tall trees, making movement through these areas very difficult. Light woods often border heavy woods. It is difficult to see through heavy woods. As with light woods, heavy woods affect line of sight for 2 levels above the level of their hex (see *Intervening Terrain*, p. 100).

ROUGH

Rough terrain represents broken, rocky and jumbled ground. Though firm, the uneven surface makes it more difficult to cross than clear terrain. Commonly encountered near cliffs and bluffs, rough ground may also be formed by the destruction of woods.

WATER

Water hexes are covered by streams, rivers, swamps, ponds or lakes. A water hex is defined by depth (see *Level Change*, p. 48). Depth 0 water is very shallow, only ankle-deep on a 'Mech, and represents terrain such as streams, swamps or shallow ponds. Depth 1 water is six meters deep, or one level below ground level (about waist-high on a 'Mech). Depth 2 water is twelve meters deep, enough to just cover a 'Mech. Depth 3 water is eighteen meters deep, and so on. Even when a shallow stream fills only part of a hex, that entire hex is considered a water hex.

Water hexes effectively have two levels, the surface of the water and the bed (or floor) of the body of water they represent. The surface level is equal to the level of the hex. The bed level is equal to the level of the hex minus the depth of the water. For example, for a Depth 2 river in a Level 3 hex, the surface is at Level 3 while the riverbed is at Level 1.

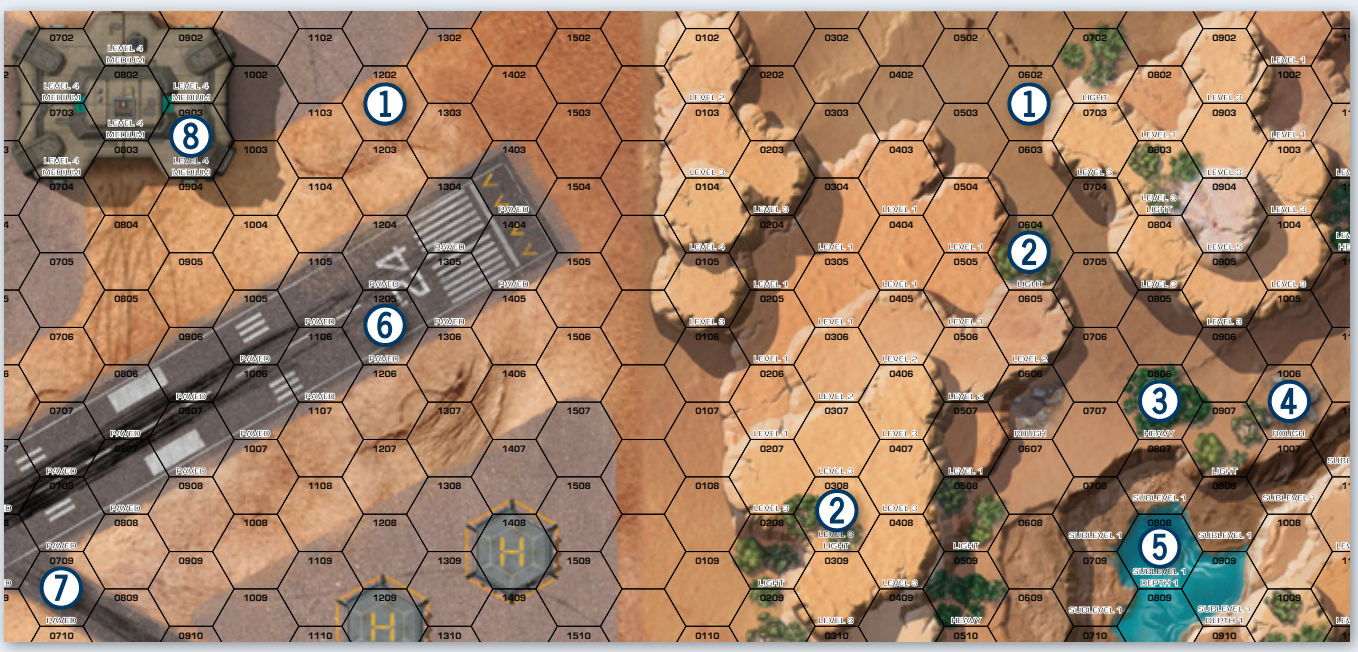
PAVEMENT

A paved hex offers a fairly smooth and very hard surface. Paved hexes typically include roads, sidewalks and landing fields made of asphalt, cement or even cobblestone. This terrain increases the speed of ground vehicles, but running 'Mechs and ground vehicles moving at flank speed may skid on paved hexes (see *Movement on Pavement*, p. 61).

ROADS

Roads are narrow strips of pavement that pass through other terrain. All the rules that apply to a paved hex apply to a road hex, except that units must move from one road or paved hex to another road or paved hex to be considered "on" the road. A unit not on the road in a hex is considered to be moving on the underlying terrain type.

• SAMPLE MAPSHEET AND TERRAIN HEXES •



BRIDGES

When a road passes over water or over terrain that is lower than the road level, that road is considered a bridge. Units moving along a road may use a bridge and so ignore the normal terrain restrictions and movement penalties they otherwise would suffer while moving through the underlying terrain (for example, through a water hex or across changes of level). The Construction Factor of a bridge represents the amount of weight each hex of the bridge can bear. Any bridge not strong enough to support the weight of the crossing unit will collapse. (See *Collapse*, p. 176 in *Buildings*.)

BUILDINGS

Buildings are usually multi-hex terrain, representing a variety of different structures, as described below (see *Buildings*, p. 166, for specific rules covering buildings). A building hex has the structure's type and level printed on it.

Light Buildings

Light buildings generally represent small wooden or sheet-metal structures through which most 'Mechs and vehicles can move with little trouble.

Medium Buildings

Constructed from stone, heavy wood and metal, medium buildings represent light industrial structures that offer more substance than light buildings. Their heavier construction materials mean they can take more damage than light buildings before being reduced to rubble.

Heavy Buildings

Usually part of industrial complexes, heavy buildings are constructed of reinforced concrete, built to bear large loads. All but the heaviest 'Mechs can jump onto heavy buildings without collapsing the structure.

Hardened Buildings

The builders intentionally strengthen hardened buildings to withstand combat. Of all types of buildings, hardened structures can bear the most weight and sustain the most damage before being reduced to rubble.

Gal-1GLS Gallowglas, Fourth Donegal Guards (House Steiner)

RAILROADS

This terrain type represents a variety of tracks, from traditional steel rails on wooden ties to advanced extruded ferrocrete troughs for maglevs and more. All ground vehicles and ´Mechs treat railroad hexes as rough terrain, but railroad hexes have no effect on any other unit's movement and do not affect line of sight.

COUNTERS

Certain terrain features, such as rubble—or buildings, if players wish to add buildings to a mapsheet that does not have building hexes already printed on it—can be represented on the map by cardboard or paper counters. You can make your own, or purchase generic counters for such use. Rather than printing these kinds of features on the maps, using counters to represent them allows the players to alter their locations before the game begins, based on the requirements of the scenario being played or on mutual player agreement.

The following text offers an overview of counters used in the game and their effects. Specific rules regarding effects on movement and combat appear in the appropriate sections later in this book.

BUILDINGS AND BRIDGES

Buildings and bridges represented on a map by counters—as opposed to already printed on a map sheet—function just like other types of buildings and bridges (see *Buildings* and *Bridge Movement*, pp. 166 and 62, respectively).

RUBBLE

Weapons fire, fire damage and physical damage inflicted by BattleMechs can reduce a building to rubble. A rubble hex is difficult to move through.

Only the destruction of a building results in a rubble hex. The reduction of terrain other than a building results in a rough hex (see *Clearing Woods*, p. 112).

DICE

BattleTech requires players to use two six-sided dice, preferably of two different colors. If the situation requires the player to roll one die, the rules indicate this in shorthand as 1D6. Unless otherwise noted, the abbreviation 2D6 means the player rolls both dice and adds the results together.

MILITARY ORGANIZATION

—From *Modern Warfare: A Manual of Tactics and Strategy, 2nd Edition*, by permission of the College of Military Arts, New Avalon Institute of Science

Most Great House militaries organize their forces along the Star League model described below. Irregular forces such as mercenary commands and Periphery armies often use organization schemes designed to maximize their limited resources, bolstering their main forces with vehicles and/or infantry.

LANCE/PLATOON/SQUAD

A lance consists of four BattleMechs or combat vehicles commanded by a lieutenant. The standard aerospace lance (commonly called a flight) consists of two fighters.

The infantry equivalent of a lance is a platoon, which can consist of anywhere between eight and 28 men depending on infantry type. The smallest—and most rarely deployed—infantry organization is a squad, usually consisting of seven men. Battle armor infantry typically deploy in squads of four to six troopers, and are formed into platoons of four to six squads for administrative purposes.

COMPANY

The standard company consists of three lances (twelve BattleMechs or combat vehicles) commanded by a captain. A fourth lance of aerospace fighters may be assigned to the company to support the primary BattleMech force.

A company of aerospace fighters is often referred to as a squadron and consists of three lances/flights (six fighters). An infantry company consists of three platoons, often with an attached command squad.

BATTALION

A standard battalion consists of three companies (36 BattleMechs or combat vehicles) commanded by a colonel or major. Battalions may include a command lance that provides mobile command and logistical support. Some battalions organize attached aerospace lances as separate companies or squadrons. Though the standard Star League organization included a command lance at the battalion level, this is not current standard practice and varies with each military.

A battalion of aerospace squadrons is often referred to as a wing and consists of three squadrons (eighteen fighters), often with an attached command lance/flight. An infantry battalion consists of three companies, often with an attached command squad.

REGIMENT

A standard regiment consists of three to five battalions (108 to 180 BattleMechs and/or combat vehicles) commanded by a general or colonel. DropShips or JumpShips are usually attached to regiments, as are support battalions such as infantry or tank forces.

A regiment of aerospace fighters consists of two to three wings, with an attached command lance/flight. An infantry regiment consists of three to four battalions, often with an attached command squad.

REGIMENTAL COMBAT TEAM (RCT)

Commanded by a general, the modern regimental combat team (RCT) consists of one BattleMech regiment, three regiments of combat vehicles, five infantry regiments, one artillery battalion and two aerospace fighter wings.

Federated Suns military leaders introduced RCTs to modern warfare during the Succession Wars. Though most Great Houses now use RCTs to some extent, the Federated Suns and Lyran Alliance use this form of organization almost exclusively.

Father,

While current events have conspired to keep me away from this project, your words return to me all too often and I strive to find the time to update and expand my Secret History of the Clans. In an attempt to calm my mind following the most recent fighting, I reread a passage I have perused at least a dozen times, only to spot an error that should have been caught long ago.

Below is a supposed direct excerpt from Nicholas Kerensky's own papers, and yet the timeline is off. We have irrefutable proof that the OmniMech debuted in 2854, while battle armor saw its first use in 2868, and then the Horses first fielded their genetically enhanced Elementals in 2870. And yet Nicholas died in 2834, a decade before dedicated research initiated the development of the OmniMech.

Is this simply an overzealous scientist casteman transcribing material and updating it appropriately? Or, as you and I have surmised on numerous occasions, is this a move of later ilKhans to make sure that the all-powerful Founder remained all-knowing in word as well as deed?

I know such thoughts are trivial next to the horrors unfolding, but in such minutiae sanity can be found.

Take care, father.

Phelan
Arc-Royal, 14 July, 3069

Excerpted from the papers of Nicholas Kerensky:

We must eradicate all vestiges of the tainted past so that we can forge ourselves into a people worthy of our destiny. We must kill the traditions that blinded and crippled us for so long, for the old ways are like shackles that hinder our true strength. We are a new people, reborn in the fire, and we must follow new ways.

Henceforth, our eight hundred warriors will be divided into twenty Clans. And they will no longer fight as lances, companies, battalions or regiments. Instead, they will enter battle in Points, Stars, Binaries, Clusters and Galaxies.

SMALL FORMATIONS: POINT, STAR AND NOVA

Each MechWarrior shall form a Point. In the absence of an OmniMech, two aerospace fighters or five battle-armored Elementals shall comprise a Point. *(Editor's Note: Nicholas may not have liked vehicles, but the Clans use them, with two in a Point.)* Five Points shall form a Star and follow the orders of a Star Commander.

A Star of OmniMechs and a Star of Elementals shall together form a Nova. Each OmniMech will carry a Point of Elementals into battle.

BINARY/TRINARY/SUPERNOVA

Two Stars shall form a Binary. Three shall form a Trinary. Star Captains shall lead these forces. Nova pairs shall fight as Supernova Binaries, and three Novas shall form a Supernova Trinary.

LARGE FORMATIONS: CLUSTER AND GALAXY

A Cluster shall contain three to five Binaries, Trinaries or Supernovas. A Star Colonel shall command each Cluster. Three to five Clusters shall comprise a Galaxy, led by a Galaxy Commander.

—From *Field Manual: ComStar*, a military readiness report on Com Guards forces, commissioned by Precentor Martial Victor Steiner-Davion, 3062. Second Printing (3065). Used with Permission.

FORCE STRUCTURE

ComStar forces diverge from the Star League-originated system of lances, companies, battalions and so forth. Instead, they use a system based on multiples of six that offers enormous flexibility for deployments. Both the Com Guards and the Word of Blake Militia make use of combined-arms forces, for which this system is ideally suited.

The smallest formation is a Level I, which comprises a single BattleMech, fighter, tank or infantry platoon. Such forces are the building blocks of ComStar armies. The next formation, a Level II, contains six Level Is and is thus roughly analogous to a reinforced lance or a demi-company. In many cases a Level II contains forces of the same type (for example, BattleMechs), but combined-arms groups are also possible at this level.

The next formation, a Level III, contains six Level II formations and is the ComStar equivalent of a battalion (and is frequently referred to as such). Level IIIs are almost all combined-arms formations. Level IIIs are usually the largest formation to operate together on a regular basis.

Level IV formations, known as divisions, contain six Level III formations, making them equivalent to two SLDF-style regiments. Divisions are the largest permanent formation and form the backbone of the administrative network. The Com Guards also use a larger formation, the Level V or army that contains between four and six divisions. Though principally administrative, Level V formations can form field commands, as demonstrated on Tukayyid in 3052.

Composition

Each ComStar/Word of Blake formation is a combined-arms force and uses a Greek letter to denote the proportion of 'Mech, armor and infantry forces it contains (aerospace forces are more or less constant). Letters closer to the start of the alphabet contain a higher proportion of 'Mechs and are intended for offensive operations, while letters toward the end of the alphabet imply a higher proportion of armor and infantry and are generally used by garrison or city-fighting formations.

—Partial transcript of Caradoc Trevena's seminar of '66, Focht War College.

Most military forces in known space organize in multiples of four, five or six: lance, Star or Level II. And while I could bore you with well-known parlance, I leave the standard lance, company, battalion and so forth discussion for another day. And hopefully another speaker.

However, some military vernacular isn't in common usage. I'll quickly cover those.

A brigade is formed from a group of three or more regiments, usually of a similar composition. Though not often used in modern military combat operations (or parlance), a division is made up of two or more brigades. Don't confuse this with a ComStar division; again, see another day and another speaker for *that* information. A corps is composed of five to ten divisions, and finally an army consists of three to five corps.

The term "combat command" usually refers to a temporarily organized force—generally larger than a regiment—that combines smaller, cohesive 'Mech, armored and infantry forces from several different commands into a unified force. These formations give a commander flexibility and capabilities beyond what the independent components of the combat command can muster. Rare for small-scale battles, such commands come into their own during large-scale operations. Of course, the rarity of such commands applies only to the Great Houses, not to the Com Guards; one might argue that every Com Guards Level III is a combat command.

Continuing, a combat organization represents any and all forces—whether a single regiment or multiple regiments—that fall under the same administrative chain of command, such as the Davion Brigade of Guards, House Kurita's Sword of Light or the Marik Militias.

Now, with your pens scribbling furiously over these grandiose military terms, don't forget that not every force strictly adheres to such regimentation.

First off, you've got your down-on-their-luck forces—mercenaries, forgotten planetary militias or Periphery troops—that simply lack the training and/or resources to field such organized military commands. Ad-hoc is generally the name of their game—these types of forces put together whatever they can. They can show you some unpleasant surprises if you're not careful.

Then there are the oddball militaries that organize along unique lines. We see the most famous example in the legions of the Marian Hegemony, which organize in five 'Mechs or vehicles to a century, two centuries to a maniple, three maniples to a cohort and three to five cohorts to a legion.

Though almost annihilated during the FedCom Civil War, a lance of Davion Assault Guards show their indomitable will to defend their realm.

This section provides the sequence of play for *BattleTech* and presents the basic rules for playing the men and women (MechWarriors, aerospace pilots, vehicle crews, infantry troopers and so on) who pilot or crew the machines of war in *BattleTech*.

To begin a game, the players lay out the *BattleTech* mapsheet(s) on a table or on the floor in a way agreed to by all players, or, if using a published scenario, according to the game setup given for the scenario to be played. This step may include placing buildings of varying height and type on the mapsheets, or placing other types of counters. Guidelines for creating your own scenarios appear in *Creating Scenarios,* p. 256.

Next, players should fill out the appropriate record sheets for each of their units involved in the battle. The 'Mech, vehicle, aerospace fighter and DropShip descriptions required to fill out various unit record sheets can be found in any *BattleTech* technical readout, or players may purchase pre-filled out record sheets from store.catalystgamelabs.com.

If all players agree, they can create one-of-a-kind units or make minor tweaks to existing units using the various construction rules found in *TechManual*.

A NOTE ON SCALE AND THE RULES

BattleTech turns represent ten seconds of real time, while each hex on a mapsheet represents thirty meters of a battlefield (for the exception, see *Aerospace Movement*, p. 74). However, players should note that such "real world" terms are abstractions when applied to the board game. *BattleTech* is a game, not a detailed simulation. Therefore, the real world must take a back seat to game play—for simplicity, length of play, space required and simple enjoyment.

For example, while only a single 'Mech can occupy a hex, it does not actually take up the entire hex. A 30-meter-wide hex offers plenty of room for a twelve-meter-tall 'Mech to move around and avoid fire. In real-world terms, another 'Mech could easily fit in that space as well. However, for ease of play, a 'Mech tactically controls the hex it occupies even though it does not physically fill that space. Therefore, only a single 'Mech is allowed in a hex.

Weapon ranges provide another example. Players will quickly realize that the longest-range standard weapon in the game can only hit targets out to thirty hexes (900 meters) from the attacker. Real-world primary main battle tank weapons have operational targeting ranges in excess of 4,000 meters. Because *BattleTech* mapsheets are only seventeen hexes long, recreating real-world ranges on a table would require more than seven mapsheets laid end to end, for a playing space greater than twelve feet in length. Not many people have that type of table space, nor would it provide players with any tactical maneuvering room. Anywhere a player might move a unit on the map, an attacker could hit that unit.

Finally, the abstractions of real-world factors such as firing distance often can enhance the aesthetic of the game universe. *BattleTech* has always been about "in-your-face" combat, which works best with closer ranges. Players are encouraged to remember such abstractions and not get bogged down in real-world mechanics and physics. Just enjoy the game!

INDIVIDUAL UNIT RULES

Beginning with *Playing the Game* and proceeding through *Buildings*, the following sections present the rules as they apply to all units equally, with specific exceptions noted in each section under appropriate headers. ProtoMechs, infantry, Combat Vehicles, Support Vehicles and aerospace units have additional specific rules, which appear in their respective sections.

Because BattleMechs are the primary focus of *BattleTech*, the rules often focus on ´Mechs first (movement, combat and so on), and then provide specifics for other types of units.

SEQUENCE OF PLAY

A *BattleTech* game consists of a series of turns. During each turn, all units on the map have an opportunity to move and fire their weapons.

Each turn consists of several smaller segments of time, called phases. During each phase, players may take one type of action, such as movement or combat. The players execute the phases in a given order. Specific actions, movement, effects of damage and so on are fully explained in separate sections later in this book.

Each turn includes the following phases, performed in the following order:

1. Initiative Phase
2. Movement Phase (Ground)
3. Movement Phase (Aerospace)
4. Weapon Attack Phase
5. Physical Attack Phase
6. Heat Phase
7. End Phase

INITIATIVE PHASE

One player from each side rolls 2D6 and adds the results together to determine his team's Initiative. The team with the higher result has Initiative throughout the turn. Re-roll all ties.

MOVEMENT PHASE (GROUND)

The team that lost Initiative chooses one ground unit (non-aerospace; this includes VTOLs) and moves it first. If this team has more ground units than the team that won Initiative, it may need to move more than one ground unit, as described in *Unequal Numbers of Units*, page 39.

The team that won Initiative then moves one ground unit. If this team has more ground units than the team that lost Initiative, it may need to move more than one ground unit (see *Unequal Numbers of Units*).

Movement alternates between sides until all ground units have been moved. Each time a player must move a ground unit, he may designate movement for any ground unit that has not been destroyed, even if a unit is completely immobile, as long as it is not destroyed it can still be given a "move" action, and it will remain in its hex. For example, units whose warriors are unconscious are not destroyed and can be designated to remain immobile.

MOVEMENT PHASE (AEROSPACE)

The team that lost Initiative chooses one aerospace (non-ground) unit and moves it first. If this team has more aerospace units than the team that won, it may need to move more than one aerospace unit (see *Unequal Numbers of Units*).

The team that won Initiative then moves one aerospace unit. If this team has more aerospace units than the team that lost, it may need to move more than one aerospace unit.

Movement alternates between sides until all aerospace units have been moved. Each time a player must move an aerospace unit, he may designate movement for any aerospace unit that has not been destroyed, even if the move is to expend no thrust. Aerospace units whose warriors are unconscious are not destroyed and can be designated to expend no thrust, even if the unit is currently out of control; see *Out-of-Control Effects*, page 93.

Any aerospace units that are grounded or that crashed but survived are considered a ground unit. Players may move them during the Movement Phase (Ground).

WEAPON ATTACK PHASE

The team that lost Initiative chooses a unit (ground or aerospace) to declare fire first. If this team has more units than the team that won Initiative, the players may need to declare attacks for more than one unit as described in *Unequal Numbers of Units*, page 39. The player controlling the firing unit declares whether it will twist its torso or flip its arms or turn its turret, and in which direction. He must declare any attacks he plans to make using his unit's weapons—or the type of attack in the case of aerospace units—specifying which weapons he will fire and at what target(s). If a weapon uses special ammo loads, such as LB-X cluster munitions, or can make special types of attacks, such as double-firing an Ultra autocannon, or can produce any other unusual effects, the player must declare those effects at this time.

The team that won Initiative then chooses a unit (ground or aerospace) to declare fire. If this team has more units than the team that lost Initiative, the players may be required to declare attacks for more than one unit (see *Unequal Numbers of Units*). The player controlling the firing unit declares any torso or turret twists and attacks he plans to make using that unit's weapons, as described above.

The act of declaring attacks alternates between players until all fire has been declared. Each time a player must declare an attack, he may do so for any unit that has not been destroyed, even if the declaration is to make no attack.

Torso/Turret Twist

Torso or turret twists are made when declaring a weapon attack, but the torso or turret remains pointed in the same direction throughout the remainder of the turn. This affects physical attack firing arcs as well; the torso or turret returns to its forward-facing position during the End Phase (see next page).

Resolving Weapons Fire

Players resolve weapons fire one unit at a time. The order in which each unit's successful attacks are resolved is up to that unit's controlling player. All weapons attacks by one unit should be resolved before those of the next unit in order for the players to more easily track which weapons have fired.

All declared attacks must be made, even if the intended target is destroyed before all attacks against it have been resolved. Also, players must resolve all declared weapons fire for the purpose of tracking ammunition and heat. In addition, players may not change an attack declaration once made, as the time-scale (and the general confusion of battle) makes it impossible to do other than follow through with a declared attack.

Determining Damage

Damage from weapon attacks takes effect next. Players record damage as attacks are resolved, but this damage does not affect the unit's ability to attack during this phase. This means a unit may make its declared attacks in the same phase even if that unit or its weapons are destroyed.

At the end of the phase, all damage takes effect simultaneously. Players must make any Piloting Skill Rolls and/or Control Rolls required according to the effects of weapon attacks. Damage taken by a unit during the Weapon Attack Phase takes effect before the start of the same turn's Physical Attack Phase. As needed, Piloting Skill Rolls, Control Rolls and Consciousness Rolls may be required at the end of the Weapon Attack Phase.

Note that even though damage does not take effect until the end of the phase, destroyed sections take effect immediately for the purposes of assigning damage. For example, if a 'Mech's torso is destroyed during the Weapon Attack Phase, the appropriate arm falls off immediately, and so any other damage in the same Weapon Attack Phase that strikes the arm automatically transfers.

PHYSICAL ATTACK PHASE

Players repeat the steps given for the Weapon Attack Phase, with all damage from physical attacks taking effect before the Heat Phase. As needed, Piloting Skill rolls, Control rolls and Consciousness rolls may be required at the end of the Physical Attack Phase.

HEAT PHASE

Players adjust their units' heat scales for units that track heat, to reflect any heat built up or lost during the turn. Resolve any temporary or permanent damage caused by excessive internal heat at this time. Heat effects may also damage a warrior, resulting in a Consciousness roll (see p. 41).

ProtoMechs, infantry, and Combat and Support Vehicles do not keep track of heat. See *Heat*, page 158, for specific rules regarding such units during this phase.

END PHASE

Players whose warriors were unconscious during the Initiative Phase of this turn now roll 2D6 to see if the pilot regained consciousness during this turn. Players may also execute any miscellaneous actions remaining in the turn, such as switching heat sinks on or off. The specific rules for such actions state whether or not they take place during the End Phase.

Players repeat all the steps given above until one team meets its victory conditions for the scenario. Under normal circumstances, the team with the last surviving unit(s) left on the map wins. If the last units from each team are destroyed simultaneously in the same turn, or if the last units from each team cannot move and have no ability to damage one another, the game is a draw. The players may set other victory conditions by mutual agreement before play begins or by using the victory conditions given in a published scenario. See *Creating Scenarios,* page 256, for guidelines on setting up unique scenarios.

Torso/Turret Twist: Torsos and turrets that were turned or twisted return to a forward-facing position during the End Phase. Turrets jammed by damage (see *Ground Combat Vehicle Critical Hit Effects*, p. 193) do not return to a forward-facing position, but remain in their current facing for the remainder of the game. BattleMech torsos cannot be jammed in this fashion.

A Mad Cat Mk II *and* Phoenix Hawk IIC *from House Kurita's Ryuken-ni brave a lava flow to corner their prey.*

Unequal Numbers of Units

The Movement Phase (Ground), Movement Phase (Aerospace), Weapon Attack Phase and Physical Attack Phase require each player to alternate moving or declaring attacks with his or her units. When both sides have an equal number of units, each player simply takes a turn moving or declaring a single unit's action, then the other player declares movement or an action for one unit, and so on. If the number of units on each side is not equal, however, this procedure must be altered.

If, prior to any pair of movement or attack declarations, one team has at least twice as many units left to declare for as the other team, the team with twice as many units declares for two units rather than one. If one team has at least three times as many units, it declares for three each time, and so on.

See the example below for how to handle unequal numbers of units.

At the beginning of the Movement Phase (Ground), Side A has eight units and Side B has five units. Side A wins Initiative. Before the first pair of movements, Side A does not have double or more the number of units Side B has remaining to move, and so Side B moves one unit, then Side A moves one unit. Now Side A has seven units left to move, while Side B has four units left to move. Because Side A still does not have twice as many units left, each side again moves one unit. Before the third pair of movements, Side A has six units left to move, twice as many as the three units remaining for Side B. This means Side A must now move two units for every one that Side B moves.

The following table shows how many units each side moves during this Movement Phase (Ground).

Move No.	Side B Units Left to Move	Side A Units Left to Move	Side B Moves	Side A Moves
1	5	8	1	1
2	4	7	1	1
3	3	6	1	2
4	2	4	1	2
5	1	2	1	2

Warriors

The soldiers who pilot BattleMechs are called MechWarriors; aerospace and conventional fighter jockeys are simply called pilots. A BattleMech or fighter is knocked out of action if its MechWarrior or pilot is killed or seriously injured, even if the machine itself suffers only minor damage.

Vehicles and DropShips are piloted by crews (several individuals who work together to make a unit function properly), and infantry units represent a platoon of individual soldiers. The battlefield performance of these unit types degrades as their crews or platoons take damage. For purposes of *BattleTech* game rules, the term "warrior" represents the human element of any unit, whether a single individual or a crew of many.

SKILLS

Though warriors possess different skills, for purposes of *BattleTech* they use only two skills in combat: Piloting/Driving and Gunnery. Skills have a rating; the lower the skill rating, the better the warrior is at the skill.

Piloting Skill represents a warrior's ability to control his machine's movements. This skill includes keeping a 'Mech from falling down (see *Piloting/Driving Skill Rolls*, p. 59), keeping an aerospace fighter from tumbling out of control (see *Control Rolls*, p. 92), keeping a vehicle from skidding (see *Skidding*, p. 62, *Sideslipping*, p. 67) and so on.

Gunnery Skill helps determine how easy or difficult it is for the warrior to make a successful shot using his unit's weapons. See *Firing Weapons*, page 106.

Vehicles: Vehicle crews have Driving Skill, used in the same way as Piloting Skill.

Leftenant Terrero of the Third Crucis Lancers suits up and prepares to board his Davion AS7-D Atlas.

Infantry: Infantry units have Gunnery Skill, but no Piloting Skill. In addition, only infantry units may also have Anti-'Mech Skill.

ProtoMechs: The unique capabilities of ProtoMechs mean that ProtoMech pilots never need to make Piloting Skill Rolls, and so these pilots have only Gunnery Skill (see *Piloting Skill Rolls*, p. 59).

Default Skill Ratings

Inner Sphere and Clan warriors have different average Piloting and Gunnery skills, depending on the type of unit. Though these skill ratings can change (see *Skill Improvement*, below), unless otherwise stated in the scenario being played, assume all warriors have average skills as shown on the Average Skills Table below. Rather than defaulting to these skill ratings, players may use the *Experience Ratings and Skills* rules on page 273.

Piloting/Driving Skill and Control Rolls

When a unit (piloted by a warrior with Piloting or Driving skill) attempts a potentially dangerous maneuver, or whenever the warrior might lose control of the unit, that warrior's controlling player must make a Piloting or Driving Skill Roll, or Control Roll in the case of aerospace units (see *Piloting/Driving Skill Rolls* and *Control Rolls*, pp. 59 and 92 respectively).

Additionally, a unit's base to-hit number for physical attacks is equal to its Piloting Skill rating. When modified for movement, terrain and other factors, this number becomes the modified to-hit number for such attacks (see *Physical Attacks*, p. 144).

Shutdown and Unconscious Units: A shutdown unit or one with an unconscious pilot cannot make a Piloting/Driving Skill or Control Roll, and fails it automatically (see *Shutdown*, p. 160).

AVERAGE SKILLS TABLE

Warrior/Crew Type	Gunnery Skill	Piloting Skill	Driving Skill	Anti-'Mech Skill
Inner Sphere				
MechWarrior	4	5	—	—
Combat Vehicle crew	4	—	5	—
Support Vehicle crew	5	—	5	—
Conventional infantry*	4	—	—	8
Conventional infantry (anti-'Mech)				
Foot	4	—	—	5
Jump/Motorized	4	—	—	6
Battle armor infantry	4	—	—	5
Aerospace fighter pilot	4	5	—	—
Conventional fighter pilot	4	5	—	—
Small craft crew	4	5	—	—
DropShip crew	4	5	—	—
Clan				
MechWarrior	3	4	—	—
ProtoMech pilot	4	—	—	—
Combat Vehicle crew	5	—	6	—
Support Vehicle crew	6	—	6	—
Conventional infantry*	5	—	—	8
Conventional infantry (anti-'Mech)				
Foot	5	—	—	5
Jump/Motorized	5	—	—	6
Battle armor infantry	3	—	—	4
Aerospace fighter pilot	4	5	—	—
Conventional fighter pilot	5	5	—	—
Small craft crew	5	5	—	—
DropShip crew	4	5	—	—

*Mechanized infantry cannot make anti-'Mech attacks.

Gunnery Skill Rating

A unit's base to-hit number is equal to its Gunnery Skill Rating. When modified for range, terrain and other factors, this number becomes the modified to-hit number (see *Firing Weapons*, p. 106).

Anti-'Mech Skill Rating

During anti-'Mech attacks (see p. 220), an infantry's base to-hit number is equal to its Anti-'Mech Skill rating. When modified for movement and other factors, this number becomes the modified to-hit number.

SKILL IMPROVEMENT

Players may want to use the warriors they create in future scenarios or in *BattleTech* campaign games—assuming, of course, that the warrior survives the current battle. If so, they may wish to improve their soldiers' skills. Optional rules for skill improvement should only be used if all players agree and will keep track of skill advancement for their forces.

Players should keep track of Experience Points for each warrior who survives a scenario. Each surviving warrior earns 1 Experience Point. In addition, each player must award a bonus Experience Point to one surviving warrior on the enemy team (if there were any), based on his opinion of which warrior performed most bravely, scored the most damage or any other desired criteria. If a player group is opposing a force run by a gamemaster, then it falls to the gamemaster to decide which warrior will receive the bonus point.

After each scenario, any warrior may spend accumulated Experience Points on skill improvement. Improving Piloting/Driving Skill costs 4 points per rating, improving Gunnery Skill costs 8 points, and improving Anti-'Mech Skill costs 6 points. Each improvement reduces the improved skill's rating by 1. For example, spending eight points to improve a warrior's current Gunnery Skill of 4 would lower the skill rating to 3.

A Time of War: The BattleTech RPG, the roleplaying game for the *BattleTech* universe, offers a comprehensive character creation and skill advancement system that can be used in place of these rules.

Maximum Skill Ratings: No skill Rating can be improved beyond 0.

DAMAGING A WARRIOR

The following section provides a brief overview of how damage affects warriors piloting or driving different units. For greater detail, see the appropriate *Combat* sections.

MechWarriors

Three types of damage to a 'Mech can also damage the MechWarrior inside: head hits, falling and internal ammunition explosions. In addition, excessive heat buildup can harm the MechWarrior if the 'Mech's life support system takes damage. A MechWarrior can take up to 5 points of damage before dying from injuries. The sixth point of damage kills the warrior.

Head Hits: The MechWarrior takes 1 point of damage whenever the 'Mech's head suffers 1 or more points of damage, even if the hit does not penetrate the 'Mech's armor.

Falling: If a 'Mech falls, the controlling player must make a Piloting Skill Roll (see p. 59) for the MechWarrior. If the roll fails, the warrior takes 1 point of damage. (If the MechWarrior is unconscious or the 'Mech is shutdown, such a fall automatically damages the warrior.)

Ammunition Explosions: An internal ammunition or Gauss explosion causes 2 points of damage to the MechWarrior as a result of the electric shock he receives through his neurohelmet.

Excess Heat: When life support systems take a critical hit, the MechWarrior suffers 1 point of damage every turn that the 'Mech's internal heat is 15 or higher on the heat scale at the end of the Heat Phase. Every turn that the heat is 26 or higher causes 2 points of damage to the MechWarrior if his or her life support system is down.

ProtoMech Pilots

The pilot of a ProtoMech can sustain the same amount of damage as a MechWarrior, and the damage has the same effects. Rather than taking damage as described above, however, the ProtoMech pilot takes a point of damage each time the controlling player fills in a shaded critical hit box (see *Damage*, p. 185).

The ProtoMech warrior does not automatically take a point of damage when an attack hits the head.

Vehicle Drivers

Unlike 'Mechs, damage against a vehicle does not directly affect its warrior. Instead, if the vehicle takes damage to its internal structure (see *Critical Damage*, p. 192), a roll on the Ground Vehicle Critical Hits Table may give a Crew Stunned or Crew Killed result.

Support Vehicles: Depending on the type of armor they mount, every hit against a Support Vehicle may result in a penetrating critical hit; see *Damage*, page 206.

Infantry

Damage to infantry is applied directly to a unit, with a trooper's armor marked off first (if appropriate). The player next marks off an individual trooper within the unit, with the damage transferring to the next trooper (depending on weapon type) and so on until all the damage of an attack is expended (see *Infantry*, p. 212).

Battle Armor: Damage does not transfer between troopers in battle armor units (see *Attacks Against Battle Armor*, p. 219).

Aerospace Pilots

The pilots of conventional fighters, aerospace fighters, small craft, DropShips, Airships and Fixed-Wing Support Vehicles all sustain damage in the same manner. Each aerospace unit's warrior can take up to 5 points of damage before dying from injuries; the sixth point of damage kills the warrior.

Critical Hit: Each time one of these units sustains a Crew Critical Hit (see *Damage*, p. 238), the warrior takes 1 point of damage.

Ammunition Explosions (aerospace fighters and small craft only): An internal ammunition or gauss explosion causes 1 point of damage to the warrior.

Excess Heat (aerospace fighters and small craft only): Warriors may suffer 1 point of damage every turn that the unit's internal heat is 21 or higher on the heat scale at the end of the Heat Phase (see *Damage to the Warrior*, p. 161).

CONSCIOUSNESS ROLLS

Warriors who pilot 'Mechs, ProtoMechs, fighters and small craft can survive up to 5 points of damage, but may be knocked unconscious long before taking that much. Every time such a warrior takes a point of damage, the player must roll 2D6 immediately and consult the Consciousness Table below (the Warrior/Pilot Data section of the appropriate record sheet also contains the information on this table). The player makes this roll for every point of damage taken, so in the case of an ammunition explosion in a 'Mech, that MechWarrior will need two consecutive Consciousness Rolls.

If the roll result is equal to or greater than the warrior's consciousness number, the warrior remains conscious. If the result is less than the consciousness number, the warrior is knocked unconscious. The unit becomes an immobile target; a non-grounded aerospace unit goes out of control. The unit cannot move, fire or take any other action, but its player can still declare that it is not moving (see p. 53).

Once a warrior has been knocked unconscious, no other Consciousness Roll need be made in the same turn, regardless of additional damage. Only in the End Phase of a subsequent turn can a controlling player attempt to awaken the warrior.

Equipment: All equipment that does not require action by the warrior to operate still functions while the warrior is unconscious.

Immobile Target: A unit with an unconscious pilot is an immobile target, and may be targeted by aimed shots as described on page 110.

Piloting Skill/Control Rolls: If a Consciousness Roll and a Control or Piloting/Driving Skill Roll is required at the same time, the Consciousness Roll always comes first. Any Piloting Skill or Control rolls that the player must make for the unit while the warrior is unconscious automatically fail.

Recovering Consciousness: During the End Phase of each turn after the turn in which the warrior lost consciousness, the player rolls 2D6. If the result is equal to or greater than the consciousness number for the warrior's current degree of damage, the warrior regains consciousness. The player need not roll again to determine consciousness until the warrior takes new damage. A warrior that has taken 6 points of damage is dead and cannot regain consciousness.

WARRIOR CONSCIOUSNESS TABLE

Total Damage Points	Consciousness Number
1	3
2	5
3	7
4	10
5	11
6	Dead

In Turn 3, a Grasshopper *takes a head hit from an attack with a medium laser. Though the laser does not penetrate the head's protective armor, the* Grasshopper's *warrior takes 1 point of damage. He took 2 points of damage in previous attacks, and so now has 3 points of damage. The player consults the Warrior Consciousness Table and rolls against a target number of 7. He gets a 6, one point less than his warrior needed to remain conscious. Because the warrior fell unconscious immediately during the Weapon Attack Phase, the* Grasshopper *is considered an immobile target for the Physical Attack Phase of Turn 3. The* Grasshopper *cannot move or fire and is still considered an immobile target during Turn 4. In the End Phase of Turn 4, the player rolls 2D6 again. If he gets a 7 or higher, the warrior regains consciousness and his BattleMech can move and fire normally during Turn 5.*

If an action requires a Piloting Skill Roll while the warrior is unconscious, the roll automatically fails and the Grasshopper *falls. The warrior automatically takes another point of damage. If the* Grasshopper *had fallen during the Physical Attack Phase of Turn 3, or at any time during Turn 4, the player would need to roll a 10 or higher for the warrior to regain consciousness during Turn 4's End Phase, because the warrior would have taken a fourth point of damage from the fall.*

GAME TERMS

The following terms describe important concepts used in the *BattleTech* rules.

BASE TO-HIT NUMBER

A unit's base to-hit number equals its Gunnery Skill rating (see *Gunnery Skill Rating*, p. 40).

MODIFIED TO-HIT NUMBER

When a unit's base to-hit number is modified for range, terrain and other factors, it becomes the modified to-hit number (see *Firing Weapons*, p. 106).

MODIFIED PILOTING/DRIVING SKILL

When a unit's Piloting Skill (see *Piloting Skill Rating*, p. 40) is modified for events that take place during a turn—for pre-existing damage and so on—this number becomes the Modified Piloting Skill (see *Making Piloting/Driving Skill Rolls*, p. 59).

TARGET NUMBER

Any action in *BattleTech* that requires a dice roll has an associated target number, representing the difficulty of the action. If the roll result equals or exceeds this target number, the action succeeds. If the result is less than the target number, the action fails.

MODIFIED TARGET NUMBER

A target number may be modified up or down (consequently making the action more or less difficult), based on various circumstances such as terrain, range, damage to the unit taking the action and so on. The final number against which a player makes a dice roll is called the modified target number.

Note: Gunnery, Piloting/Driving and Anti-'Mech Skill actions may use such terminology. For example, when forced to make a Piloting Skill Roll, the player rolls against the final modified Piloting Skill target number.

ATTACKER MOVEMENT MODIFIER

When an attacking unit has moved during the same turn, the target number is modified (making a successful attack more difficult) to reflect the attacker's movement type: walking/cruising, running/flanking, jumping and so on (see *Attacker Movement*, p. 106).

TARGET

A target is defined as anything a unit may attack, whether with a weapon or physically. This can be another enemy unit (a friendly can never be the target of a direct attack, though it can be damaged through the effects of another attack), a structure (such as a building), terrain (such as woods) or even a clear hex. Anything can be the target of an attack, as long as the rules for the type of attack in question do not disallow it.

TARGET MOVEMENT MODIFIER

If a target has moved during the turn in which an attack is made against it, the number of hexes entered may modify the target number. The more hexes moved, the more difficult it is to hit the target; see *Target Movement*, page 107.

MARGIN OF SUCCESS/FAILURE (MOS/MOF)

Most actions in *BattleTech* have simple pass/fail results. The outcomes of some actions, however—most notably those involving aerospace units—depend on the amount by which the roll succeeds or fails. To determine the Margin of Success or Margin of Failure, compare the roll result to the target number. If the result is greater, the difference is the Margin of Success. If the result is less, the difference is the Margin of Failure. If the dice roll matches the target number, that result is a simple success.

DAMAGE VALUE

Damage Value is defined as the specific amount of damage each weapon inflicts on a target. The Weapon and Equipment Tables list the Damage Values of each weapon.

Some weapons do not deal their full Damage Value to a single location. Instead, the points of damage from the weapon are divided into Damage Value groupings (each weapon has its own way to determine how the Damage Value is divided up) and then each grouping is assigned to a separate location (see *Cluster Weapons*, p. 113).

ARMOR VALUE

Armor Value is defined as the total number of armor circles (or boxes, depending upon the unit type) in a location on a unit's record sheet. Some rules also use the terms "points of armor" or "armor points," or "armor points remaining" to reference the number of armor circles in a location, or the number of remaining armor circles in a location.

Note that in a Technical Readout, Armor Value denotes total number of armor circles in all locations.

LEVEL, ELEVATION, ALTITUDE

These three terms are used to define the heights of various units and terrain within the game as follows:

- Level refers to the height of ground terrain; i.e. a Level 2 hill hex, a Level 5 building hex, woods rising 2 levels above the underlying level of the hex and so on (all printed maps have hill and building terrain marked in terms of Levels); see *Level Change*, page 48. The term will also be used when referring to the height of a ground unit; i.e. a 'Mech rises 2 Levels above the underlying level of the hex.
- Elevation refers to the height of non-aerospace units when they are airborne; i.e. a VTOL Vehicle is 3 elevations above the underlying level of the hex. In other words, elevation is synonymous with level, but used to refer to such airborne units.
- Altitude refers to the height of aerospace units when they are airborne and are fixed; i.e. unlike elevations for airborne non-aerospace units, which rely on the underlying level of the hex to determine the total height of a unit, altitudes have fixed, un-changing values (see *Low-Altitude Table*, p. 81).

It is important to note that these terms are used exclusively. Anytime 'altitude' is used in the rules, it is referring to airborne aerospace units, while 'elevation' refers to airborne non-aerospace units and 'levels' refers to the height of terrain, or ground units, as appropriate.

Heat: The only exception to this rule is heat, which is measured in levels (see p. 158).

Sublevels and Depths

A subset of levels, *Sublevel* refers to any level below 0, while *Depth* refers to water hexes.

ATTACK PATH/FLIGHT PATH

These two terms are used for aerospace units moving in relation to ground mapsheets (and non-aerospace units) and are used interchangeably. Whether the term attack path or flight path is used, in both instances it refers to a single row of hexes across a ground mapsheet over which an aerospace unit flies, as well as along which an aerospace unit can attack non-aerospace units on the ground.

MAPSHEET

This general term refers to a single 18" x 22" playing map as published in the various *MapPack*s (see p. 10)

PLAYING AREA

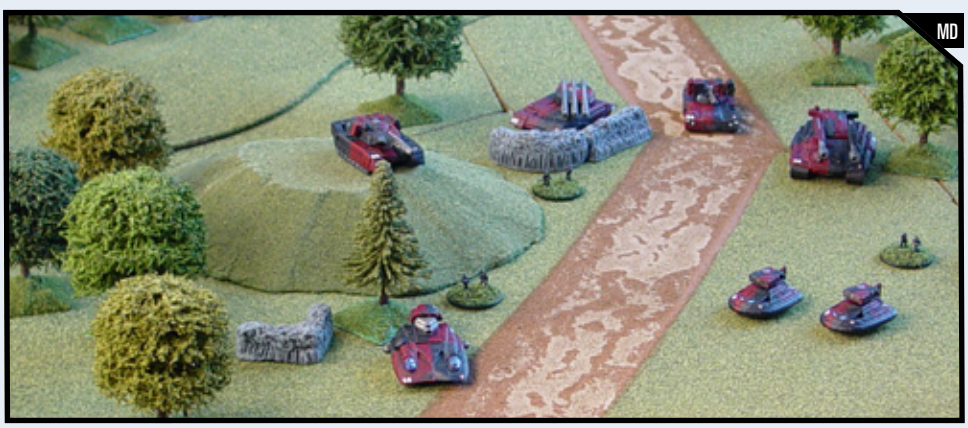
This general term refers to the total playing area of a given game—anywhere from a single mapsheet to dozens.

SCENARIO

This term usually describes a game with specific forces and set-up conditions (see *Creating Scenarios*, p. 256). It can also be used to describe a single game—for example, the one-off game currently involving the players.

MECHANIZED

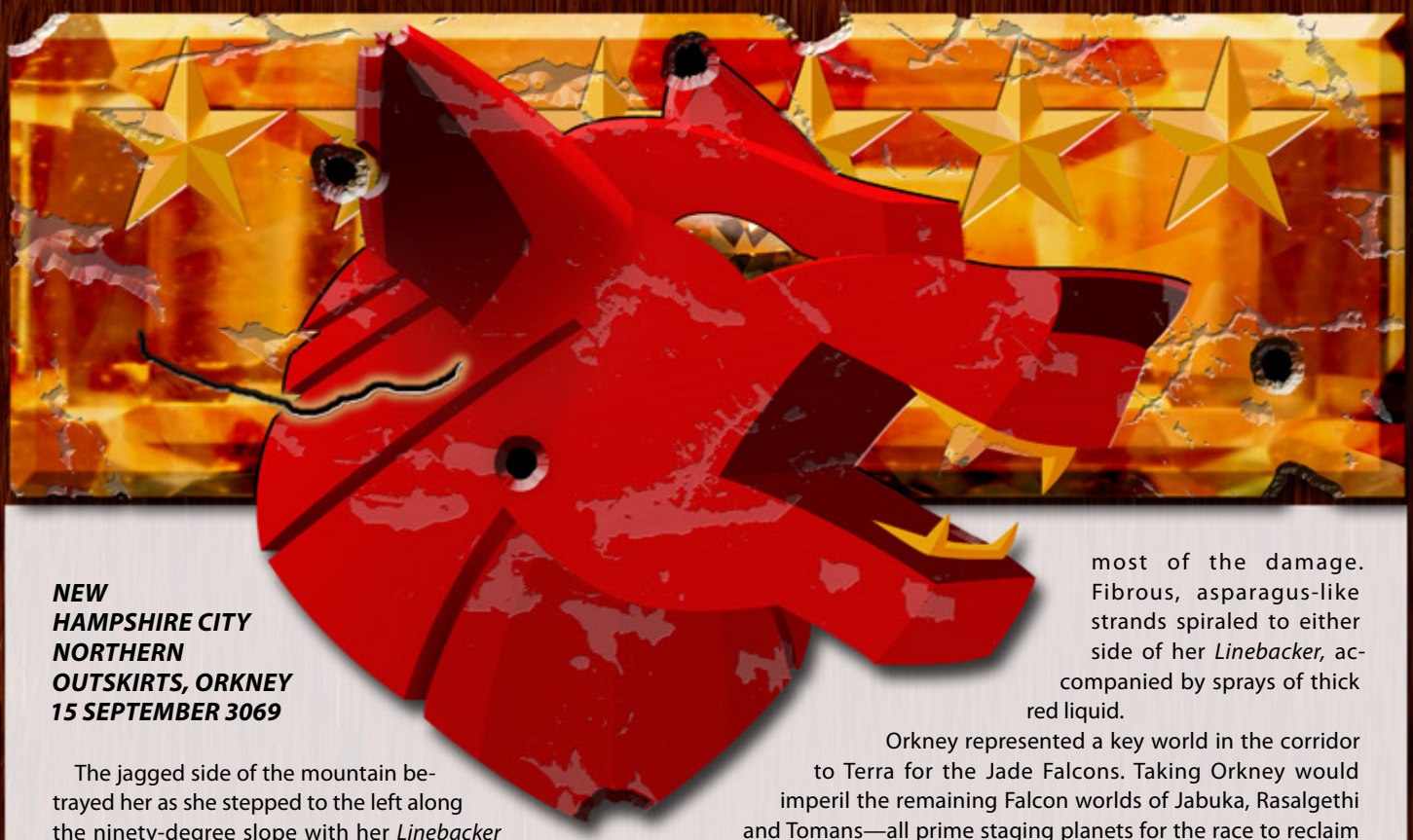
The term Mechanized is used in two specific, yet distinct ways. Mechanized Infantry refers to a specific type of conventional infantry (see p. 23), while Mechanized Battle Armor refers to rules governing battle armor riding on other units during a scenario (see p. 227).



Forces in the Chaos March are constantly on alert for trouble.

WOLF ON THE MOUNTAIN

Phaedra M. Weldon



NEW HAMPSHIRE CITY NORTHERN OUTSKIRTS, ORKNEY 15 SEPTEMBER 3069

The jagged side of the mountain betrayed her as she stepped to the left along the ninety-degree slope with her *Linebacker Prime*. One hundred and eighty meters away stood the enemy *Hellbringer*. Green, leathery cactus-shaped trees the size of 'Mechs stood in clumps all around them, towering sentinels to the chunks of crystalline formations that broke apart beneath the weight of her stumbling machine.

Star Commander Shayla of Striker Star Kappa Alpha powered back her *Linebacker*'s offensive as the ground gave way. The sixty-five ton 'Mech skittered downward several meters, sending up dust, rocks and the carcasses of groups of spires that resembled batches of dried coral.

"*Savashri*!" Shayla hissed. A wrong move in her descent and she could topple over, careening end over end, likely crashing into one of the cactus trees before hitting bottom.

Her left foot and leg found a stable ledge against a clump of the odd trees. Just as the 'Mech stopped, the Jade Falcon *Hellbringer* above her fired two of its medium lasers. A larger cluster of trees thirty meters higher on the mountainside took most of the damage. Fibrous, asparagus-like strands spiraled to either side of her *Linebacker,* accompanied by sprays of thick red liquid.

Orkney represented a key world in the corridor to Terra for the Jade Falcons. Taking Orkney would imperil the remaining Falcon worlds of Jabuka, Rasalgethi and Tomans—all prime staging planets for the race to reclaim humanity's birthworld. The Falcons were too busy attacking the Lyrans to guard their takings. Such careless strategy, so common among the Pigeons—it was laughable.

Shayla's Star was part of a larger force sent in to take the busiest of Orkney's spaceport cities. Four of them already lay under Clan Wolf's control. New Hampshire was the last. The city rested amid the crystal mountain passes, its defenses dependent on the planet's natural landscape.

Shayla smiled as the enemy's laser fire went wild. In keeping the skidding *Linebacker* in sight, the *Hellbringer* had reached an unsteady ledge of granite and crystal. The Falcon 'Mech wobbled, almost backpedaling. She watched as it found better footing fifty meters closer to her *Linebacker*, but still one hundred and fifty meters away. Her grin widened. *Orkney belongs to Clan Wolf.*

Heat encased her in the cockpit of her 'Mech. She reveled in the sensation. Cleansing. Victorious.

Her heads-up showed the other members of her team nearby. Daryna in her *Nova Prime* was engaging a Jade Falcon *Black Lanner*. Turan had neatly dispatched an *Adder Prime* with his *Kit Fox Prime*. The enemy *Adder* lay in a smoking heap near the lake below. Some of the cactus trees reached higher than the 'Mechs, with rounded tops that resembled giant green mushrooms, each decorated with silver spikes as large as a man's head. The Star's battlesuits used this on both sides for hide and strike moves.

The *Hellbringer* steadied itself on the treacherous footing. Nearly hugging the mountainside, Shayla could not launch her Streak SRM-4. She braced the *Linebacker* up on its right elbow just enough to target the *Hellbringer*. Firing at a target within one hundred and fifty meters, the missiles' accuracy would be sketchy at best. A range of two hundred and ten meters would be preferable, but ideal situations came rarely in battle.

Shayla fired the LRMs from her left torso. Several went wild, as she had expected, but one detonated against the enemy's left leg, throwing the *Hellbringer* off balance. Fire sizzled around the *Hellbringer*'s leg as it re-evaluated its precarious position.

"By my hand you die, *freebirth*," came Warren's voice from the cockpit of his *Adder*. Shayla nodded at her warrior's work. The enemy *Nova Prime* came tumbling down the mountainside, losing metal along with mounted weapons as its armor smashed into jutting granite and thick cactus-trees. An arm bolted free and stuck against the base of a large trunk that clung to the mountainside.

Targeting klaxons filled Shayla's cockpit as the *Hellbringer* fired on her. SRMs flew at her position. One of them hit a nearby Wolf battlesuit, sending the suit and its wearer into an airborne pirouette. Another missile struck the rocks, sending granite shrapnel into the *Linebacker*'s right side. Shayla heard the clanging of rock on armor as the shards lodged in place.

Two of the enemy missiles struck her 'Mech, smashing into the left stabilizing actuator joint of the leg she had been using to cement her position against the ninety-degree slope. The computer warned her of imminent joint failure. She silenced it with a slap of her hand. If she lost that joint, she would fall.

She refused to end up at the bottom of the mountain. With an eye on her HUD to track the *Hellbringer*'s movements, she scanned the mountainside around her. Her *Linebacker*'s left foot was braced against a cactus tree, her right leg up with its knee bent and foot pressed into the side of the mountain. She had to reverse the stress on each leg without straining the damaged joint. One wrong move and the leg would buckle.

A voice came through her neurohelmet's speakers, cold and haughty, issuing a batchall. "Once again the Jade Falcons have shown our mettle on the battlefield against the unweaned cubs who seek to take what is ours. I will defeat

you, Star Commander. In a few seconds I will send you down the mountain."

Surat. Shayla sneered at the *Hellbringer* through the ferroglass of her cockpit. Beyond it she could see the movement of battlesuits, popping up and down like grasshoppers in a spring field as they engaged their jump jets.

"Only your arrogance, little pigeon, leads you to believe you have won. A single victory is but a drop in the whole of the mightiest of Clans. The Wolves *own* this world—this battle is the last of our victories here before we scour the Jade Falcon infestation from this corridor of space. It is you who are defeated, Star Commander. Bow to the might of Clan Wolf!"

His response to her rebuke was to swing around with his remaining medium lasers. As she had anticipated, the *Hellbringer*'s aim was less than accurate. He struck one of the larger nearby cactus trees, with a root stalk as thick as her *Linebacker*'s ankle. The thick skin split as chunks of it flew in several different directions. Most of it hit Shayla's 'Mech, splattering it with viscous red fluid.

Now was her best chance to move. The HUD gave stress points in flowing numbers. She overlaid her internal readout with a look at all systems on her schematic. The left actuator flashed orange, not yet critical, but close. She had two movements at best before it gave.

She needed to create her own cover in case her antagonist realized what she intended and fired again at her leg. Shayla targeted the Falcon 'Mech's right leg, which now stood in the same position as her left and showed damage. She would hit that leg as she made two swift moves, shifting the stress off her own damaged joint onto her right leg.

She swiveled the rear-mounted small laser, its sighting limited by her tilted position, and targeted the crystalline granite at the *Hellbringer's* foot. The laser's initial hit caused the encased air and gas that formed the crystal to explode, sending up spears of shrapnel into the *Hellbringer*'s torso. The laser's heat also melted the crystal, which flattened beneath the enemy 'Mech's supporting foot.

She could not afford to hit one of the trees. She had seen a PPC strike to a tree when a Jade Falcon 'Mech fired at it. The tree had shredded into rubbery strips that clung to the crystalline rocks like green webbing. The resulting mess had tripped both machines, entangling their limbs and sending them down the mountainside. No—Shayla wanted a clear shot at her target. She wanted to see the Pigeon's eyes widen when he knew a Wolf had claimed her prize.

The *Hellbringer* slid as the crystals turned to molten rock.

Shayla slammed down her right footpedal while pressing her joysticks forward to support her weight, shifting the *Linebacker*'s position while maintaining balance. The 'Mech felt sluggish, and she gritted her teeth. The horizon dials tilted dangerously to the left, toward the drop. She threw all the 'Mech's weight onto the left joint, angled the hip and then moved the right leg down and back. The left knee bent as the huge machine's weight transferred swiftly from left to right.

The horizon dials steadied. She powered up both PPCs as she glanced at her heads-up to see the *Hellbringer*—

The cactus-tree below her right foot gave, weakened by the *Hellbringer*'s earlier fire. The *Linebacker* lurched backward.

"*Savashri*!" Shayla threw the joysticks and pedals forward, pushing her 'Mech into the mountainside. If she tipped away from the mountain, her own weight would destroy her.

The ploy worked. The *Linebacker* skidded a few meters downward on its belly until the right foot found purchase against the base of another cactus tree. Now she was in front of one instead of behind it. She stopped, clouds of dust surrounding her cockpit. She heard the plink of rocks as they bounced off the cockpit and shoulders and tumbled to the lake below.

She lay on her stomach, her 'Mech's arms out at its sides. Only the harness held her in her couch. It bit into her sternum between her breasts. Orange, red and green lights illuminated her controls. She took several deep breaths before pushing forward with her joysticks, moving the 'Mech out from the mountain on its elbows. The HUD showed both PPC cannon mounts intact and fully charged. But she was in no position to fire them.

The *Hellbringer* was attempting to close the distance between them. Shayla could see the massive 'Mech in the upper right corner of her shield, its fully charged PPCs glowing white. Three hundred and forty meters lay between her and the Falcon. Every step brought the *Hellbringer* closer.

The Falcon's voice came again, arrogant as ever. "Again I show you the might of the Jade Falcon, little milk-cub. Once in range, I will send your 'Mech down the mountain where you belong. Wolves should not dare the lofty heights—they are reserved for the Falcons that fly above you. Order your men to surrender."

Shayla almost laughed at the demand. This *surat* had defeated nothing. She could still see on her HUD the movement of all her 'Mechs, a full roll call. Of her antagonist's Star, there remained only four.

"Star Commander," came the stern, deep voice of Joachim over the private channel. "You look like you could use support, *quiaff*?"

"You have dispatched your enemy, *quiaff*." Shayla knew he had. She had seen it on the HUD.

"*Aff*."

"*Aff*."

What they were about to do broke *zellbrigen*. But as a Wolf, Shayla knew that at some moments, she could honorably accept aid given by other members of her Star.

The enemy Star Commander—as inflexible as he was arrogant—did not expect a third combatant. He had no defense prepared against the Alpha *Adder*'s large pulse laser as it melted armor along his left arm and torso. Joachim followed up with a spear of fire across the Falcon's path, between the *Hellbringer* and Shayla. She used this distraction to push the *Linebacker* onto its right shoulder until it faced the *Hellbringer*, which had begun returning fire at the *Adder*. Along with it, the enraged Falcon sent a stream of curses and insults through the open channel. "Freebirth! *Surat*! You have broken *zellbrigen*!"

Shayla checked her PPCs, then set her firing reticule over the *Hellbringer*'s chest. Joachim's fire had loosened the *Hellbringer*'s position and sent it closer to her. Two hundred and ten meters. "You are right, little pigeon," she said after opening her own channel. "Without the mountainside, I would have beaten you fairly in a *batchall* of equals. But we are not in the realm of fairness—not with the Word of Blake winning on all fronts. Your ineptitude at understanding your enemy once again is your undoing. To invade Lyran space is a waste of power and shows the stupidity of Clan Jade Falcon. Clan Wolf will take back Terra

and crush those who stand in our way." She fired without waiting for an answer.

Both PPCs engulfed the *Hellbringer*. The blast forced the 'Mech backward as lancing arcs of blue and white rippled over its armor. The ground shook as it struck the crystalline terrain and began rolling down the slope. It slammed into another thick cactus tree, this one as tall as an *Adder*. The force of the impact cracked the *Hellbringer* in half.

Shayla needed to right her BattleMech and check for damage. They still had a barrier to breach—and from the looks of her HUD, three more BattleMechs to defeat.

"Wolf Star Commander," a new voice boomed through her open channel.

Shayla tested her *Linebacker*'s right foot. The cactus trunk seemed firm enough to support any movement she wished. She bounced once, then pushed back with the right foot from the mountainside. Looking at her HUD, she saw a Jade Falcon *Nova Prime* approaching from her right, its armor gleaming in the sun, a stark contrast to the green, spiraling forest.

She did not bother to respond, instead checking her heads-up and horizon signals.

"I am Star Commander Ballar, slayer of Wolves, Steel Vipers and Snow Ravens alike! I challenge the Wolf cub in the *Linebacker Prime* to a duel of equals. In this solemn matter, let no one *else* interfere!"

Shayla pursed her lips and checked the position of her closest Star members. Turan had taken on a *Black Lanner* several hundred meters to her left. Daryna had decided to amuse herself by picking off enemy battlesuits, swatting at them like errant bugs, aiming them so they exploded against the cactus trees. Some stuck, the pointed spindles skewering the armor as well as the soft flesh inside.

She switched channels. "Joachim—keep on point."

"*Aff*."

Shayla checked her diagnostics. Her left actuator could not last long, and she preferred to do mountain battle if her movement was limited—but movement was what they needed. To drive the Jade Falcons backward, inside the city. Corral them.

Even if she won the battle, though, the *Linebacker* would not make it up the mountain. Not without jump jets—and even if she had those, the landing would be tricky with a shot leg.

She needed a new machine. A jump-capable one.

"Challenge accepted," Shayla said. "Term and condition."

"*Aff*."

With a glance at Joachim, and a feral grin she knew he could not see, Shayla said, "I claim your 'Mech as my prize."

There was a pause. Shayla knew she was taking a big risk. The sizes of the 'Mechs were comparable, but not even. On an even field in battle, the *Nova Prime* would barely have a chance against a *Linebacker*. But here, fighting on a near-perpendicular slope against a damaged opponent—the Falcon 'Mech could take her. If so, Shayla could only hope her codex was found intact.

She wiped the sweat from her face when the challenger said, "*Aff*."

With the *Nova Prime*'s schematics pulled up on her computer, Shayla made a quick assessment. She had few LRMs left, and even fewer SRMs. She also saw an error light on her right PPC. Of course, she only needed one to knock her enemy back. But the *Nova Prime*, though it carried twelve extended-range medium lasers, was jump capable. Even in as treacherous a field as this one, the jump jets offered a slight advantage.

As challenger, the enemy *Nova Prime* took the first shot, firing half his medium lasers into the neck and cockpit area of Shayla's *Linebacker*. Heat sinks worked overtime as the red and orange beams burned into armor, seals and gears beneath.

Shayla pushed her *Linebacker* up and shifted her left leg to the right on the nearest boulder. Her HUD gave a distance of two hundred meters. She fired LRMs from her left torso and swiveled the rear-mounted small laser to fire at the ground. It struck directly in front of the *Nova*. Shayla wanted to get close enough to the 'Mech to stop it, but not damage it too much.

She targeted one of the larger trees near the *Nova*, exploding it into a tangle of rubbery strands and blood-red fluid that showered the enemy 'Mech. The *Linebacker* moved sluggishly as it drew a little closer to increase the aim of her working PPC. The *Nova* had started firing medium lasers at Shayla and the cactus webbing draped over its torso and right arm. The shots mostly missed Shayla, though some glanced off her shoulder. The enemy was aiming where the *Linebacker* had been, not where it was now.

The HUD read a pulse of energy from the *Nova*. Star Commander Ballar was planning on using jets to get airborne, above the smoke and plants to see the area. But Shayla had a better idea. If the *Nova* did not shoot out her cockpit, if she did not misstep, if her actuator held until she was finished... .

Using her HUD as a guide, Shayla pushed the footpedals, pressed the joysticks forward and reached into the smoke. She counted, felt the first vibration of jets igniting and pushed off from her feet, using the cactus-tree trunk as a springboard. Not quite a death-from-above attack, but close enough. Inside, Shayla slammed forward, caught and held against the couch by the harness. Warnings clanged around her. She heard the crack of ferro-glass as her cockpit smashed against the rock.

"Commander," came Joachim's voice. "*Nova Prime* is down. Again the Wolf Clan reigns supreme."

Shayla wiped her forehead, blinking as the stinging, salty sweat coursed down her cheeks. Her internal systems remained online, but her cockpit was dimmed, the light cut out by the *Nova Prime*'s feet beneath her. She had done it—landed on top of the enemy 'Mech before it could jump. She hoped she had not damaged it too badly.

"Wolf Star Commander," came Ballar's voice—low and flat, as if through gritted teeth. "I accept my defeat."

Shayla hit her harness release and lowered herself to the cracked ferro-glass. She removed her helmet and smiled. Ballar could destroy them both by firing his lasers directly into the *Linebacker* holding him down. It depended on the position of the *Nova Prime*.

But perhaps Ballar wanted off the side of this mountain as much as she did.

A Beta Galaxy Nova from Clan Wolf marches through an abandoned research facility on Quarell.

BattleTech units change position and location on the mapsheet by performing any one of several movements.

During the Movement Phase (Ground) of each turn, players must choose a movement mode for each unit they intend to move in that turn: walking/cruising, running/flanking or jumping. Units with VTOL/UMU movement, depending on the specific units in question, may choose cruising/flanking or may simply have a set number of VTOL/UMU MPs to spend. When it is the player's turn to move a unit, the player must announce its movement mode or that the unit is staying still. The player always chooses how a unit moves, within the limits set by the rules.

Aerospace Units: All aerospace unit movement is described in *Aerospace Movement* (see p. 74). Airships and Fixed-Wing Support Vehicles are considered aerospace units.

Movement Basics

As shown at the top of the Movement Cost Table, p. 52, a unit must spend 1 movement point (MP) to enter a hex. The type of terrain within a hex adds more MP costs, as shown under the MP Cost Per Hex/Terrain Cost column of the table. A unit can also take any of three other movement actions—facing change, dropping to the ground and standing up—at the MP cost shown on the table.

The controlling player always starts with a base cost of 1 MP for a unit to enter a new hex. The player then consults the Movement Cost Table and adds any MP required, based on the type of hex being entered and/or the action being taken. Such additional modifiers are cumulative. For example, a unit entering a Clear hex only spends the base 1 MP for entering a new hex. However, a unit entering a heavy woods hex two levels above its current hex would spend 5 MP (1 base MP for entering a new hex, +2 for the two-level change and another +2 for heavy woods). A unit entering a heavy woods hex and making a one-hexside facing change spends 4 MP (the base 1 MP for entering a new hex, +2 MP for heavy woods and +1 MP for the facing change).

Water: Water hexes have a depth that functions like a level change (see below). However, units entering Water hexes must pay the MP cost for entering water, plus the cost of entering the hex, plus the cost for the level change (if any), except for hover, WiGE and naval vehicles (see Movement Cost Table, p. 52). Submerged units use slightly different movement rules (see *Underwater Movement*, p. 56).

Difficult or Prohibited Terrain: For some terrain, a player must make a successful Piloting/Driving Skill Roll (see p. 59) in order for a BattleMech to remain standing once it enters that terrain. Also, certain kinds of units may not enter certain types of terrain. These terrain types and movement restrictions appear on the Movement Cost Table.

Support Vehicles: If a wheeled Support Vehicle lacks the Off-Road chassis modification, then movement costs an additional 1 MP per hex, unless the hex is pavement or the unit is following a road.

LEVEL CHANGE

While moving forward, a 'Mech may change level or depth by only 1 or 2 levels per hex, at a cost of 1 MP per level. Ground vehicles, infantry and ProtoMechs may only change 1 level per hex (this rule does not apply to jumping, VTOL or WiGE units. See *Jumping*, p. 53; *VTOL Movement,* p. 54; and *Wing-In-Ground-Effect Movement*, p. 55). Level changes greater than these are considered prohibited terrain. No unit may "voluntarily fall" from a greater level in order to circumvent the maximum allowable level change in a single hex.

ProtoMechs, VTOLs and Submarines: ProtoMechs, VTOLs and submarines must spend 1 MP to change their level by 1 level.

Ground Vehicles and Infantry: Ground vehicles must spend 2 MP to change level by 1 level. If using ground movement (not jumping or VTOL), infantry must likewise spend 2 MP (see *Infantry Movement*, p. 214).

Conflicting Terrain and Levels: Even though all published mapsheets have level and terrain clearly marked, situations may arise that involve conflicting levels or terrain. For example during a tournament, one player may place a map normally, while another places a map with the blank side up—effectively creating a single map filled with Level 0, clear hexes. Players may also face this situation when using maps they have created.

In such cases, the level of a hex is considered equal to the highest level present in it. If any part of a hex contains a sublevel, the entire hex is considered to be the deepest sublevel marked in it. The exception to this occurs if the hex also contains a level greater than 0, in which case the level of the hill takes precedence as described above.

MINIMUM MOVEMENT

A unit must possess sufficient MP to pay the cost of entering each new hex. A unit can always move into the hex directly in front of it, regardless of the terrain cost, provided such movement is the only MP expenditure the unit makes in that turn (i.e. the unit cannot make any facing changes in the same turn it uses the *Minimum Movement* rule). The controlling player can only make this kind of move if the unit has at least 1 MP to spend (meaning it is mobile) and is not prohibited from entering that terrain (see *Level Change*, p. 48); all units reduced to 1 MP either due to heat or damage can still make use of the minimum movement rule. A unit that enters a hex under these conditions is considered to have used running/flanking movement. Units using this rule can enter hexes that normally could not be entered by a running unit (for example, water hexes). Any Piloting Skill Rolls for running still apply.

'Mechs: A prone 'Mech with only 1 MP available can make a single attempt to stand using the *Minimum Movement* rule. If a 'Mech has only 1 MP because it is missing a leg, attempting to stand will require only a single Piloting Skill Roll, with a +5, plus any modifiers for other damage (see *Leg Destruction*, p. 122).

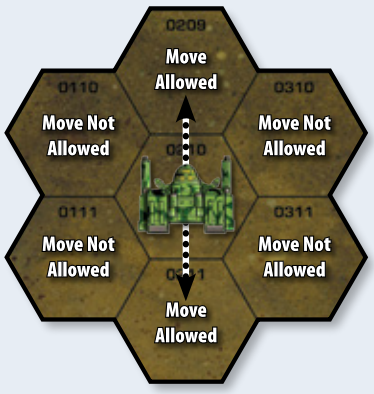
PRONE 'MECH MOVEMENT

A 'Mech lying prone at the beginning of its movement may declare walking or running movement, but may not jump. The 'Mech expends MP to attempt to stand (see *Standing Up*, p. 50). Though a prone 'Mech cannot crawl into another hex, it may expend MPs, and change its facing in the hex it occupies at the standard cost of 1 MP per hexside while it still remains prone, attacker movement modifier is based on what type of movement mode the player selected.

STACKED TERRAIN

Though all published mapsheets have all level and terrain clearly marked, and never mix terrain types, situations may arise where multiple terrain types occur in the same hex. For example, at the start of a game, players might place building counters on rough hexes, which become rubble during the game.

In such situations, all appropriate modifiers are cumulative. In the example above, to enter a rough/rubble hex would cost 3 MP (1 for the hex, 1 for the rubble and 1 for the underlying rough terrain). If the entering unit is a ´Mech, its controlling player must make a Piloting Skill Roll to avoid falling on the rubble.



• MOVEMENT DIRECTION DIAGRAM •

MOVEMENT DIRECTION

A unit can move forward into the hex it is facing or backward into the hex directly to its rear. It cannot move into any other hex unless it first changes its facing (see below). The diagram above shows the two hexes that a unit may enter without changing its facing.

Four-Legged 'Mechs: Four-legged 'Mechs are the exception to this rule (see *Lateral Shift*, p. 50).

Infantry: Because infantry units have no facing, they may enter any of the six hexes surrounding the hex they occupy, subject to terrain restrictions.

Backward Movement

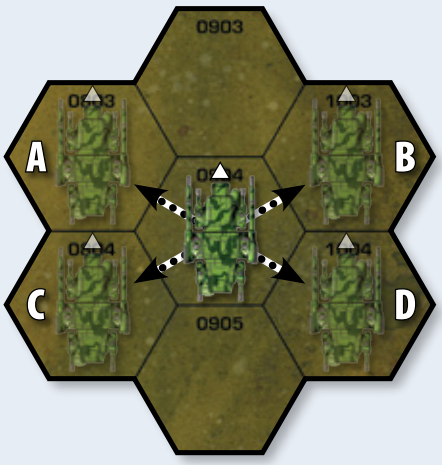
During the course of its movement, a unit can move forward and backward (i.e. it can make both moves within the same Movement Phase) and change direction in any manner the player chooses, as long as the unit possesses the required number of MP. However, if a 'Mech or vehicle declares at the beginning of its turn that it will use running/flanking mode, it cannot move backward at any time during that turn.

Units moving backward may not change levels; this includes water hexes where a level change is required to enter the hex.

VTOL Vehicles and submarines, or units expending VTOL or UMU MPs, may change elevations/depths while moving backwards.

DROPPING TO THE GROUND ('MECHS ONLY)

A player may choose to have his 'Mech drop to the ground during combat, as long it did not jump that turn—usually at the end of movement to hide or to make attacks against the 'Mech more difficult. This action creates no additional heat, causes no falling damage and costs 1 MP, but the 'Mech can only change its facing in the hex until it stands once more. The 'Mech drops with the same facing it had while standing and is automatically facedown, as in an unintentional fall (see *Falling*, p. 68). The 'Mech is thereafter considered prone. To regain its feet, it must attempt to stand, as described below.



Possible Lateral Shifts (1 additional MP to enter hexes)

• LATERAL SHIFT DIAGRAM •

LATERAL SHIFT (FOUR-LEGGED 'MECHS ONLY)

Four-legged 'Mechs may also move laterally, or sideways, without changing their facings. A quad 'Mech making a lateral shift moves into an adjacent hex that is not directly to its front or rear, while retaining its original facing.

A lateral shift costs 1 MP, in addition to the cost of moving into the target hex.

A backwards lateral shift—moving into hexes C or D in the diagram above—is considered backward movement (see *Running/Flanking*, p. 53).

STANDING UP ('MECHS ONLY)

The player may have a 'Mech attempt to regain its feet after falling or dropping to the ground. Each attempt to stand costs 2 MP. A prone 'Mech with only 1 MP available at the beginning of its turn may make one attempt to stand using the *Minimum Movement* exception on page 49.

A 'Mech may stand during the same Movement Phase that it fell, as long as it still has sufficient MP to make the attempt and was not jumping that turn. 'Mechs may only attempt to stand during the Movement Phase. A 'Mech may attempt to stand even if missing one leg, or one arm and one leg, or both arms, but can never stand if missing all its legs. A 'Mech missing one leg and both arms cannot attempt to stand. If a 'Mech begins the Movement Phase prone, it must declare whether it will walk or run before it attempts to stand.

For a fallen 'Mech to stand up, the player must make a successful Piloting Skill Roll (see p. 59). If the roll fails, the 'Mech falls again and takes falling damage. Use the same facing it had on the ground as its initial facing when rolling on the Facing After Fall Table (see p. 68). The 'Mech may make repeated attempts to stand as long as it has MP available.

Once the 'Mech successfully stands, it may face in any direction at no cost, regardless of its facing while on the ground, and may continue to use MPs as per the movement mode restrictions appropriate to the mode the player selected before attempting to stand.

Four-Legged 'Mechs: After a quad 'Mech falls down or drops to the ground, the player need not make a Piloting Skill Roll to stand unless one or more legs have been destroyed (see *Leg Destruction*, p. 122). The usual MP cost and heat generation apply.

Heat: Each attempt to stand creates 1 point of heat, in addition to the standard heat for movement.

FACING

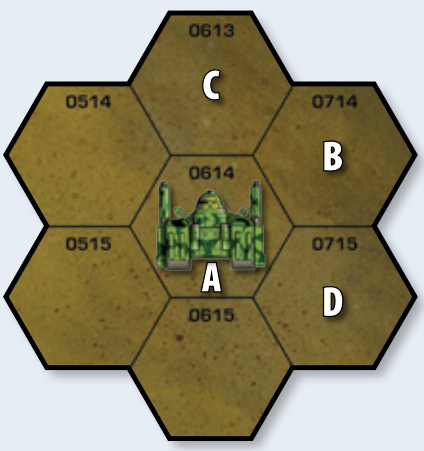
Every hex on the map has six edges, called hexsides. In *BattleTech*, every unit must face one of those six hexsides. A BattleMech is considered to be facing the way its feet are pointing. A vehicle is considered to be facing in the direction of its front side. Infantry units have no facing.

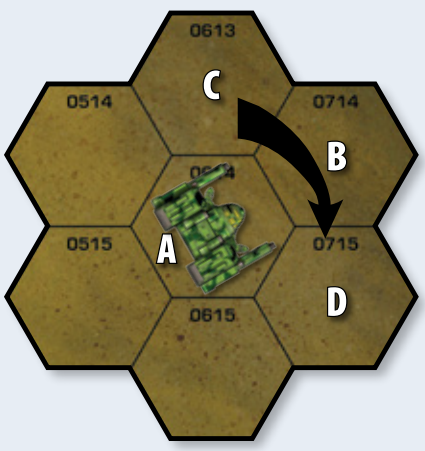
A unit's facing affects movement (see below) and combat (see *Combat*, p. 98), and can only be voluntarily changed during the Movement Phase.

Units not clearly facing a hexside at the end of the Movement Phase can be realigned to one of the two closest hexsides by the opposing player.

FACING CHANGE

Changing a unit's facing costs 1 MP per hexside changed, regardless of the terrain type in the hex. For example, a 180-degree turn costs a unit 3 MP.

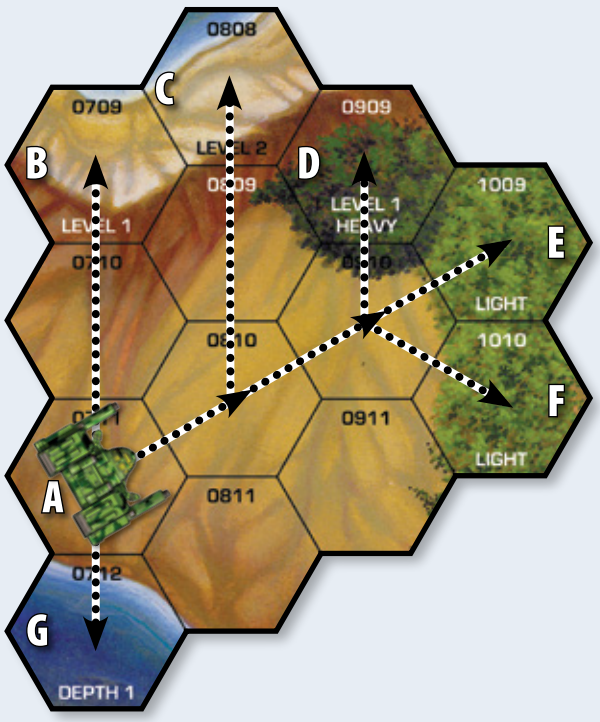




• FIGURE 1 • • FACING CHANGE DIAGRAMS • • FIGURE 2 •

In the facing Change diagram on p. 50, a player wants to move the BattleMech from Hex A to Hex B. However, the BattleMech is currently facing Hex C, and so cannot legally move to Hex B. If the BattleMech changes its facing, as shown in Figure 2, it can legally move into Hex B. This facing change costs 1 MP.

If the player wanted to move the BattleMech into Hex D (without going backward), the BattleMech would have to make a two-hexside facing change, at a cost of 2 MP.



• MOVEMENT BASICS DIAGRAM •

In the Movement Basics diagram at left, the BattleMech in Hex A on the Wide River map has a Walking MP of 5 and a Running MP of 8. The controlling player declares that the BattleMech will walk this turn.

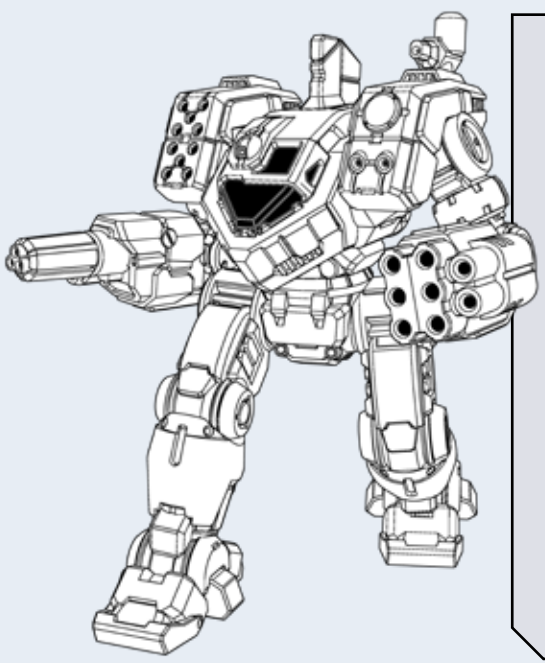
It costs 4 of the BattleMech's available Walking MP to change facing one hexside to the left (1 MP), move forward into the clear hex (1 MP) and then, after climbing 1 level (1 MP), enter clear Hex B (1 MP).

It costs 6 MP for the BattleMech to move to Hex C: straight forward into the clear hex (1 MP), then change facing one hexside to the left (1 MP), then move forward into the clear hex (1 MP) and then, after climbing two levels (2 MP), enter clear Hex C (1 MP). As this move costs more than the Walking MP of the BattleMech, the controlling player cannot make it.

Likewise, the controlling player cannot move the BattleMech to Hex D. Doing so would require 7 MP: straight forward into a clear hex (1 MP), then straight forward again into a clear hex (1 MP), then change facing one hexside to the left (1 MP) and then, after climbing one level (1 MP), enter a heavy woods hex (3 MP).

The 'Mech can enter Hex E, moving straight forward into the clear hex (1 MP), then straight forward again into the clear hex (1 MP) and then moving straight forward a final time into the light woods Hex E (2 MP). Similarly, the 'Mech can enter Hex F by spending 5 MP: straight forward into the clear hex (1 MP), straight forward again into the clear hex (1 MP), change facing one hexside to the right (1 MP) and move straight forward into the light woods Hex F (2 MP).

Finally, the BattleMech can change one hexside to the right (1 MP), then one more hexside to the right (1 MP), and then enter the Depth 1 water hex (2 MP), which requires an additional 1 MP for the level change (total 5 MP). As noted on the Movement Cost Table, however, the controlling player would need to immediately make a Piloting Skill Roll to avoid falling after entering the water hex.



movement dice

To help remember which 'Mechs moved in what way, movement dice are often used. Commonly, white dice are used to mark 'Mechs that walked, black dice for those that ran, and red dice for those that jumped (if using the optional Sprinting rules, yellow dice are typically used when sprinting). The number displayed on the die is the Target Movement Modifier generated as a result of the move, with "6" traditionally indicating a TMM of 0 (or immobility). Also common is the rule that—like taking your hand off the piece you are moving in chess—once a movement die is placed, that move cannot be changed.

It's best to use dice of a different size and/or color than those used for rolling attacks, to prevent confusion. During the End Phase, remove all movement dice from the board.

MOVEMENT COSTS TABLE

Movement Action/Terrain Type	MP Cost Per Hex/Terrain Cost	Prohibited Units
Cost to Enter Any Hex	1	
Terrain Cost When Entering Any New Hex		
Clear	+0[6]	Naval vessel
Paved/Bridge	+0	Naval vessel
Road	+0[3]	Naval vessel
Rough	+1	Wheeled, naval vessel
Light woods	+1[10]	Wheeled[9], hover[9], VTOL[12], WiGE[12], naval vessel
Heavy woods	+2[11]	Vehicles[12], naval vessel
Water		
Depth 0	+0	Naval vessel
Depth 1	+1[1] (Level change MP cost not included)	Infantry[14], vehicles[4, 7]
Depth 2+	+3[1] (Level change MP cost not included)	Infantry[14], vehicles[4, 7], IndustrialMechs[8]
Level change (up or down)		
1 level	+1 ('Mechs, VTOLs, subs, ProtoMechs) +2 (infantry, ground vehicles)	—
2 levels	+2 ('Mechs, VTOLs, subs)	Infantry, ground vehicles, WiGE[13], ProtoMechs
3+ levels	+1/level (VTOLs, subs)	'Mechs, ProtoMechs, infantry, ground vehicles, WiGE[13]
Rubble	+1[1]	Wheeled, Naval vessel
Light building	+1[2]	VTOL, WiGE, Naval vessel
Medium building	+2[2]	VTOL, WiGE, Naval vessel
Heavy building	+3[2]	VTOL, WiGE, Naval vessel
Hardened building	+4[2]	VTOL, WiGE, Naval vessel
Additional Movement Actions		
Facing change	1/hexside[5]	
Dropping to the ground ('Mech only)	1	
Standing up ('Mech only)	2/attempt	

[1] MP cost to move along the bottom of the water hex; Piloting Skill Roll required to prevent falling.
[2] Piloting Skill Roll required to prevent damage; infantry pays only 1 MP (except mechanized infantry, which pays 2 MP) to enter any building hex.
[3] If traveling along road; otherwise cost of underlying terrain.
[4] Hovercraft and WiGEs may enter all water hexes along the surface and may enter such hexes using flanking movement.
[5] No cost for infantry.
[6] If a wheeled Support Vehicle lacks the Off-Road chassis modification, then movement costs 1 additional MP per hex.
[7] Wheeled or tracked Support Vehicles with the Amphibious chassis modification can move through any water hex on the surface at a cost of 2 MP (see p. 56).
[8] IndustrialMechs *can* enter a Depth 2 or greater water hex. However, the IndustrialMechs must mount either a fuel cells, fission or fusion power plant *and* must mount the Environmental Sealing chassis modification to do so. If the IndustrialMech does not meet those requirements, it is considered destroyed if they remain in a Depth 2 or greater water hex (or prone in a Depth 1 water hex) in the End Phase of the turn immediately following the turn in which they entered it.
[9] Hover and Wheeled Support Vehicles with either the Monocycle or Bicycle chassis modification can enter a light woods hex.
[10] Infantry pays only 1 MP (except permitted mechanized infantry, which pays 2 MP) to enter any light woods hex.
[11] Infantry pays only 2 MP to enter any heavy woods hex.
[12] VTOL and WiGE vehicles can enter a woods hex provided their elevation is higher than the level of the woods in the hex.
[13] This only applies to WiGE units entering a hex whose level is higher than the unit's current hex; see *Wing-In-Ground-Effect*, p. 55, for rules governing entering hexes whose level is lower than the unit's current hex.
[14] Infantry can enter a water hex of Depth 1 or deeper if they are noted as having UMU MPs.

movement modes

At the beginning of each unit's movement, a player must select one of the following movement modes. A unit may not combine movement modes during a turn.

STANDING STILL

If the player declares that a unit will "stand still", the unit stays in the hex in which it started the turn. It may expend no MP during that turn. It does not move, not even to change facing. Standing still generates no heat, gives no penalty to weapons fire and allows attackers to fire on the unit without target movement modifiers.

A unit that stands still is not considered immobile, and so that to-hit modifier does not apply (see *Firing At Immobile Targets*, p. 110).

WALKING/CRUISING

Generally speaking, units with legs walk or run, while units without legs cruise or flank; the record sheet or Technical Readout game stats of each unit will indicate which type of movement it can make.

If the player declares that a unit will walk or cruise, the unit may expend a number of MP up to its walking/cruising MP rating. A walking/cruising unit suffers a +1 to its to-hit number when making attacks. As a moving target, a walking/cruising unit may also be harder to hit. These combat effects appear on the appropriate To-Hit Modifier tables in the *Combat* section, page 98, and are explained in that section.

Heat: Walking creates 1 point of heat for BattleMechs.

RUNNING/FLANKING

A unit can move further in a turn when running (or moving at flank speed) than it can walking. The player may spend up to the unit's Running/Flanking MP rating each turn. A unit that is running or flanking suffers a +2 to-hit modifier when making attacks, but its speed may make it a more difficult target to hit. These effects are explained in the *Combat* section, page 98. In addition, a unit using running/flanking movement on a paved surface risks skidding (see *Skidding*, p. 62). No unit can move backward while running/flanking.

Critical Damage: After the end of its movement, a 'Mech that runs with damaged hip actuators or gyros must make a Piloting Skill Roll to avoid falling. See *Piloting/Driving Skill Rolls*, page 59.

WiGE, VTOL, and Hover Vehicles: VTOL, WiGE, or hover units risk sideslipping any time it uses flanking movement (see *Sideslipping*, p. 67).

'Mech Heat: Running creates 2 points of heat for BattleMechs.

MP Reduction: With the exception of infantry, a unit's Running/Flank MP rating is always equal to its Walking/Cruising MP times 1.5, rounding up. If damage to a non-infantry unit reduces its Walking/Cruising MP rating, the player must recalculate the unit's running/flank speed.

Water: No unit except hover, VTOL, WiGE and naval vessels can enter Depth 1 or deeper water hexes while running/flanking, though a running unit may leave or change facing in a water hex.

JUMPING

Jumping allows the most flexibility in movement, but generates a great deal of heat (for those units that track heat). A Jumping unit suffers a +3 to-hit modifier when making attacks, but a jumping unit makes a more difficult target. These effects are explained in the *Combat* section, p. 98. Any jump-capable unit has Jumping MP listed among its game statistics, or is described as jump-capable in the rules specific to that unit.

'Mechs must be standing at the start of the turn in order to jump. When a unit jumps, it can move 1 hex for every available Jumping MP. It may jump in any direction, regardless of its original facing. The player chooses a target hex for the unit to jump to (this may the same hex the unit is standing in), and then the unit travels to that hex along the shortest path (i.e. the fewest number of hexes required to get there), landing with any facing desired. A unit can jump over and into any hex, regardless of terrain type. If this path crosses a level higher than the sum of the unit's Jumping MP plus the level of the hex in which the jump started, then the unit cannot make the jump. If more than one possible path exists between the unit and its goal hex, the player may declare which path his unit takes.

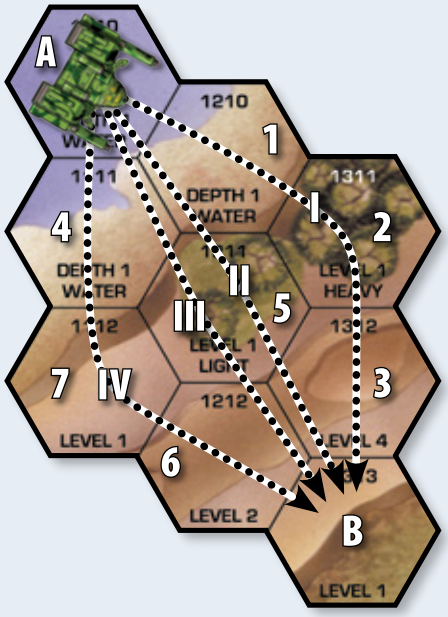
A unit with at least one Jumping MP may jump down any number of levels.

Critical Damage: BattleMechs that jump with destroyed hip or leg actuators or a damaged gyro must make a Piloting Skill Roll to avoid falling when they land (see *Piloting/Driving Skill Rolls*, p. 59).

Heat: Jumping generates 1 heat point for every hex jumped, with a minimum cost of 3 heat points. If a 'Mech mounts improved jump jets, the heat from jumping is reduced by half (1 heat point per 2 hexes or portion thereof jumped), to a minimum of 3 heat points. Regardless of what type of jump jets are mounted, if a 'Mech only jumps 1 hex, it builds up 3 heat points for that jump.

Water: Jump jets cannot be fired while submerged in water, and so a 'Mech standing in Depth 2 or deeper water (or a ProtoMech in Depth 1 or deeper water) cannot jump. A 'Mech standing in Depth 1 water may not fire jump jets located in its legs, but it may use jets located in the torso, each one providing 1 Jumping MP. For example, a 'Mech with a Jumping MP of 5 that has one jump jet in each leg and each torso location may only use 3 MP when jumping out of Depth 1 water.

Goshawk 3 *(custom), First Division (Word of Blake)*



• JUMPING DIAGRAM •

In the Jumping diagram above, the BattleMech in Hex A on the Lake Area map has a Jumping MP of 6 and a Walking/Running MP of 6/9. The BattleMech jumps to Hex B, four hexes away. Because the BattleMech is using jump movement, it spends only 1 MP for every hex that it moves, ignoring all terrain costs for the hexes it passes over and for the hex in which it lands. As it lands, the player can face the BattleMech in any direction he chooses, at no extra cost. To reach Hex B with the facing shown by walking or running, the BattleMech would have had to spend at least 10 MP. The 'Mech is starting in Depth 1 water (Hex A), giving it a level of –1. Two of the jump jets are mounted in the legs (one in each leg) and so cannot be used as they are submerged; its other jump jets are located in the torsos, however, so it can still jump with a Jumping MP of 4.

At first, it looks like the BattleMech could have jumped into Hex B by at least four different hex paths that are equally short (four hexes), as indicated on the diagram. There are actually two additional paths (1-5-6-B and 4-5-3-B), but for the purposes of this example, only the primary four paths will be discussed.

Path I: 1, 2, 3, ending Hex B.

Path II: 1, 5, 3, ending Hex B.

Path III: 4, 5, 6, ending Hex B.

Path IV: 4, 7, 6, ending Hex B.

The player cannot choose Path I and II, however, because a hill in the intervening terrain (Hex 3) has a level of 4. The 'Mech only has 4 Jumping MP, and that plus its –1 starting level only equals 3 (4 + –1 = 4 – 1 = 3). Four is higher than 3, and so the 'Mech cannot jump over Hex 3.

While the trees in Hex 5 rise two levels above the underlying terrain, they only rise to Level 3 (1 (underlying terrain) +2 (trees) = 3). While the jumping MP of the 'Mech equals or exceeds that level (4 (Jumping MP) –1) = 3), the 'Mech could cross that path regardless of the height of the trees as trees do not affect jumping movement. As such, the player may still choose either Paths III or IV.

If the 'Mech had a Jumping MP of 5 or higher (i.e. it had a higher over-all Jumping MP, or if the two jump jets mounted in the legs were mounted in the torsos), then it could have traveled to its destination along Paths I or II, because the unit's Jumping MP (5) plus the level of the starting hex (–1) would equal or exceed the level of the intervening hilly terrain (4).

VTOL MOVEMENT

Though this type of movement is primarily reserved for VTOLs, other units may share this movement type, such as Sylph battle armor; the rules governing that unit type will cover any additional rules beyond VTOL Movement that apply to movement. A unit using VTOL movement is considered airborne and therefore is harder to hit (see the Attack Modifiers Table, p. 117).

Like other vehicles, a VTOL may move at cruising or flank speed during the Movement Phase (Ground). To make a facing change or enter a new hex, regardless of the underlying terrain type, costs 1 MP. In order to make a facing change or enter a new hex, the VTOL must be at least one elevation above the level of the hex it currently occupies.

A VTOL may move vertically at a cost of 1 MP per elevation that the unit ascends or descends. A VTOL can move any number of elevations up and down in a single hex, as long as it has sufficient MP. Players must record the elevation of each VTOL on its record sheet's Elevation Track at the end of the Movement Phase (Ground). A VTOL is a Ground Combat Vehicle and is always considered to be on the ground mapsheet. It is not an aerospace unit, does not fly using Altitudes, and does not use the Low Altitude mapsheet in *Total Warfare* play. A VTOL may achieve a maximum elevation of 500 levels.

VTOLs cannot fly at or below the tops of trees while in wooded hexes (2 levels high), and cannot fly at or below the building's level in a building hex unless they are landing on the building. The only movement a VTOL can make while at ground level (landed) is to ascend at least one elevation above the ground. A VTOL that begins or ends its movement at an elevation equal to the terrain's level has landed. VTOLs may only land in clear, paved or building hexes (on the roof; see *Collapse*, p. 176, for additional rules concerning a unit's interaction with a building hex), or on the helipad on a Large Naval Vessel Support Vehicle. If they attempt to land in any other hex, even if using vertical movement, they automatically crash (see *VTOL and WiGE Crashes*, p. 68); if a unit attempts to land in a hex occupied by a DropShip or Large Support Vehicle, they automatically charge the unit (see *Collisions*, p. 67).

Roads: VTOLs can choose to move along a road, allowing them to traverse woods hexes at a level below the treetops. In order to do this, a VTOL must begin the movement through the woods on a road and stay on the road for the entire movement. Of course, at any point the VTOL can increase its elevation to rise above the trees and continue its movement off the road.

Sideslipping and Crashes: A VTOL vehicle using flanking movement may sideslip (see *Sideslipping*, p. 67). If a VTOL sideslips, it may crash. VTOL vehicles that enter a hex horizontally (as opposed to vertically, which means it would land) at or below the level of that hex's terrain likewise crash (see *VTOL and WiGE Vehicle Crashes,* p. 68). Additionally, if a VTOL vehicle horizontally enters a hex that contains ground units at the same level as the VTOL's current elevation (whether through voluntary movement, or through a sideslip), may accidentally charge said unit (see *Collisions*, p. 67).

Water: A VTOL cannot land on water hexes unless the unit has the Amphibious chassis modification, nor can it descend below Depth 0 in a water hex. A VTOL that makes either of these movements crashes and is destroyed.

In the VTOL Movement diagram at right, a VTOL is landed in Hex A on the BattleForce 2 map. The controlling player decides to move the VTOL to Hex B, four hexes away. It costs the VTOL 3 MP to rise high enough in the starting hex to fly over the Level 2 hill in Hex 1. However, the trees in Hex 2 rise two levels above the underlying terrain, which is Level 1, making the height of the trees Level 3. The controlling player spends 1 more MP to raise the VTOL to Elevation 4. He then expends 4 MP to move to Hex B, and then 3 MP to land again, for a total of 11 MP.

• VTOL MOVEMENT DIAGRAM •

WING-IN-GROUND-EFFECT (WIGE) MOVEMENT

Though this type of movement is primarily reserved for WiGE vehicles, other units may also move in this way; the rules governing that unit type will cover any additional rules beyond WiGE Movement that apply to movement. As with jumping and VTOL movement, a unit using WiGE movement is harder to hit, but finds it more difficult to make an attack (see *Combat*, starting on p. 98).

For WiGE vehicles, takeoff costs 5 MP, which must be spent in a single turn, and places the vehicle at one elevation above the level of the underlying terrain in the hex from which it took off. While airborne, WiGE vehicles fly one elevation above the ground, and so are unaffected by water, rubble or rough terrain.

A WiGE vehicle must move at least 5 hexes per turn to remain airborne (this minimum movement requirement does not apply on the turn the WiGE takes off) or else it is forced to land at the end of its movement (landing for a WiGE vehicle does not cost any MP). WiGE vehicles may only land in clear or paved hexes. If they attempt to land in any other hex, they automatically crash (see *VTOL and WiGE Crashes*, p. 68); if a unit attempts to land in a hex occupied by a DropShip or Large Support Vehicle, they automatically charge the unit (see *Collisions*, p. 67).

While grounded, a WiGE vehicle has 1 Ground MP, and is considered a hover vehicle for terrain restrictions. A grounded WiGE vehicle can enter a hex using the *Minimum Movement* rule (see p. 49), provided it is not prohibited from entering that hex.

Buildings: A WiGE moving over a building immediately collapses that building if its tonnage x 0.25 exceeds the building's current CF (see *Collapse*, p. 176).

Roads: WiGE vehicles can choose to move along a road, allowing them to traverse woods hexes at a level below the treetops. In order to do this, a WiGE must begin the movement through the woods on a road and stay on the road for the entire movement.

Sideslipping and Crashes: A WiGE vehicle using flanking movement may sideslip (see *Sideslipping*, p. 67). If a WiGE sideslips, it may crash. WiGE vehicles entering a hex greater than one level above their current hex likewise crash (see *VTOL and WiGE Vehicle Crashes*, p. 68). Entering a woods hex (either because of a sideslip or deliberately) automatically causes the WiGE to crash. In addition, if damage reduces an airborne WiGE vehicle's MP to 0 at any time during a turn, it automatically crashes in the hex where the damage occurred. Additionally, if a WiGE vehicle enters a hex horizontally, through a sideslip, that contains ground units at the same level as the WiGE's current elevation, may accidentally charge said unit (see *Collisions*, p. 67).

Water: All WiGE vehicles float on water and so treat water hexes as clear terrain, including when taking off and landing, though they cannot descend below Depth 0. When landed on water, these units are treated as naval vessels for purposes of line of sight, etc.

Backwards Movement: WiGE Vehicles cannot move backwards (see *Backward Movement*, p. 49).

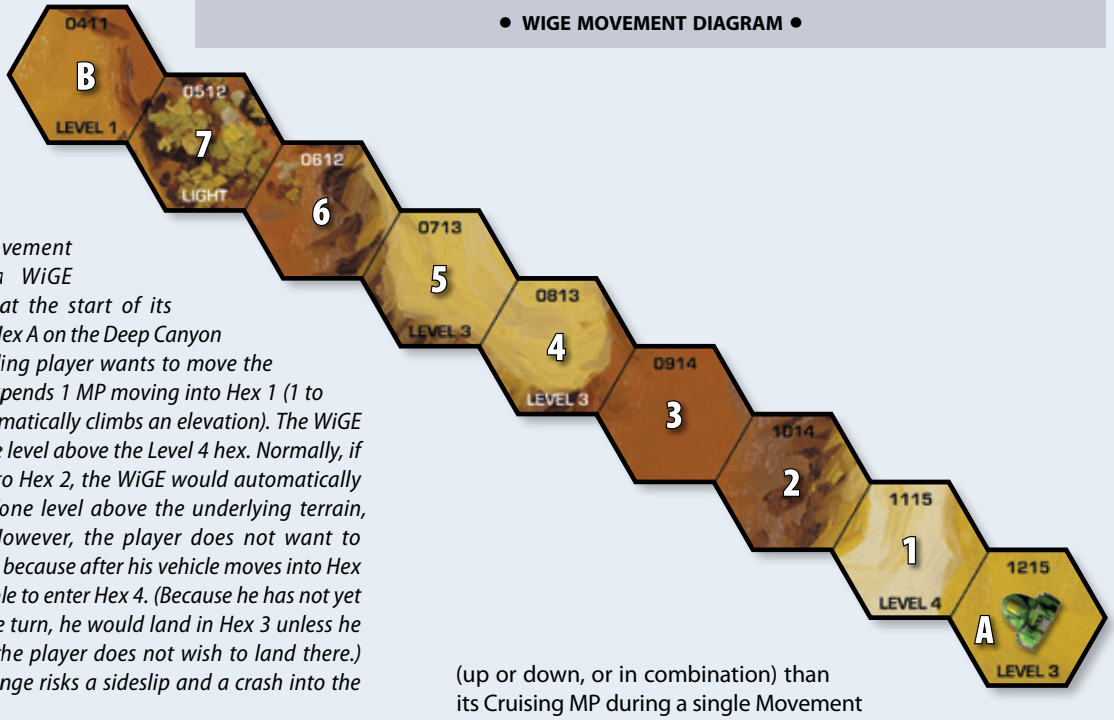
Elevation Changes

A WiGE vehicle entering a hex whose level is one higher than its current hex automatically maintains its one elevation of clearance above the terrain, and expends no additional MP to do so. A WiGE vehicle cannot enter a hex whose level is two or more higher than its current hex.

A WiGE entering a hex with a level lower than its current hex automatically descends to maintain the standard one elevation above the underlying terrain, regardless of the difference in levels between the two hexes, at no additional MP expenditure. However, in certain circumstances, a WiGE vehicle may prefer to avoid such a descent. A WiGE vehicle may maintain the same elevation in a new hex (regardless of how many level changes occur in the lower level hex entered) by expending 2 additional MP per hex that it crosses. If the WiGE does not reach a hex within 1 level difference than the one it exited from by the end of its Movement Phase, it automatically descends to the standard elevation above the underlying terrain in the final hex of its movement.

NDA-1K No-Dachi, *Otomo (House Kurita)*

• WIGE MOVEMENT DIAGRAM •



In the WiGE Movement diagram above, a WiGE vehicle is airborne at the start of its Movement Phase in Hex A on the Deep Canyon #2 map. The controlling player wants to move the WiGE to Hex B. He expends 1 MP moving into Hex 1 (1 to enter the hex; it automatically climbs an elevation). The WiGE is now at Level 5, one level above the Level 4 hex. Normally, if the player moved into Hex 2, the WiGE would automatically descend to Level 1 (one level above the underlying terrain, which is Level 0). However, the player does not want to descend to that level, because after his vehicle moves into Hex 3, he would not be able to enter Hex 4. (Because he has not yet moved 5 hexes in the turn, he would land in Hex 3 unless he keeps moving, and the player does not wish to land there.) Making a facing change risks a sideslip and a crash into the higher level of Hex 4.

Upon entering Hex 2, the player expends 3 MP, and also expends 3 MP in Hex 3. Upon entering Hex 4, the player only expends 1 MP. The WiGE automatically descends to one level above the Level 3 underlying terrain, putting it at Level 4 in Hex 4. The player then expends 1 MP to enter Hex 5 and 3 MP to enter Hex 6. The player once again expends 3 MP to enter Hex 7 (because the player wants to reach Hex B and, more importantly, the WiGE would crash if it entered the wooded hex at an elevation equal to or less than the level of the trees). Finally, the player expends 1 MP to enter Hex B, and the WIGE automatically descends to one level above the underlying Level 1 terrain. It is now at Level 2 in Hex B. Because it moved for more than 5 hexes, it stays airborne at the end of the Movement Phase. The total cost to move from Hex A to Hex B was 16 MP.

NAVAL MOVEMENT

Naval movement applies only to Naval Vessels (Combat and Support) and hovercraft/WiGE units. This type of movement includes moving on and below the water's surface. Surface naval units may only move through Depth 1 or deeper water hexes, at a cost of 1 MP per hex entered, regardless of depth. Unlike other units, naval units moving on the surface can use flank speed in Depth 1 or deeper water. For line of sight purposes, a surface vessel is at Level 0 (on the water's surface).

Hovercraft and WiGE Units: Treat hovercraft and WiGE units moving over Depth 1 or greater water hexes like surface units.

Submarines

Regardless of depth, a submarine (including Support Vehicles with the Submersible chassis modification) expends only 1 MP to enter a water hex.

A submarine unit can move vertically at a cost of 1 MP per depth that it ascends or descends. A submarine can move any number of depths up and down at cruising speed in a single water hex as long as it has sufficient MP. If a submarine changes more depths (up or down, or in combination) than its Cruising MP during a single Movement Phase, it must automatically roll once on the *Motive System Damage Table* (see p. 193).

A submarine cannot descend to a depth greater than that of its hex or ascend above the water's surface (Depth 0). In order to move horizontally or change facing, the submarine must be at a vertical depth higher than the depth of the hex it occupies—in other words, it cannot move along the bottom. If a submarine is at the depth of the hex it occupies and/or enters, it is considered to be resting on the bottom. Players should record the depth of each submarine on the Depth Track on its record sheet at the end of the Movement Phase (Ground).

UNDERWATER MOVEMENT (NON-NAVAL UNITS)

Underwater movement—moving across the bottom of a water hex, as opposed to moving through the water itself—while rare, does occur, though few units not classified as naval vessels can survive complete submersion and still function. In addition to the movement effects described below, only specific types of weapons may be used and their ranges significantly decrease. Units must also deal with hull integrity and possible hull breaches (see *Underwater Units*, p. 121). To be considered underwater, a unit must be completely submerged. It cannot be in Depth 0 water; 'Mechs must be in at least Depth 2 water, or at least Depth 1 if prone.

Unless a unit's write-up or record sheet describes it as having Underwater Movement MP (Underwater Maneuvering Units, or UMUs), the following rules apply for movement underwater. Note that these rules apply only for Depth 1 to 15 water. Rules for water hexes of Depth 16 or greater are covered in *Tactical Operations*.

A unit must pay 4 MP (base MP of 1 for entering a hex, +3 for Depth 2 or greater water) for each hex it enters and must make a Piloting Skill Roll (if applicable) using the appropriate modifiers for each Depth 2 or deeper water hex. In addition, a 'Mech must pay all standard MP for moving from one level (depth) to another (see Movement Cost Table, p. 52). If the Piloting Skill Roll fails, the unit automatically falls.

Falling Damage: If a unit below the water's surface falls, it suffers normal falling damage divided by 2, rounding the final damage down (see *Falling*, p. 68). A unit above the water's surface suffers normal falling damage divided by 2 for hitting the water's surface and normal falling damage divided by 2 for the fall from the water's surface to the bottom of the water hex. Normal damage for hitting the water's surface equals tonnage/10 (round up) x (# of levels fallen + 1)/2. Normal damage for hitting the bottom of the water hex equals tonnage/10 (round up) x (depth of water hex + 1)/2. Damage is resolved separately.

Hull Integrity: Whenever an underwater unit takes damage through movement (such as falling), it must immediately check for hull integrity as though it took damage from a weapon attack. Use the underwater Hull Integrity rules under *Damage* (see p. 121) to resolve such situations. A unit above the surface of a water hex that falls into a water hex does not check for hull integrity, but would check for hull integrity when the unit strikes the bottom of the water hex.

Minimum Movement: A unit can use the *Minimum Movement* rule (see p. 49) to enter a hex when moving underwater; this is the only time a unit can use running movement to enter a water hex.

Prohibited Units: Only 'Mechs and ProtoMechs may move underwater using these rules. (An IndustrialMech must be specifically equipped, or such movement might destroy the unit; see Movement Cost Table, p. 52.) No other unit may move underwater unless it has Underwater Movement MP.

Mechanized Battle Armor: While battle armor cannot normally enter water of depth 1 or greater, they can still be moved into and underwater by other units as per the normal rules (see p. 227). Mechanized battle armor being transported in such a fashion cannot voluntarily abandon their transport; if forcibly removed or their transport is destroyed, they immediately sink to the bottom of the hex and are rendered immobile.

Underwater MP: If a unit has Underwater Movement MP, the unit suffers none of the movement penalties of other units capable of underwater movement—i.e. it is not moving across the bottom of a water hex, but is instead moving akin to a submarine—but suffers targeting penalties as normal and remains subject to hull integrity rules (see *Underwater Units*, p. 121).

STACKING

At the end of each Movement Phase, up to two units from each side may occupy a single hex (a maximum of four). These units can consist of any combination of vehicles and infantry, but only one of the four can be a 'Mech. This maximum is called the stacking limit.

During the Movement Phase, a unit may move through hexes occupied by other friendly units. Though a unit can enter a hex occupied by an enemy unit, it may not leave that hex in the same turn; entering an enemy hex automatically ends a unit's movement.

Regardless of the conditions noted above, no unit may voluntarily end its movement in a hex if that movement would violate the stacking limit.

If a unit inadvertently violates the stacking rules, the result is a domino effect (see *Domino Effect*, p. 152). Most often, this occurs when a 'Mech moves into a hex with a friendly unit and the terrain requires a Piloting Skill Roll. If the roll fails, the entering 'Mech falls. The domino effect results if it cannot manage to stand up and move out of the hex.

UNIT AND TERRAIN RULES

The following specific unit and terrain rules modify the basic stacking rules as noted above.

'Mechs

If the enemy unit(s) located in the hex are only infantry a 'Mech may exit that hex in the same turn it entered. If the enemy unit(s) are any other units, then the 'Mech must stop in the hex as noted above.

Infantry

Infantry mounted on or in a vehicle (see *Infantry Carriers*, p. 223) and battle armor riding on a unit using the Mechanized Battle Armor rules (see p. 226)—as well as infantry swarming a unit (see *Swarm Attack*, p. 220)—do not count against the stacking limit. This includes infantry using VTOL or underwater movement. Infantry dismounts into an adjacent hex of its controller's choice if dismounting in the same hex as the carrier would violate the stacking limit.

Large Support Vehicles

No other unit may move through or occupy a hex(es) occupied by a Large Support Vehicle, except for infantry (in this case, a single friendly infantry unit and two enemy infantry units may occupy the hex of a Large Support Vehicle).

ProtoMechs

A ProtoMech counts as a vehicle for stacking purposes.

Trailers

One small or one medium Support Vehicle trailer acts as part of a tractor for purposes of stacking; two small, two medium, or one small and one medium trailers together act as a single Support Vehicle. Treat Large Support Vehicle trailers as individual units for stacking purposes. See *Trailers* (p. 205 of *Support Vehicles*) for more information.

Airborne Non-Aerospace Units

These ground stacking limits do not apply to airborne units such as WiGE and VTOL Vehicles, or other units expending such MPs (such as a battle armor unit expending VTOL MP). Instead, apply the limits to each elevation within a hex; see *Elevation and Depth* Rules, page 58, for the exception.

Grounded Aerospace Units

If an aerospace unit is grounded (either because it landed or crashed) in a ground hex(es), the following rules apply for stacking purposes:

- Aerospace and conventional fighters (this includes Fixed-Wing Support Vehicles), are considered vehicles.
- Small craft are considered 'Mechs.
- Airships are considered Large Support Vehicles.
- DropShips are considered Large Support Vehicles for the target hex and the six surrounding adjacent hexes.
- Units mounted in grounded aerospace units do not count against the stacking limit (see *Carrying Units*, p. 89, in the *Aerospace Movement* section.)

Buildings

These stacking rules do not apply to units in the same building hex on different levels. Within a building hex, apply the unit stacking limits to each level of the building hex (see *Building Levels*, p. 167).

ELEVATION AND DEPTH RULES

All the above stacking rules apply to the elevation or depth of every hex, with the exceptions noted below.

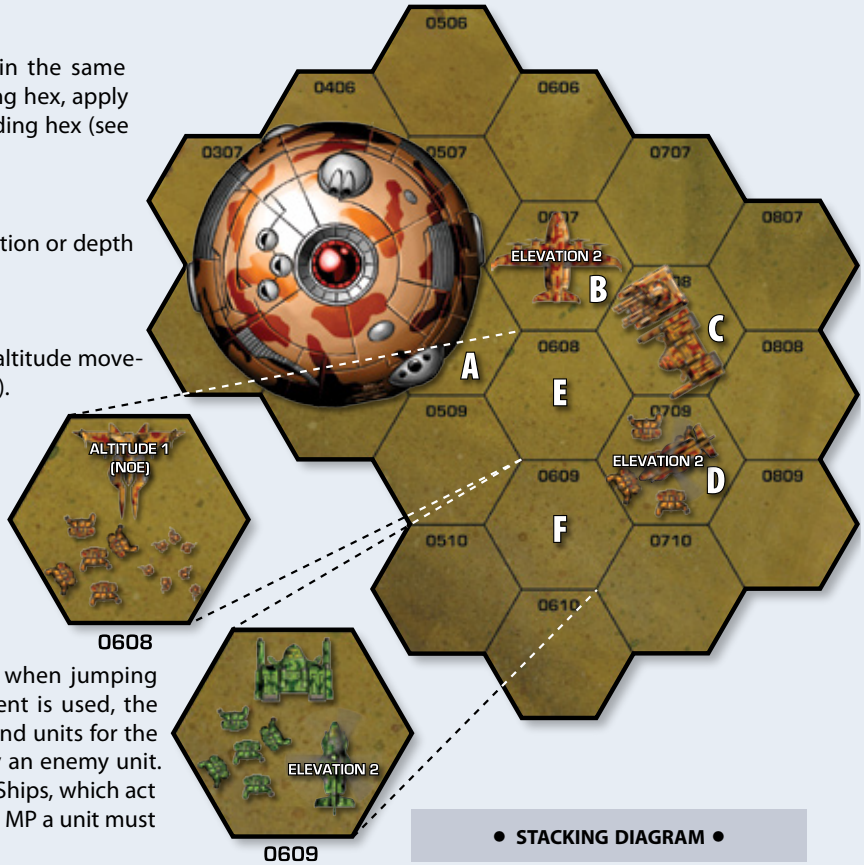
Airborne Aerospace Units

The stacking rules do not apply to aerospace altitude movement (see *Stacking*, p. 78, in *Aerospace Movement*).

Unit Heights

Various units rise a number of levels above the level of the underlying hex they are in, depending on the unit type (see *Unit Heights*, p. 99, in *Combat*). These heights must be taken into consideration when dealing with the stacking limits of each elevation (or depth) in a hex.

Jumping: The only exception to this rule is when jumping movement is used. Any time jumping movement is used, the jumping unit may ignore the heights of all ground units for the purposes of moving through a hex occupied by an enemy unit. The only exception to this rule is grounded DropShips, which act as terrain Levels for purposes of how many Jump MP a unit must have to jump over a grounded DropShip.



• STACKING DIAGRAM •

During the Movement Phase, controlling Player A wishes to move his units on the Open Terrain #1 map. He has a 'Mech, and battle armor unit in Hex F, which is the maximum amount of units one player can have in a hex. At Elevation 2 in the same hex, player A also has a VTOL Vehicle, which is also the maximum amount of units one player can have in a hex, since the 'Mech rises two levels above the level of the underlying hex (which is Level 0), making its height equal to that of the VTOL; i.e. the 'Mech counts in both Levels 1 and 2, which equates to Elevations 1 and 2. Furthermore, Player A could not have the VTOL Vehicle in that hex at Elevation 1, as that equates to the Level 1 of the battle armor unit already in that hex, and the player can only have two units at a Level/Elevation, in the same hex.

Arrayed against him are controlling player B's units (in all cases, the level of the underlying terrain is Level 0): a grounded, spheroid DropShip in Hex A (and 6 additional hexes) occupying Levels 1 to 10 of those hexes; a Large Support VTOL Vehicle in Hex B occupying Elevations 2 and 3 of that hex; a 'Mech and ground vehicle in Hex C occupying Level 1 of that hex (the 'Mech also occupies Level 2 of that hex); a battle armor unit (expending VTOL MPs) and a VTOL Vehicle in Hex D occupying Elevation 2 of that hex; a battle armor unit and conventional infantry unit in Hex E occupying Level 1 of that hex; finally, an aerospace fighter using Aerospace Units on Ground Mapsheets (see p. 91), is in Hex E as well, flying at Altitude 1 (NOE).

First Player A notes that regardless of what unit type he is moving or where, non-aerospace units (including grounded aerospace units) never interact for height, stacking or movement purposes with airborne aerospace units. As such, even though the aerospace fighter in Hex E is flying at it's lowest altitude, no matter how many elevations high a non-aerospace unit (such as a VTOL Vehicle) might occupy, he will never have to worry about stacking limits against the airborne aerospace unit.

Player A first moves his 'Mech (without using jumping MP). If the 'Mech moves into Hex D, it cannot then exit that hex; the enemy units at Elevation 2 overlap the Level 2 height that the 'Mech occupies, so that it can enter the hex occupied by the enemy units, but cannot exit; if the VTOL were at an elevation higher than 2, then the 'Mech could exit Hex D as the only enemy unit to occupy the hex (and appropriate overlapping Levels/Elevations) is an infantry unit. If the 'Mech moves into Hex E, it could continue its movement this turn as the only enemy units that occupy that hex are infantry. However, the 'Mech cannot enter Hex A, as it cannot enter a hex occupied by a grounded DropShip. It cannot enter Hex B as a Large Support Vehicle occupies Elevation 2, which overlaps with the Level 2 height of the 'Mech, and it cannot enter a hex occupied by a Large Support Vehicle. Finally, it cannot enter Hex C, as it cannot enter a hex occupied by an enemy 'Mech. Perhaps player A should've taken a different route.

Player A then attempts to move the infantry (without using jumping MP). If the infantry enters Hex D, it can continue its movement, as the enemy unit's Elevation of 2 does not overlap with the infantry's Level 1 height. If the infantry unit enters hex E, it also must stop and cannot exit the hex as both Player A's and enemy's units are at ground level, occupying Level 1 of that hex. If there were no units in Hex E, the infantry unit would have the following additional movement options this turn (provided it had the MPs available): it could actually enter Hex A, as infantry can enter the same hex as a grounded DropShip, but it would

not then be able to exit Hex A this turn; it could enter Hex B and actually exit Hex B as its Level 1 height doesn't overlap with the Elevation 2 occupied of the Large Support Vehicle (even if the Large Support Vehicle occupied Elevation 1 or was landed, the infantry unit would still be able to enter the hex, it simply could not exit it this turn); finally it could enter Hex C, but would be unable to exit.

Finally player A moves his VTOL. The VTOL could enter Hex D, but since it occupies the same elevation (Elevation 2) as an enemy unit, it cannot then exit; if it changed its Elevation up or down by one before entering the hex, it could then continue its movement this turn. It could enter Hex E, and then exit this turn as its elevation does not overlap with the level occupied by the enemy infantry units. However, it cannot enter Hex A because it cannot enter the hex at an elevation occupied by a grounded DropShip; provided it had the MP available, if the VTOL changed its elevation in Hex E to Elevation 11, it could then enter Hex A. It cannot enter Hex B, as it occupies the same elevation as the Large Support VTOL Vehicle; if it changed its Elevation to 1 or 4 (the Large Support VTOL Vehicle occupies Both Elevations 2 and 3), it could not only enter the hex, but exit it this turn. Finally, if it entered Hex C, it could not exit as its Elevation 2 overlaps with the Level 2 of the 'Mech; once again, if it changed its elevation in Hex E to 3 or greater, it could then enter Hex C and exit Hex C this turn.

In the case of both Player A's 'Mech and battle armor, if the units had been using jumping movement when entering Hexes B, C, D or E, they could've continued towards their destination hex without stopping even though those hexes are occupied by enemy units, as jumping units ignore the heights of other units for movement and stacking purposes (though they must still adhere to the stacking rules in their destination hex). The one exception is the DropShip in Hex A; the only way for the 'Mech to enter Hex A using Jumping MP is if the unit had a Jumping MP of 10, allowing it to jump over the Level 10 height of the grounded DropShip.

ENF-6M Enforcer III, Fifth Syrtis Fusiliers (House Davion)

PILOTING/DRIVING SKILL ROLLS

Players must make Piloting/Driving Skill Rolls for their warriors under a variety of treacherous circumstances, usually to avoid falling (for 'Mechs). All of the events that require a Piloting/Driving Skill Roll are listed in the Piloting/Driving Skill Roll Table on page 60.

Four-Legged 'Mechs: A four-legged 'Mech adds a –2 modifier to all Piloting Skill Rolls made to avoid falls, as long as none of its four legs are destroyed.

Immobile 'Mechs and Unconscious Warriors: Immobile 'Mechs or 'Mechs with an unconscious warrior forced to make a Piloting Skill Roll automatically fail (see *Falling Damage to the MechWarrior*, p. 69).

IndustrialMechs: When an ICE-powered 'Mech fails a Piloting Skill Roll, the controlling player must make a second unmodified Piloting Skill Roll to prevent the engine from stalling. A stalled 'Mech is treated as if shut down (see *Shutdown*, p. 160), and the player may try to restart it during the End Phase of the next turn by making a successful unmodified Piloting Skill Roll.

Infantry: Infantry units have no Piloting Skill and so never need Piloting Skill Rolls.

ProtoMechs: ProtoMechs never need Piloting Skill Rolls. They cannot fall down, drop prone or skid. Even the destruction of a ProtoMech's legs will not cause it to fall, though it will be unable to move.

Vehicles: Vehicle crews make Driving Skill Rolls only to avoid skids or sideslips and to avoid taking damage when entering buildings.

MAKING PILOTING/DRIVING SKILL ROLLS

The Piloting/Driving Skill Roll Table lists the events that require a player to make a Piloting Skill Roll for his MechWarrior. Each time one of these events occurs, the player adds the following modifiers to his MechWarrior's Piloting Skill: all indicated modifiers for the event, plus additional modifiers from any other events taking place in the same phase, including those listed under Preexisting Damage on the Piloting Skill Roll Table. The resulting number is the Modified Piloting Skill.

To make the Piloting Skill Roll, the player rolls 2D6. If the result is equal to or greater than the Modified Piloting Skill, the 'Mech avoids falling. If the result is less than the Modified Piloting Skill, the 'Mech falls.

You can never choose to automatically fail a Piloting/Driving Skill Roll.

Movement Phase: Piloting Skill Rolls required because of movement (entering water, trying to stand up, entering rubble, avoiding falling damage and so on) must be made immediately following the action. Multiple rolls may be required during the 'Mech's movement for a turn. For example, if a 'Mech is moving through three hexes of Depth 1 water, the player must make a Piloting Skill Roll when the 'Mech enters each water hex. If the 'Mech falls during the Movement Phase and has at least 2 MP remaining, it may attempt to regain its feet that turn.

PILOTING/DRIVING SKILL ROLL TABLE

Situation	Modifier
Damage to 'Mech	
'Mech takes 20+ damage points in one phase	+1
'Mech fusion (or fission) reactor shuts down	+3[1]
Leg/foot actuator destroyed	+1
Hip actuator destroyed	+2
Gyro hit	+3
Gyro destroyed	Automatic fall[2]
Leg destroyed	Automatic fall[3]
Physical Attacks Against 'Mech	
'Mech was kicked	0
'Mech was pushed	0
'Mech was successfully charged/hit by death from above	+2
Unit's Actions	
'Mech missed kick	0
'Mech made a successful charging attack	+2
'Mech made death from above attack	+4[4]
'Mech entered Depth 1 water hex	–1
'Mech entered Depth 2 water hex	0
'Mech entered Depth 3+ water hex	+1
'Mech attempted to stand	0
'Mech entered rubble hex	0
Running/flanking unit moved after facing change while on pavement	See *Skidding*, p. 62
Flanking VTOL/WiGE/Hover Vehicle moved after facing change	See *Sideslipping*, p. 67
'Mech jumped with damaged gyro or leg/foot/hip actuators	per Preexisting Damage, at right
'Mech jumped with destroyed leg	per Preexisting Damage, at right
'Mech ran with damaged hip or gyro	per Preexisting Damage, at right
Special Cases	
MechWarrior trying to avoid damage when his 'Mech is falling	+1/every level above 1
IndustrialMech trying to avoid critical damage when falling	+1/every level above 1
IndustrialMech with ICE power plant fails PSR (see *Piloting/Driving Skill Rolls*, p. 59)	0 (no additional modifiers)

[1]Only during the phase that the reactor shuts down. If the MechWarrior must make a Piloting Skill Roll for a 'Mech with a shutdown reactor, the 'Mech automatically falls; in either case, if the 'Mech falls, the warrior automatically takes 1 point of damage (see *Falling Damage to the MechWarrior*, p. 69).

[2]The modifier for a destroyed gyro is +6 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.

[3]The modifier for a destroyed leg is +5 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.

Situation	Modifier
Special Cases (Continued)	
Four-legged 'Mech with intact legs	–2
Unintentional charge	+3
'Mech mounts small cockpit	+1
Preexisting Damage	
Per leg/foot actuator previously destroyed	+1
Per hip actuator previously destroyed	+2[5]
Gyro previously hit	+3
Leg previously destroyed	+5[6]
Skidding Movement	
Hexes moved in turn	
0–2	–1
3–4	0
5–7	+1
8–10	+2
11–17	+4
18–24	+5
25+	+6
Building Movement[7]	
Unit entering/leaving light building hex	0
Unit entering/leaving medium building hex	+1
Unit entering/leaving heavy building hex	+2
Unit entering/leaving hardened building hex	+5
Hexes moved in turn	
1–2	0
3–4	+1
5–6	+2
7–9	+3
10–17	+4
18–24	+5
25+	+6

[4]Automatic fall if death from above attack is unsuccessful.

[5]Ignore all modifiers from previous critical hits on that leg.

[6]Do not add modifiers for other damaged actuators in the leg.

[7]To avoid damage only. Does not result in a fall if Piloting Skill Roll fails. See *Buildings*, p. 166. Add an additional +1 modifier if unit is charging or being charged (in addition to the +2 modifier normally required in that situation).

If a Piloting Skill Roll is required in the Movement Phase due to weapon attacks, such rolls are made immediately.

Weapon Attack Phase: All Piloting Skill Rolls required because of weapons attacks must be made at the end of the Weapon Attack Phase. A 'Mech only makes one Piloting Skill Roll for taking 20+ damage points in a single phase, regardless of how many points of damage over 20 it takes. All weapons attacks are resolved before the players make any required Piloting Skill Rolls. 'Mechs that fall during the Weapon Attack Phase begin the turn's Physical Attack Phase in a prone position. This means that Death From Above and Charging attacks automatically fail if the 'Mech fails its Piloting Skill Roll before the beginning of the Physical Attack Phase (see p. 38).

Physical Attack Phase: All Piloting Skill Rolls required because of physical attacks are made at the end of the Physical Attack Phase. Resolve all physical attacks before making any Piloting Skill Rolls.

During the Weapon Attack Phase, a 'Mech whose MechWarrior has a Piloting Skill of 5 takes 40 points of damage and loses two leg actuators. The player makes one Piloting Skill Roll for taking 20 or more points of damage, and two more for losing two leg actuators. The modified Piloting Skill target number for each of the three rolls is 8 [5 (Piloting Skill) + 1 (20+ points of damage) + 1 (damaged leg actuator) +1 (damaged leg actuator)].

During the Physical Attack Phase, the same BattleMech is kicked in the leg by two other 'Mechs, losing another actuator and taking 23 more points of damage. The player must make four more Piloting Skill Rolls: two for getting kicked twice, one for losing a leg actuator and one for the 23 points of damage. The modified Piloting Skill target number for each of the four rolls is 9 [5 (Piloting Skill) + 2 (existing actuator damage) + 1 (another damaged leg actuator) + 1 (20+ points of damage)].

Movement on Pavement

Movement on pavement is handled in the same way as movement through clear terrain, with a few important exceptions. Units may skid when moving on pavement, and roads may allow passage through prohibited or difficult terrain.

A road is simply a narrow strip of pavement that passes through terrain of some other type. All ground units traveling on roads pay only 1 MP per hex regardless of the hex's underlying terrain. A ground unit is considered to be traveling on a road if it moves from one hex to the next on that road. Ground units may move through prohibited terrain while traveling on a road, but they must begin and end their movement through such terrain on the road and remain on it while traversing the terrain. A ground unit traveling on a road must pay any costs required to change levels while entering a hex.

Ground Vehicles: Ground vehicles moving on pavement may receive a movement bonus of 1 MP, regardless of whether the vehicle uses cruising or flanking movement. To gain the extra MP, the unit must begin its turn on a paved hex and continue to travel on pavement for the entire Movement Phase. This does not apply to motorized or mechanized infantry.

An Atrean Dragoons' LCT-5M Locust chances a fall as it races down a city street towards a developing battle.

BRIDGE MOVEMENT

Roads that cross a water hex (or span a distance where the underlying terrain of the hex is lower than the level of the bridge) are considered bridges. Bridges are classified as light, medium, heavy or hardened in the same manner as buildings, and have the same range of Construction Factors (CF) as light, medium, heavy and hardened buildings (see *Buildings*, p. 166). If the type of bridge is not marked or defined by the scenario being played, assume it is a medium bridge with CF 40.

Bridges can also be attacked like buildings. When a bridge's CF is reduced to 0, it has collapsed.

Maximum Capacity: Just like buildings, each hex of a bridge will only support units with a total tonnage equal to or less than the bridge's current CF. If the total tonnage of units in a bridge hex exceeds the bridge's current CF, that bridge hex collapses, and units on it must take normal falling damage. In the case of bridges that cover more than a single hex, CF values are assigned to each hex. The destruction of a single hex of a multi-hex bridge does not affect any other hex in the same bridge, unless more than half the total hexes have been destroyed. In this case, the entire rest of the bridge collapses. If the collapse of the final hex that destroys the whole bridge occurs because of movement, it happens immediately; if from weapon or physical attacks, the bridge collapses at the end of the appropriate phase (see *Collapse*, p. 176).

Under Bridge Movement: A unit may enter a bridge hex and be considered underneath the bridge, provided the level of the underlying hex, plus the height of the unit, is equal to or less than the level of the bridge: for surface naval vessels, the level of the underlying hex is the surface of the water hex; for submarines or units expending UMU MPs, the level of the underlying hex is their current Depth; for 'Mechs, the level of the underlying hex is the bottom of the hex.

If a unit cannot move on top of the bridge, or underneath the bridge, the bridge is treated as a building hex for the purposes of movement (see *Buildings*, p. 166).

SKIDDING

If a ground unit using running/flanking movement makes a facing change in a paved hex (including a road or bridge) at any point in the turn and then attempts to enter a new hex in the same turn, before that unit actually enters the hex, the player must make a Piloting Skill Roll to see if the unit skids.

The player must modify the roll by a factor based on the total number of hexes moved in the turn so far, using the Skid Modifier Table (see p. 63). If the die roll result equals or exceeds the ground unit's modified Piloting Skill target number, the unit does not skid and may enter the hex and continue its movement. If the result is less than the modified Piloting Skill target number, the 'Mech falls (see *Falling*, p. 68). It suffers normal falling damage and then skids.

A ground unit skids for a number of hexes equal to the number of hexes it has moved in the turn so far divided by 2 (round up), continuing in the direction it was traveling before making the facing change that caused it to skid. For every hex that a 'Mech skids, it suffers damage equal to one-half its normal falling damage, rounded up; after the skid has ended, add up all damage, then apply it in 5-point groups (see *Falling*, p. 68). Use the column of the 'Mech Hit Location Table determined by the fall (see p. 119 in *Combat*) to determine the location of this damage.

After a skid, the ground unit's movement ends, even if it had MP remaining.

Skidding in Combat

Add +2 to the to-hit modifier for all weapons fire and physical attacks made against a skidding ground unit during the turn in which it skid. In addition, apply a +1 to-hit modifier for all weapons fire and physical attacks made by a skidding ground unit during the turn in which it skids.

These modifiers are in addition to all the standard attacker and target movement modifiers.

Ground Vehicles (Except Hover Vehicle)

Ground Vehicles (except hover vehicles) that fail a Driving Skill Roll lose control and skid as described above. In addition, they must make one immediate roll on the Motive System Damage Table (see p. 193). No further damage occurs unless the vehicle hits something or moves into a hex that is more than one level below its current level (if this occurs, use the *Accidental Falls from Above* rules, p. 152).

Hover vehicles do not skid but instead sideslip; any time a hover unit uses flanking movement, regardless of underlying terrain, it risks sideslipping (see *Sideslipping*, p. 67).

Collisions

If an obstacle (a unit, terrain, a building and so on) lies in the path of the skid, the skidding unit may crash into it; the following rules cover how to resolve the various situations a skidding unit may encounter.

Note that the falling (if any) and skidding damage to a unit should be applied first before any damage from a collision is applied, then any further damage that might result from a skid is applied. If a unit continues to skid after a collision, then that additional damage is applied after all the resulting damage from a collision is applied. For example, if a 'Mech falls and skids for four hexes, but runs into a building hex in the second hex of its skid—which it destroys and so continues to skid—the damage from the fall and two hexes of skid would be applied first, then the damage from the collision would be applied, then the damage from the collapsing building would be applied, then the damage from the additional hexes skid (if any) would be applied.

If at any time during a collision and the application of damage the skidding unit is destroyed, the skid ends immediately, with no further effects applied or resolved.

Buildings: Skidding units automatically crash into buildings if entering a building hex. The building hex takes damage as if the skidding unit had executed a successful charge attack (see *Charge Attacks*, p. 148). The unit takes damage equal to the building hex's current CF divided by 10 (round up). If the building hex is not destroyed, the unit's skidding ends, with the unit occupying the building hex. If the building hex is destroyed and the skidding unit still has hexes it is required to skid, look at the MP Cost column on the Building Modifiers Table, page 167, and subtract that number of MPs for the type of building hex destroyed from the remaining hexes to be skid. After subtracting, if there are still hexes to be skid, the skid continues. For example, if a unit skid into a Medium Building hex and destroyed the building hex and still had 4 more hexes to skid, the controlling player would subtract 2 (after looking at the MP cost column of the Building Hex Table), leaving the unit to skid only 2 more hexes. In either case (i.e. if the building hex was not destroyed, or if the subtraction of the MP cost from the building type reduced the remaining hexes to be skid to 0), the skid ends, with the skidding unit now occupying the building hex.

Other Units: A skidding unit must make a successful charge attack (meaning an unintentional charge), with all the standard modifiers (including those for unintentional charges), against any unit in the path of its skid. The skidding unit takes damage from the target unit as if the target unit had executed a successful Kick attack. In addition to multiple units in different hexes, if two or more units occupy a single hex, a successful charge attack must be made against each unit; randomly determine the order in which such unintentional charge attacks occur. An unintentional charge is not modified for differences in Piloting Skill between the attacker and potential target units.

If the unintentional charge is successful, the skidding unit applies damage as for a standard charge (see *Charge Attacks*, p. 148). For target 'Mechs, the damage is rolled on the 'Mech Kick Location Table (unless the 'Mech is prone, in which case use the appropriate column of the 'Mech Hit Location Table). The charge is resolved immediately and, unlike standard charge attacks, can affect a unit that has not yet moved. Use the distance the skidding unit moved before the skid to calculate damage. After the crash is resolved, the skid continues if the target unit was destroyed. Otherwise, adjust both units' positions on the map as for a successful charge, and the skid ends. This could result in an additional displacement from the target hex when the skidding unit is placed in it, if that hex contained multiple units, or a domino effect in the hex where the displaced unit ends up (see *Unit Displacement*, p. 151).

If the unintentional charge is unsuccessful (if the skidding unit struck no other units in the hex), the skidding unit continues its skid.

Note that a skid is one of the few instances when a unit can enter and exit a hex occupied by an enemy unit in the same Movement Phase.

Levels: If the levels of the hex to be entered is one or more higher than the level of the skidding unit's current hex, the skidding unit automatically crashes into it and stops, taking 1 point of damage for every 20 tons the skidding unit weighs (round fractions up). Group the resulting damage into 5-point groupings, then roll once for each grouping on the appropriate Hit Location Table (based on the attack direction: see p. 119). Treat the attack as if it came from the hex that the skidding unit crashed into. If the level of the hex to be entered is one level lower than the level of the skidding unit's current hex, the level change has no effect on the skid. For 'Mechs, if the level is one or two levels lower, the change has no additional effect on the skid.

Accidental Falls From Above: If a unit skids into a hex whose level is lower *and* greater than the maximum allowable level change for that unit (see *Level Change*, p. 48), the unit experiences an accidental fall from above (see p. 152). Regardless of the results of the accidental fall, the unit's skid ends in that hex.

Terrain: If a unit skids into any terrain hex (not including buildings, level changes or water), other than clear and/or paved hexes (such as woods, rough terrain and so on), that terrain affects the duration of the skid. For each such hex entered, subtract the Movement Points required to enter that terrain type from the remaining hexes to be skid, as shown on the Movement Cost Table, p. 52, with no additional damage applied (unless the terrain is prohibited; see below). For example, if a unit in the process of skidding through six hexes enters a light woods in the third hex, it would subtract an additional one from the hexes left to skid (plus the one for entering the hex), leaving it two hexes to skid. If a unit would enter a hex that would reduce its remaining hexes to skid to 0 (or less), it would still enter that hex, ending its movement in that hex. In the example above, the unit has 2 hexes still to skid. If the next hex it entered were a heavy woods hex, that would subtract 2 hexes (plus the one for entering the hex), which it doesn't have, but it would skid into that hex regardless (as above, with no additional damage applied), ending the skid in the heavy woods hex.

Prohibited Terrain: If a unit skids into prohibited terrain—such as a hover vehicle sideslipping into woods or a wheeled vehicle skidding into rough—the unit takes 1 point of damage for every 5 tons it weighs (round fractions up). Group the resulting damage into 5-point groupings, then roll once for each grouping on the appropriate Hit Location Table (always use the Front/Rear column). The unit is considered immobile for the remainder of the game. If a unit prohibited from entering water skids into Depth 1 or greater water, it is automatically destroyed.

Water: Units not prohibited from entering a water hex automatically end their skid if they enter Depth 1 or greater water (except hover vehicles, which continue sideslipping). No additional damage is applied in this case. If a hover vehicle suffered critical damage that rendered it immobile during a sideslipping (see *Combat*, p. 98), it is destroyed when it enters a Depth 1 or greater water hex.

Avoiding a Collision: A unit that has not yet moved during the current Movement Phase can attempt to dodge a skidding unit that has made a successful unintentional charge attack to-hit roll against it. In order to get out of the way, the player controlling the target unit must make a successful Piloting/Driving Skill Roll just before the skidding unit enters the target's hex. A successful roll means the target unit may make its entire movement immediately, before the skidding unit stops. Failure means the target remains in its hex (though a failed roll does not cause the target unit to fall). Units moved in this way have expended their movement (by walking/cruising) and may not move again later in the Movement Phase. Once the skidding unit's movement is completely resolved, make sure to immediately adjust for the number of units shifted per side (see *Unequal Numbers of Units*, p. 39).

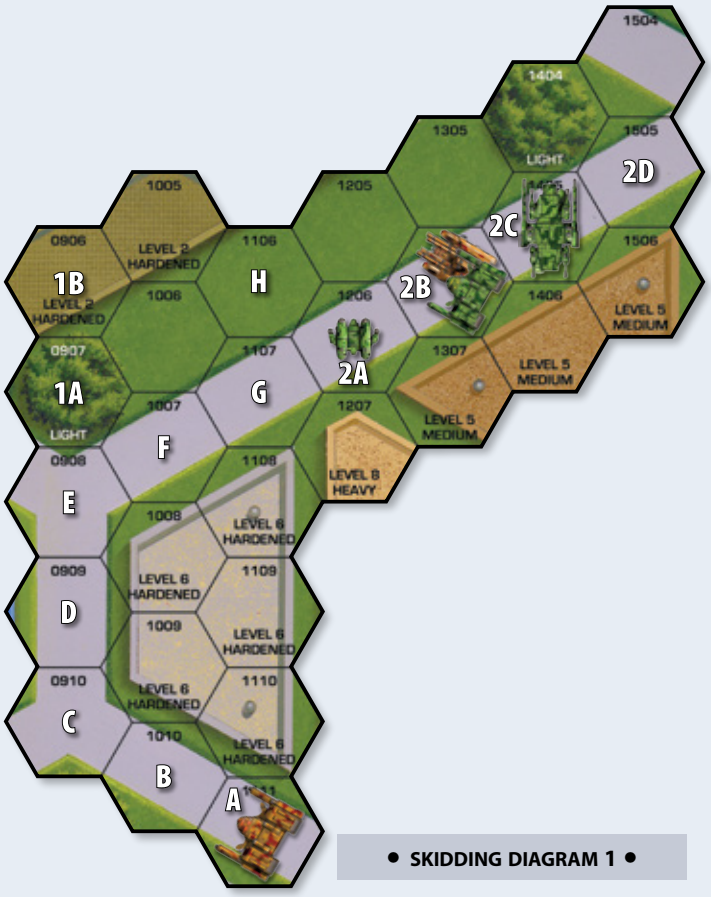
SKID MODIFIERS TABLE

Hexes Moved	Piloting Skill Modifier
0-2	–1
3-4	0
5-7	+1
8-10	+2
11-17	+4
18-24	+5
25	+6

Infantry: Infantry that has not yet moved can automatically dodge a skidding unit. If a unit skids into infantry, the infantry takes damage equal to the skidding unit's tonnage divided by 5, and the skidding unit continues its skid even if the infantry survives.

Large Support Vehicles: Large Support Vehicles may never attempt to avoid a collision with a skidding unit.

ProtoMechs: ProtoMechs that have not yet moved can automatically dodge a skidding unit; the ProtoMech stays in the same hex and is not required to make a Piloting Skill Roll. If this would violate the stacking rules, however, then it cannot automatically dodge, and the skidding unit may strike the ProtoMech.



• SKIDDING DIAGRAM 1 •

In Skidding Diagram 1, the controlling player wants his BattleMech in Hex A to end its turn in Hex H, facing the numbered hexside on the City (Skyscraper) map. To spend the required 10 MP, this BattleMech must run (it has a Walking MP of 7 and a Running MP of 11). It runs to Hex C and makes a facing change toward Hex D. No Piloting Skill Roll is required. However, when the BattleMech attempts to enter Hex D, still running, the player must make a Piloting Skill Roll before entering the hex because the BattleMech will be running as it moves into a new hex after making a facing change on pavement. So far, the BattleMech has moved 2 hexes, and so the modifier for the Piloting Skill Roll is –1 (there are no additional modifiers due to damage to the 'Mech). The player needs to roll a 4 or higher to avoid skidding. The player rolls a 10, and the BattleMech continues to run toward Hex H.

The BattleMech makes another facing change in Hex E toward Hex F. In order to move safely from Hex E to Hex F while running on pavement, the player must make another Piloting Skill Roll, this time modified by 0 because the BattleMech has moved 4 hexes. The modified target number is 5 (5 + 0).

If the player rolls a 4 or less, the warrior failed to maintain control of the BattleMech and it skids down the 1A-1B hex row. Normally the 'Mech would skid for two hexes (4 / 2 = 2), placing it in Hex 1B. However, the light woods in Hex 1A must be taken into consideration. The Movement Point Cost Per Hex for light woods is 1, so that is subtracted from the total amount of hexes to be skid, meaning the 'Mech only skids 1 hex into 1A. The BattleMech, which weighs 55 tons, suffers 6 points of damage falling into hex E where it failed its Piloting Skill Roll (55 tons divided by 10 is 5.5, rounded up to 6) and 3 points of damage per hex it enters during the skid (half the falling damage of 5.5, rounded up) for a total of 9 (6 + 3 = 9); it only skid 1 hex and the woods do not cause any additional damage. Once the skid is finished, the player rolls two times to determine the locations of the falling/skid damage: one 5-point Damage Value grouping and one 4-point Damage Value grouping. Both groupings are applied to the appropriate location determined through the fall (see Falling, *p. 68).*

If the light woods had not been in Hex 1A, then the 'Mech would've skid into the building Hex of 1B, which would've required the controlling player to resolve the damage to both the 'Mech and the building hex as though the 'Mech had charged the building (see Charge Attacks, *p. 148).*

If the player rolls a 5 or greater, then the BattleMech continues to run towards Hex H. The 'Mech makes another facing change in Hex G towards Hex H. Once more, in order to move safely from Hex G to Hex H while running on pavement (even though the hex the 'Mech is moving into is not pavement), the player must make another Piloting Skill Roll, this time modified by +1 because the 'Mech has moved 6 hexes. The modified target number if 6 (5 + 1).

If the player rolls a 5 or less, the warrior failed to maintain control of the BattleMech and it skids down the 2A-2D hex row. Normally the 'Mech would skid for three Hexes (6 / 2 = 3), placing it in Hex 2C. However, the units in hexes 2A and 2B might modify the total number of hexes skid before the unit reaches Hex 2C.

If the 'Mech collided with the ProtoMech in Hex 2A, the controlling player would first apply the damage (a 5-point and 4-point Damage Value groupings) from the fall and skid to the hex occupied by the ProtoMech and then would resolve the damage from the collision; this might result in the 'Mech being destroyed in Hex 2A, before it actually unintentionally charges the ProtoMech in Hex 2A, which would mean that no collision or further damage is resolved for the 'Mech or ProtoMech. Of course a charging resolution doesn't need to be resolved at this point because the ProtoMech has not yet moved in this Movement Phase and so automatically avoids the skidding unit. As such, the player does not yet apply its falling or skidding damage.

As the skidding 'Mech enters Hex 2B, there are two units it must avoid; a vehicle and 'Mech— the vehicle has already moved, but the 'Mech has not yet moved in the current phase. The controlling player of the skidding unit randomly

determines to first roll to see if the skidding unit strikes the vehicle. The Modified To-Hit Number for the unintentional charge attack is 12 (5 (base to-hit number) +2 (attacker ran), +2 (vehicle moved 5 hexes), +3 (unintentional charge)). The player rolls a 10 and so doesn't hit the vehicle.

The controlling player must then determine if the skidding unit strikes the 'Mech. The Modified To-Hit Number for the unintentional charge attack is 10 (5 (base to-hit number) + 2 (attacker ran) + 0 (no target movement modifier, as the target has not yet moved in this phase) + 3 (unintentional charge)). The controlling player rolls a 10!

Because the target unit has not yet moved, it can avoid the successful charging attack by making a successful Piloting Skill Roll (in this case, a result of 4 or better). However, before the player makes the Piloting Skill Roll, the controlling player of the skidding unit first applies the falling damage and skidding damage to the skidding unit. The BattleMech, which weighs 55 tons, suffers 6 points of damage falling into Hex G, where it failed its Piloting Skill Roll (55 tons divided by 10 is 5.5, rounded up to 6) and 6 points of damage for skidding into Hex 2A and 2B (half the falling damage of 5.5, rounded up) for a total of 12 (6 + 6); the controlling player applies the two 5-point and one 2-point Damage Value groupings to the appropriate location as determined by the fall (see Falling, *p. 68).*

This damage is applied before the controlling player of the enemy 'Mech makes its Piloting Skill Roll to dodge the skidding unit, because if the falling and skidding damage destroys the 'Mech, then the charge would not occur and the dodging unit would still be able to move normally this turn. The controlling player, however, rolls a 3, which means it failed to dodge. In addition, because it has now moved, it cannot move again later in the Movement Phase.

The skidding unit strikes the target unit doing 33 points of damage: 5.5 (55 tons divided by 10) x 6 (the number of hexes the skidding unit entered during the turn, not counting skidding hexes), rounding up (if needed). The controlling player then rolls seven times for each of the six 5-point, and the single 3-point, Damage Value groupings on the front side of the 'Mech Kick Hit Location Table.

The skidding 'Mech also takes damage from the successful charge equal to 1 point of damage for every 10 tons that the target weighs (round fractions up), applied in 5-point Damage Value groupings on the Front/Rear column.

At the end of the successful charge, the skidding unit is in Hex 2B (even though it would normally have skid for 1 more hex, because it unintentionally charged another unit, it ends its movement in that hex), while the target 'Mech is moved into Hex 2C. The skidding unit is already prone, and so its player need not make a Piloting Skill Roll to avoid a fall, but the target unit must make the standard Piloting Skill Roll to avoid a fall after impact; it fails, the target 'Mech will fall into Hex 2C.

Finally, the displacement of the 'Mech in Hex 2B to Hex 2C automatically causes a domino effect to the 'Mech in Hex 2C. If it had not yet moved this turn, it could attempt to get out of the way (see Domino Effect, *p. 152); if it has already moved, it will be moved to Hex 2D, after which both 'Mechs in Hexes 2C and 2D must make Piloting Skill Rolls to avoid falling.*

If the 'Mech had fallen and skid at any time in the turn, regardless of whether the 'Mech still had MP to expend, its movement would be over.

The MechWarrior of a Masakari Prime *demonstrates his piloting acumen on the dangerous ferrocrete of a city.*

• SKIDDING DIAGRAM 2 •

In Skidding Diagram 2, Player 1 wants his 55-ton BattleMech to end its movement in Hex 1F on the Large Mountain #2 map. To spend the required 8 MP, this BattleMech must run (it has a Walking MP of 6 and a Running MP of 9). The BattleMech runs to Hex 1D. When it attempts to enter Hex 1E, the controlling player must make a Piloting Skill Roll (due to the road) against a Modified Target Number of 5 (5 for the MechWarrior's Piloting Skill +0 because the 'Mech has only moved 3 hexes at this point). If the roll is successful, the 'Mech can move to Hex 1F. There, the controlling player—thinking ahead to where he wants his unit to be in the next turn—will spend the 'Mech's remaining 1 MP to turn to Hexside 6, in preparation for moving to the light trees in Hex 3A. If the roll in Hex 1D fails, the 'Mech skids into Hex 4A. Hex 1E has a level of 4, while Hex 4A has a level of 0. This four-level drop means that the controlling player must consult the Falling rules (see p. 68) to determine damage and results. In this case, the 'Mech takes 36 points of damage (6 for the initial fall—there is no damage for the 1-hex skid as the unit skids 'into air' when it enters hex 4A—and 30 for the accidental fall from the level change). The player assigns the damage in 5-pont Damage Value groupings, using the appropriate column of the table once the facing has been determined (see Facing After a Fall, *p. 68).*

Once Player 1 has successfully moved his 'Mech to Hex 1F, Player 2 wants his 50-ton hover vehicle (Cruising 6 MP, Flanking 9 MP) to end its movement in Hex 2F. As the hover vehicle does not have a turret and wants to get into the 'Mech's rear arc for an attack during the Weapon Attack Phase, it must end up facing Hexside 6, and so it must use flanking movement to get there. The hover vehicle flanks to Hex 2E. When it attempts to enter Hex 2F, Player 2 must make a Driving Skill Roll (unlike other ground vehicles, a hover vehicle always requires a Driving Skill Roll to avoid a sideslip when flanking, regardless of terrain; see Sideslipping, *p. 67). The modified target number for the roll is 4 (4 for the vehicle's Driving Skill, with no additional modifiers as there is no damage to the vehicle). The controlling player rolls a 2. Because no obstructions exist to automatically block its path, the hover vehicle sideslips for 2 hexes (Margin of Failure for the Driving Skill is 2 (4 (the target number) –2 (dice roll result) = 2); as the unit is a hover vehicle, it does not need to make an immediate roll on the Motive System Damage Table for the sideslip.*

It first sideslips into Hex 1F, which means it might strike the 'Mech that Player 1 just moved. Because that 'Mech has already moved for the turn, it cannot attempt to dodge the hover vehicle. To determine if the vehicle strikes the 'Mech, the vehicle's player must make a Charging Attack to-hit roll against a Modified To-Hit Number of 11: 4 for the base to-hit number (driving skill) +0 (charge attack modifier) + 2 (attacker flanked) + 2 (target movement modifier) + 3 (unintentional charge). Even though the target unit's Piloting Skill rating is two higher than the sideslipping unit, the standard –2 modifier for the difference between attacker and target Piloting Skills does not apply for an unintentional charge.

The vehicle's player rolls an 8, which means the vehicle missed the 'Mech. The change in level when the hover vehicle entered Hex 1F was only one level lower, which has no effect, and so the vehicle moves into Hex 5A. That hex is five levels below Hex 1F, and so the player must consult the Unit Displacement *rules (see p. 151) to determine damage. In this case, the vehicle takes 30 points of damage. The player assigns the damage in 5-point Damage Value groupings, using the appropriate column of the table once the facing has been determined (see* Facing *After a Fall, p. 68).*

Had any ground units been located in Hexes 4A or 5A, respectively, when the 'Mech and the hover vehicle fell off the cliff—or if airborne vehicles were in those hexes at or below the elevation equal to the level of Hexes 1D and 1F (Levels 4 and 5, respectively)—a collision might have occurred, which would have required the players to use the Accidental Falls From Above *rule (see p. 152).*

SIDESLIPPING

While superficially similar to skidding, sideslipping units do not use any of the rules for skidding unless specified otherwise. Most notably, the to-hit modifiers that occur as a result of a unit skidding are not applied, and as a sideslipping unit is not actually touching the ground as it moves, it incurs no damage by sideslipping unless it runs into something.

If a VTOL, WiGE or hover vehicle using flanking movement makes a facing change at any point in the turn and then attempts to enter a new hex in the same turn, before that vehicle actually enters the hex, the player must make a Driving Skill Roll to see if the unit sideslips.

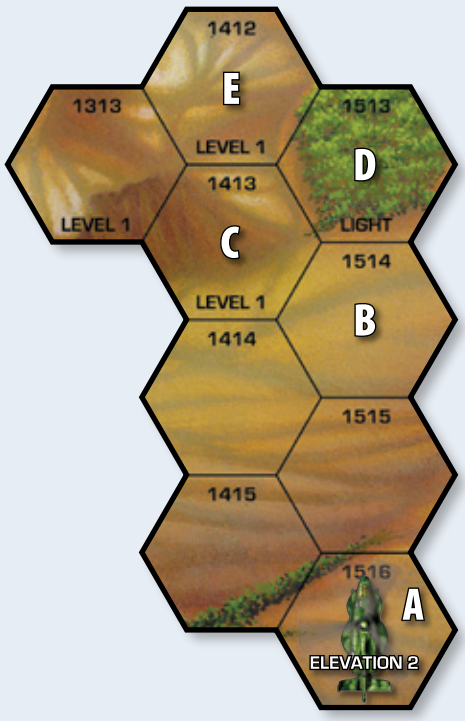
If the Driving Skill Roll is successful, the vehicle follows its desired course. If the Driving Skill Roll fails, the vehicle sideslips a number of hexes equal to the Margin of Failure in the direction of the hex that it would have moved to without the facing change; regardless of the MoF, a vehicle can only sideslip for a number of hexes equal to one less than the number of hexes entered in the turn prior to a sideslip. For example if a unit has moved for 3 hexes and then is forced to make a Driving Skill Roll with a resulting Margin of Failure of 4 or more, the vehicle could only sideslip for 2 hexes. A Driving Skill Roll is not required if the vehicle does not move after it changes facing.

The player has no opportunity to change the elevation of a VTOL or WiGE vehicle (see *WiGE* below for the exception) that sideslips before it enters the new hex. Therefore, it is possible for a vehicle to sideslip into an obstacle that causes it to crash. If the sideslip does not result in a crash, the vehicle may move normally (continue in the direction of the facing change) after the failed turn. The sideslip, no matter how many hexes are traversed during a sideslip, costs no MP. The number of hexes sideslipped counts towards the unit's target movement modifier for the turn.

WiGE: Even during a sideslip, if a WiGE enters a hex that is only 1 level higher than the level of the underlying hex the WiGE exits from, the WiGE vehicle will automatically rise 1 elevation above the level of the new hex (see *WiGE Movement*, p. 55). If the terrain is greater than 1 level difference, then a collision occurs.

In the Sideslipping Diagram above right, a VTOL Vehicle with a Driving Skill of 5 is at Elevation 2 in Hex A on the Wide River map. The controlling player declares that it will move at flank speed during the Movement Phase, and moves 2 hexes without changing elevation. When the VTOL arrives in Hex B, the VTOL changes facing and then declares that it will move into Hex C; though the Hex is at Level 1, the Elevation 2 of the VTOL would allow it to enter that hex without forcing a landing or a crash. The player makes a Driving Skill Roll with a result of 3. Because he needed a 5 to succeed, the VTOL sideslips into Hex D, Light Woods. The Margin of Failure is 2, however, since the unit only moved 2 hexes prior to making the Driving Skill Roll, the unit does not sideslip 2 hexes, but only sideslips 1 hex.

However, even if the unit had moved more than 2 hexes prior to making the Driving Skill Roll, as the tops of the trees are at Level 2 and the VTOL is at Elevation 2—i.e. they overlap—the VTOL crashes in the hex; it couldn't have sideslipped for two hexes. Because the right side of the VTOL faced the terrain it crashed into, the VTOL Vehicle takes the crashing damage on its right side.



• SIDESLIPPING DIAGRAM •

If the VTOL had climbed to Elevation 3 before attempting the turn, then it would have risen above the trees and could have continued to move normally into Hex E.

Collisions

VTOL, WiGE and hover vehicles use all the standard rules for collisions during a sideslip as described under skidding (see p. 62), with the following exceptions.

Other Units: VTOL and WiGE vehicles only encounter an accidental charge during a sideslip if the level of the hex they sideslip into (i.e. the level of the underlying terrain, plus the level of the unit) is at or higher than the elevation of the sideslipping unit (see *Stacking*, p. 57, for the heights of various units). If a VTOL or WiGE vehicle sideslips into a hex where it could potentially charge an infantry unit, then the elevation of the sideslipping unit is at the level of that hex's underlying terrain and automatically crashes (see *VTOL and WiGE Vehicle Crashes* below).

Buildings, DropShips, Large Support Vehicles and Levels: VTOL and WiGE vehicles that sideslip into a hex whose

Yellow Jacket Gunship, Tikonov Republican Guards (House Steiner)

level is at or higher than the elevation of the sideslipping unit, automatically crash (see *VTOL and WiGE Vehicle Crashing* below). If such vehicles sideslip into a hex containing a building, DropShip or Large Support Vehicle, and the level of the hex (i.e. the level of the underlying terrain, plus the level of the unit or building) is at or higher than the elevation of the sideslipping unit, it automatically charges the unit or building hex (see *Stacking*, p. 57) for the heights of Large Support Vehicles and grounded DropShips.

Accidental Falls from Above: VTOL vehicles ignore the rules for sideslipping into a hex that would cause a normal ground vehicle to incur an accidental fall from above.

WiGE vehicles, provided they have the MP available, can avoid an accidental fall in such a situation (see *Wing-In-Ground-Effect Movement*, p. 55).

VTOL and WiGE Vehicle Crashes

Sideslipping VTOL and WiGE vehicles that crash take damage from crashing on whatever side impacted the terrain. The damage is equal to the number of hexes that the vehicle moved in that turn times its tonnage, divided by 10 (rounded up). Group the damage into 5-point Damage Value groupings. The controlling player then rolls once on the VTOL Vehicle Hit Location Table (or Ground Combat Vehicle Hit Location Table, for WiGE vehicles) for each grouping of damage (see pp. 196 and 193 respectively).

If the vehicle is still functional after taking damage from the crash and it can normally land in the terrain of the hex in which it crashed, the vehicle is considered to have landed in the hex and can move as normal in the next turn. Otherwise, the vehicle is considered destroyed.

The vehicle may not attack in the turn that it crashes.

Accidental Falls from Above: If a VTOL or WiGE vehicle crashes during a sideslip and there are units occupying the hex in which the vehicle crashes, all the standard rules for an *Accidental Fall from Above* apply (see p. 152).

FALLING

Whenever a 'Mech falls, it suffers damage and its warrior may suffer damage. The amount of damage taken by the 'Mech depends on its weight and the distance it falls. Whether or not the MechWarrior suffers an injury depends on a Piloting Skill Roll.

Other types of units do not fall. If they are moved out of their hexes for any reason, they are considered displaced and use the *Unit Displacement* rules (see p. 151).

DETERMINING LOCATION AFTER A FALL

To determine a 'Mech's location after a fall, players must use their judgment and the following guidelines to create a reasonable outcome. The action that caused the fall should determine location afterward.

If the fall occurs during the Movement Phase on level ground, the 'Mech falls in the hex it was entering. If a fall occurs because of weapons fire, a physical attack or any other combat-related reason, the 'Mech falls in the hex it currently occupies. To find the number of levels the 'Mech fell, subtract the level of the hex into which it fell from the level of the hex from which it began the fall.

Falling and Collisions: If a 'Mech falls into a hex occupied by another unit, that unit might also take damage. If the first 'Mech fell from a hex two or more levels above the landing hex, use the *Accidental Falls from Above* rules, page 152. If the 'Mech fell from a hex one level higher or at the same level, use the *Domino Effect* rules, page 152.

FACING AFTER A FALL

When a 'Mech falls, it takes damage and its facing may change. This facing change determines the 'Mech Hit Location Table used when assigning damage from the fall. To determine the unit's facing after the fall and the area of the 'Mech that takes damage, roll 1D6 and consult the Facing After a Fall Table.

A fallen 'Mech lies prone and face down. 'Mechs that fall on their sides or back automatically roll over to lie face down after taking damage. Any damage to the prone 'Mech from outside sources such as weapons fire or physical attacks is treated as if the 'Mech was standing facing its current facing.

In the Falling Diagram at right, the controlling player wants his BattleMech in Hex A to move into Hex B on the City (Suburbs) map. Hex B was originally part of a multi-hex building, but damage has reduced it to rubble; the players placed a rubble counter on the hex to signify the change in terrain. As soon as the player enters the rubble hex, he must make a Piloting Skill Roll. The roll fails, and so the controlling player rolls 1D6. He gets a result of 3 and consults the Facing After a Fall Table. The BattleMech is now facing two hexsides to the right (clockwise) of its original facing and takes the damage from the fall on its right side (i.e. it uses the right side column of the 'Mech Hit Location Table). It lies prone and face down in the rubble hex.

• FALLING DIAGRAM •

FACING AFTER FALL TABLE

Die Roll (1D6)	New Facing	Hit Location
1	Same Direction	Front
2	1 Hexside Right	Right Side
3	2 Hexsides Right	Right Side
4	Opposite Direction	Rear
5	2 Hexsides Left	Left Side
6	1 Hexside Left	Left Side

FALLING DAMAGE TO A 'MECH

A 'Mech always takes damage from a fall equal to 1 point for every 10 tons that the 'Mech weighs (rounding up) times the number of levels plus 1 that the 'Mech fell; this is the level of the underlying terrain and not the height of the 'Mech. If a 'Mech that jumped that Movement Phase falls as the result of a failed Piloting Skill Roll, the 'Mech is considered to have fallen 0 levels. If it fell into a water hex, use the rules described in *Falling Damage*, page 57, *in Underwater Movement.*

Divide the damage into groupings of 5 points each, assigning any remaining points to one smaller group, and determine a hit location for each grouping. For example, a 'Mech that suffers 33 points of falling damage takes six groupings of 5-point hits and one 3-point hit. To determine the location of the damage, use the appropriate column of the 'Mech Hit Location Table, page 119 in *Combat*, as specified by the Facing After a Fall Table. If the fall occurs during the Movement Phase, resolve the damage as it happens.

IndustrialMechs: During the End Phase of any turn in which an IndustrialMech falls or is the target of a successful physical attack (see p. 144), roll 2D6 and consult the Determining Critical Hits Table (see p. 124). Apply a +1 modifier to the result for each level above 1 fallen. To determine the location of any resulting critical hits, roll once on the Front/Rear column of the 'Mech Hit Location Table (see p. 119). The controlling player makes only one roll per turn, regardless of the number of falls (or successful physical attacks) the IndustrialMech suffers.

A Grasshopper *in a Level 1 hex attempts to stand during the Movement Phase. The MechWarrior fails his Piloting Skill Roll, and the BattleMech falls again in the same hex. This means the BattleMech fell 0 levels. The player rolls a 1 on the Facing After a Fall Table and finds that the BattleMech landed on its front, so it takes the falling damage on its front. The* Grasshopper *suffers 7 points of damage (70 tons divided by 10 equals 7; the number of levels fallen plus 1 equals 1; 7 x 1 = 7). The player divides the 7 points into one 5-point grouping and one 2-point grouping. He then uses the Front column of the BattleMech Hit Location Table to determine the exact location of the damage.*

FALLING DAMAGE TO THE MECHWARRIOR

To determine if the warrior took damage when the 'Mech fell, the player makes a second Piloting Skill Roll after every fall. First, apply all appropriate modifiers to the target number (including all pre-existing damage modifiers, as well as any current situational modifiers such as taking 20+ points of damage in the current phase, and so on). Then add +1 to the MechWarrior's Piloting Skill target number for every level above 1 fallen. If the die roll result is equal to or greater than this modified target number, the MechWarrior avoided taking damage. If the result is less, the MechWarrior takes 1 point of damage.

Automatic Damage: The only ways in which automatic damage occurs to a warrior whose 'Mech falls is if the warrior is unconscious at the time of the fall, if the 'Mech is considered immobile (for example it is shut down) or if the modified to-hit number for the Piloting Skill Roll to avoid warrior damage is greater than 12. In those three instances, the warrior automatically takes 1 point of damage. In any other instance, there is always a chance that the Piloting Skill Roll can stop damage to the warrior.

The Grasshopper *in the previous example has a Piloting Skill of 5. It does not have any pre-existing damage, it did not take 20 points of damage in this turn, and it fell 0 Levels, and so no modifiers apply to the Piloting Skill target number. The controlling player therefore need only roll 5 or better to avoid damaging the MechWarrior.*

A Davion BattleMaster *from the Third Crucis Lancers rights itself after skidding into a building.*

TRIAL OF POSSESSION

Kevin Killiany

NEAR ORBIT, DEHRA DUN
CIRCE, PENTAGON WORLDS
CLAN HOMEWORLDS
16 SEPTEMBER 3057

Falling around the planet would have been better. An object in motion, circling helplessly in the grip of blind physics, would have been less noticeable than a bit of refined metal hanging in geo-synchronous orbit.

No matter how null its energy signature.

Ilya flexed his muscles, rippling them through a series of isometrics designed to keep him from growing stiff as he sat long hours at the controls of his *Bashkir*. The flight suit hugged his body close, the sensation hovering at the edge of feeling trapped.

Extra layers of insulation had been worked into the already heavy flight suits for the orbital pickets. There was no dishonor in harboring as much body heat as possible, to keep reflexes sharp. To hang without energy at the edge of the absolute cold of space required intelligent marshalling of resources as well as a predator's patience.

A predator. Ilya clung to that image.

It was better than imagining himself a buffalo. He had seen herds of the dull herbivores with the males standing, back to the herd, staring blankly over the waving grasses. Positioned by instinct to face threats they lacked the wit to imagine.

Unlike those food beasts grazing on prairies thirty-six thousand kilometers below, Ilya could imagine the threat bearing down on Circe. The Galaxy Commander of the Jade Falcons' Sigma Galaxy had bid the First Falcon Dragoons to take the genetic repository at Dehra Dun. The Fifteenth Raven Garrison Cluster had been bid to defend. Neither Galaxy Commander had cut down, each committing the full five Trinaries of his force to the battle.

The Jade Falcons had been accorded safcon in system. Neither side would risk WarShips in a naval battle. But once the DropShips slipped their moorings, they would become rightful prey. Which suited Ilya well. Safcon to the surface would have left him with no opportunity to accrue honor.

The Jade Falcons were attempting to cripple the Snow Ravens; claiming they had the right to retake genetic material traded to that Clan. Their raid would threaten the entire repository and set a precedent for other Clans to raid as well. The Snow Raven genetic store was made up of material traded and won from other Clans in the centuries since the Not-Named Clan had destroyed Dehra Dun with a nuclear strike.

Ilya deactivated his neurohelmet's visor. Sliding the viewscreen up out of his way, he looked directly at the stars—pinpoints of pure light etched on the ferroglass canopy of his cockpit. Circe lay below him, its presence betrayed by a faint glow and the haze of upper atmosphere barely visible beyond the prow of the *Bashkir*.

The twenty-ton craft was new to him, yet familiar. His first fighter had been a *Bashkir*, mounted with lasers—paired large and small—for the close personal combat he loved. The ship around him now was armed with a pitiful small laser and twin long-range missile racks. Not a weapons mix he would have chosen. But the defeat that had placed him in this cockpit had also robbed him of the status to demand better. That would come after this day's battle.

The proper showing here would earn him the right to demand more than sharper claws for a tiny fighter.

Ilya had earned a proper fighter nearly a decade ago. A *Stooping Raven*. Despite Uniform Designation Protocols requiring the craft be called an *Issus*, not a single Snow Raven aerospace pilot ever failed to call the swift and nimble war bird by its proper name.

A mere week ago he had challenged for a new prototype of the *Stooping Raven*—one that mounted an ATM-9 and a heavy laser for close combat—and lost. Lost through a subtlety of strategy on the other pilot's part that bordered on dishonorable subterfuge. Yet even as he formed the partial excuse, Ilya dismissed it. He'd been out-thought and out-fought in the simulator dogfight. His opponent, a Bloodnamed warrior, had defeated him honorably.

Not so the pilot who had challenged Ilya for his own *Stooping Raven* within hours of his defeat. She had been a giant among the aerospace subcaste—a freakish one point seven meters tall and heavily muscled. She had not challenged him to a simulator duel, which would have measured their piloting skills, but to unaugmented combat.

Ilya had been foolish to accept so quickly, but the sting of his earlier defeat prodded him to rashness. And more defeat. He would never forget his feet kicking uselessly clear of the floor as she held him aloft from behind, the arm clamped around his throat stopping blood from reaching his brain. Nor would he forget the faces of the watching warriors in the Circle of Equals growing dim as his consciousness fled.

That she had broken nothing, had left no permanent mark, made the humiliation all the more bitter.

Now he knew she waited below, ready to scramble the *Stooping Raven* that had been his, while he hung here in the *Bashkir*, which had been hers. Though he dared to hope the Star to which he'd been relegated would prevent the Jade Falcon onslaught, he knew their purpose was to slow the invaders while Circe's true defenders rose to the challenge.

"Pirate point insertion."

The terse information came with no hooting alarms, no frantic orders. The opponents' arrival was expected, the warriors ready.

Ilya slapped the neurohelmet's visor in place. Instantly open space replaced his view of the stars from a darkened cockpit. Tied to the *Bashkir*'s passive sensor array, the visor of the Snow Raven flight suit presented all directions in hyperfocused clarity. Glancing down, he saw Circe, to his left and right the silvery curve of the upper atmosphere pressing against the vault of space. Behind him, in the reverse view just above his line of sight, he could see the golden halo of the dawn line retreating toward the far horizon. Only the pressure of the harness and the array of controls suspended against the stars before him defeated the illusion of flying unaugmented above his homeworld.

Information flowed across the bottom of his view: hard data and images broadcast by automated satellites to the dark and silent aerospace fighters.

A *Sovetskii Soyuz* had appeared at the lunar Lagrange point. To choose the most obvious arrival point indicated either that the Jade Falcons lacked imagination or were eschewing pointless misdirection. Ilya cared only that their choice placed his Point closest to their landing vector. The WarShip's screen of

aerospace fighters—two full Stars—deployed even as three of the four suckling DropShips slipped from their docking rings.

The satellite's sensors could not discern individual aerospace fighters at range, but as they cleared the WarShip, the larger moving vessels were tagged as a *Lion* and a brace of *Union-C*s. Subscreens opened with attack/defense data on each vessel as it was identified.

A Star of aerospace fighters launched from the fourth DropShip, prompting the computer to identify it as a *Carrier*. Despite its formidable weapons, the Jade Falcons were not willing to bid the valuable vessel in today's assault.

Ilya did nothing, touched nothing, activated nothing. The Jade Falcon forces would be committed to their path before the ten *Bashkir*s on high patrol announced their presence

None of the aerospace assets held back to defend the WarShip—they were freed to attack by the safcon that protected the *Sovetskii Soyuz*. The thirty fighters did not arrow immediately for the surface of Circe, but formed a complex screen between the ships and the planet. Or tried to. Though the satellite image could not resolve details at distance, there seemed to be some confusion concerning attack order.

The two smaller spheroid DropShips formed on the *Lion* with apparent reluctance, maneuvering much closer to the WarShip than sound navigation would dictate. Ilya's readout on the *Soyuz* blanked for a moment as the DropShips occluded the larger vessel from the satellite's sensors. A second array activated immediately—more distant and thus less exact, but clear enough.

For twenty minutes Ilya sat motionless, watching the disorganized milling. At first he found himself embarrassed on their behalf as they stumbled through what should have been a simple formation. Then it occurred to him that the apparent blundering was a ruse intended to draw impatient defenders out of position with the promise of easy prey.

A few moments later, the Jade Falcon force confirmed his suspicions. The confusion evaporated and the wandering mass of aerospace fighters resolved itself into a crisp battle array.

Ilya dismissed the WarShip with the still-docked *Carrier* and focused on the descending assault force. A Star of fighters fell ahead—but not too far ahead. A curved shield to sweep high-altitude defenders aside. The other two Stars enclosed the DropShips, their formation folding back to cup them in a tight defensive bubble. A classic formation.

It assumed the planetary defenders would not allow the invaders to pass, then stoop to attack from the unguarded space above.

The first shield of escorts descended and swept past Ilya's orbit. *Scytha*s, *Visigoth*s, and a point of *Sabutai*s—rare so far from the Crusade to redeem the Inner Sphere—heavy fighters, all. No targeting sensors pinged the *Bashkir*'s passive array. The fighters of the forward shield were not so much hunting as deterring interference while they rushed to establish air superiority over the landing zone.

Ilya knew that somewhere below him his beloved *Stooping Raven* was rising—the mad giantess at the controls—to destroy the heavy Star. Though he did not wish her to distinguish herself, he mentally marked the leading *Scytha* as his *Raven*'s prey. Twice the mass would not avail the Jade Falcon design against the superior war bird. The tactician within him admitted that the ninety-ton *Scytha* would more likely fall to an eighty-five-ton *Xerxes* than his forty-ton *Stooping Raven*.

His former *Stooping Raven*.

Ideally the enemy would fly completely past—unaware of any threat—before the high defenders revealed their presence. But physics cared little for the ideal. To attack, the *Bashkir*s had to be in motion, vectoring in before the invading DropShips traveled too deep into the atmosphere.

Through his neurohelmet visor, Ilya saw tiny sparks come to life: the blue-white markers of his own Star's IFF transponders coming online as aerospace fighter fusion reactors powered up, their energy signatures making them targets. Those farthest from the invaders' line of flight fired up first, but the others swiftly followed suit. The blue-white sparks rippled forward in a wave.

Ilya kicked his *Bashkir*'s extralight 220 reactor to full fire, giving the drive systems the bare minimum of warm-up before leaping to maximum thrust. The heavy Snow Raven flight suit, which had felt restrictive at zero gravity, snugged tighter. Hundreds of capillary tubes rushed fluid support to his limbs, a massaging cycle of constrictions that kept blood flowing against angular accelerations that would have killed an unaugmented Elemental.

To his right and slightly below him, Ilya's Point mate fired up, matching vectors. Patir, a man half again his age whom he knew not at all.

Attacking DropShips and their escorts with light *Bashkir*s required cooperation—a concept at odds with personal honor, but necessitated by the overwhelming firepower of their enemy. When aerospace fighters engaged capital ships, the honor of the individual warrior flowed through the whole.

The other *Bashkir*, armed with extended-range lasers, would target an escort, stripping away the protector. Ilya would then drive through the gap, fighting past the DropShip's defenses to deliver his long-range missiles.

A single *Bashkir* could not bring down a DropShip, but it could do significant damage. The bay doors and thinner armor of the vessel's aft were the targets of choice. Particularly the bay doors. A door breached in flight would force a slow and cautious landing. Simple damage might prevent it opening properly when the ship was down, delaying—or even preventing—BattleMech deployment.

Chance or fate selected their target as the Falcon formation rotated to bring the *Lion* close.

For half a heartbeat, a warning beep distracted Ilya. A new subscreen opened to announce the *Carrier* had separated from the *Soyuz* and was accelerating toward them. According to the satellites' long-range scan, it was too far away to be a factor for several minutes.

Refocusing on the target at hand, he dismissed the DropShip's odd behavior. The battle would be over before it arrived.

Counting on his Point mate to know his job, Ilya snapped his craft through a half roll. For a moment the gold and dun globe of Circe hung above him. Then he pulled back on the yoke, diving in behind the trailing edge of the fighter cover. The maw of the *Lion*'s forward battery seemed to fill his viewscreen.

Ilya threw his nimble fighter through asymmetric spirals, varying thrust randomly.

If even half the weapons from the *Lion*'s nose weapon bays struck they would vaporize his fighter, not to mention the escorts. Those were his Point mate's responsibility, however.

Ignoring everything but the prey before him, Ilya calculated ranges and vectors. Not consciously, of course; there was not enough time. Rather, a lifetime of training enabled him to integrate the targeting data flowing across the bottom of his visor, his ersatz sight and the coded audio tones of status readouts into a three-dimensional gestalt of the world around him. The entire battle—his entire life—was reduced to this one moment, guiding his war bird to its target.

The bow of the DropShip was useless to him. He needed to get past its waist, past the escorting fighters, to hit the thinner armor of the aft quarters and the vital bay doors.

A staccato vibration rose through his acceleration couch as the first faint wisps of upper atmosphere snatched at him. Without wasting focus, part of his conditioned mind registered his Point mate engaging a *Tyre*, pulling it far enough from position to open a hole in the screen protecting the *Lion*'s midsection.

Choosing his final attack vector, Ilya flared wide. Far enough to give him vantage on a bay door, but not far enough to give the DropShip's batteries a clear shot. At the peak of his arc—the most dangerous point—he matched velocities briefly and lined up on his target. Good tone was useless—the targeting computer could not differentiate one part of the DropShip from another. Ilya had to narrow its options, coax it into aiming for the bay door by pointing the nose of the *Bashkir* directly at the portal.

Factoring lead in concert with the targeting computer, he unleashed both batteries of long-range missiles in a staggered salvo. As soon as the second flight cleared the launch tubes, Ilya shoved the throttle to maximum thrust. Acceleration slammed him into his couch as the *Bashkir* leapt in pursuit of the missiles. His target lock alarm sounded and faded as sheer speed carried him through the weapons arc of a second *Tyre* before the other craft could fire.

Space exploded.

Blinding flash after blinding flash—four, six, ten white-hot fireballs—as the *Lion*'s aft quarter anti-missile battery destroyed Ilya's opening salvo.

Ilya grinned.

The thin air reduced the shockwaves to vibrations. The dust of debris rattled and whistled off his invisible canopy as the *Bashkir* powered through the expanding cloud of destruction. So close the main guns would have difficulty tracking him, too fast for the anti-missile system to react and retarget, Ilya drove in, closer than reason allowed, and unleashed a double flight at minimum range.

He saw a snapshot image of the impacts stitching across the armored portal. Then he was flying for his life.

Collision alarms hooted as he sideslipped, passing close enough to the aft laser battery to count its rivets. The massive column of superheated plasma slowing the giant DropShip's descent nearly blinded him before the visor compensated. Established strategy at this point was to pull out and away, to gain distance for another run as the DropShips landed.

Ilya pulled back on the yoke. Angular acceleration became a tidal surge, pulling blood and consciousness from his brain. Even as his vision faded to red-shot grey, he kept the throttle to the limit. A *Sulla* flashed past, momentarily attracting his targeting computer, but he overrode, focusing on a second DropShip.

Rising beneath a *Union-C*, he physically aligned his fighter with a set of bay doors. A clear shot with no anti-missile batteries in the way. Three heartbeats and the salvo was away—ten long-range missiles detonating against the hull and door even as he snap-rolled right, peeling away and down, diving into the gravity well the behemoths above him were fighting.

Circe spread out before him. His tactical display showed swirling sparks of red and blue-white as the first wave of Jade Falcon aggressors broke against the rock of the Snow Raven defenders.

Kilometers slipped under his wings as he turned, as tightly as the aerodynamics of the thickening atmosphere allowed. The mighty DropShips shrank to toys, to insects, as his fighter clawed for position. He still had time for a second pass at the *Union-C*. One run straight in, at speed, minimal evasion. A single salvo, ripping into the bay doors. He hoped the same bay he'd hit before would present itself, but he had no way to anticipate how the DropShip would—

Weapons lock.

Ilya sideslipped without thought as three laser beams slashed down from above.

His right wing diagnostic flashed red, the missile launcher going black. Air screamed, tearing at the raw edge of fresh wounds.

The targeting computer identified a *Vandal* matching speeds from above, closing for the kill. Ilya stared. There had been no *Vandal*s in the escort Stars.

Weapons lock. Ilya tried a snap roll, but the *Bashkir* wallowed, its airframe moaning. Fully operational, he'd be hard pressed by a *Vandal* with position on him. Now...

A *Vandal* from above? Even as he fought his wounded craft and physics, staggering through evasive maneuvers that should have been easy as thought, Ilya wrestled with the mystery.

A trio of medium lasers burned into the rear edge of the ravaged wing, all but severing it. Giving up all hope of evasion, Ilya struggled to keep his craft aloft. He didn't need his diagnostics to know it was futile. He could feel the *Bashkir* dying around him.

The *Carrier*. The *Sovetskii Soyuz* had carried the *Vandal*s as cargo. Under cover of what he'd mistaken for confusion, they'd been transferred to the *Carrier* and brought in for close launch.

The *Bashkir*'s stuttering flight became a spiral, the horizon replaced by the plains of Circe. Sure of its victory, the *Vandal* broke off, not even granting him the honor of a final salute as the pilot went in search of other prey.

Three defeats in the space of seven days. First by superior tactics, then by superior strength, and now by both in concert.

Ilya looked at the ejection lever and considered whether his life was worth saving.

A lance of Corsairs *joins a combined aerospace fighter force from House Kurita's Galedon Regulars, along with local militia support, to intercept incoming raiders.*

Movement for aerospace units is more complex than for ground units. Different movement systems apply depending on whether a unit is operating in space, in high atmosphere or in low atmosphere. Aerospace movement in atmosphere is a subset of these units' standard movement in microgravity (space); the following rules apply to movement in space and also provide the basis for all other aerospace movement.

BattleTech aerospace units (including conventional fighters, Airships and Fixed-Wing support craft) change their position and location on the mapsheet by applying thrust to control their velocity. During the Movement Phase (Aerospace) of each turn, each player must choose how he will apply thrust to control his unit's position. As with ground units, the player must announce what movement mode he is using when it is his turn to move an aerospace unit. Unlike ground units, aerospace units must move in a specific order during the Movement Phase (Aerospace). All DropShip movement is completed before any other aerospace unit moves. Next, small craft, Fixed-Wing and Airship Support Vehicles move. Aerospace and conventional fighters move last. Conventional fighters, Airships and Fixed-Wing Support Vehicles can only operate in atmosphere (see *Atmospheric Movement*, p. 78).

GAME TERMS

The following terms describe important concepts in aerospace movement rules.

Additionally, players should once again familiarize themselves with the definition of level, elevation and altitude (see *Game Terms*, p. 43).

Atmospheric

The term "atmospheric" serves as a prefix to other game terms—atmospheric movement, atmospheric map, atmospheric turn and so on—to describe any portions of a turn, or any actions that occur, in a planet's atmosphere at high or low altitude.

Ground Map

A ground map represents the mapsheets used by *BattleTech* ground units.

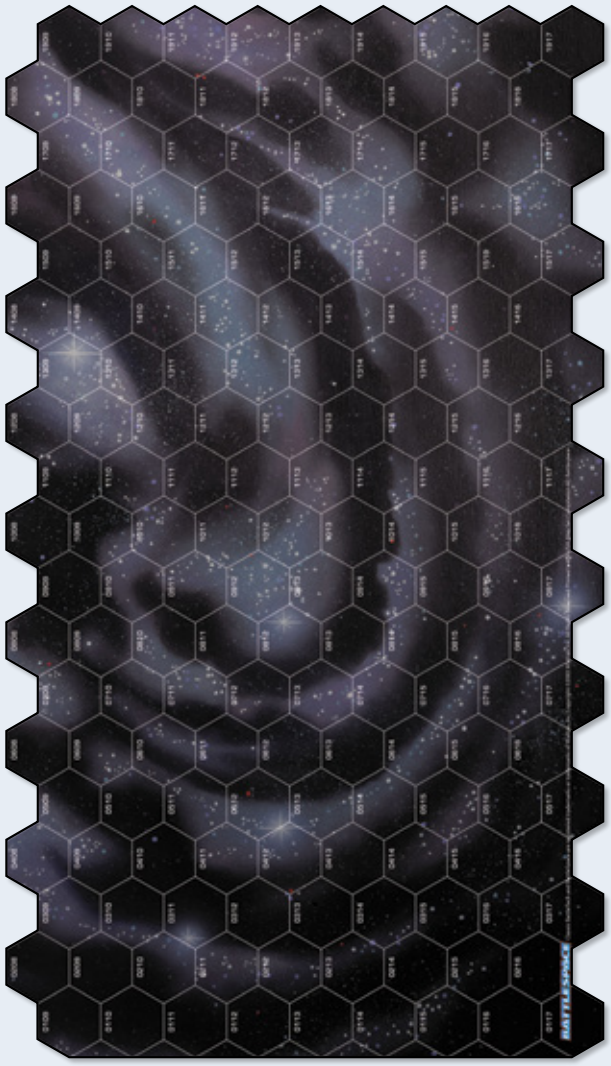
Large Craft

As defined in the *Components* section, "Large Craft" is a general description used to refer to any aerospace unit that weighs more than two hundred tons (such as a DropShip or WarShip).

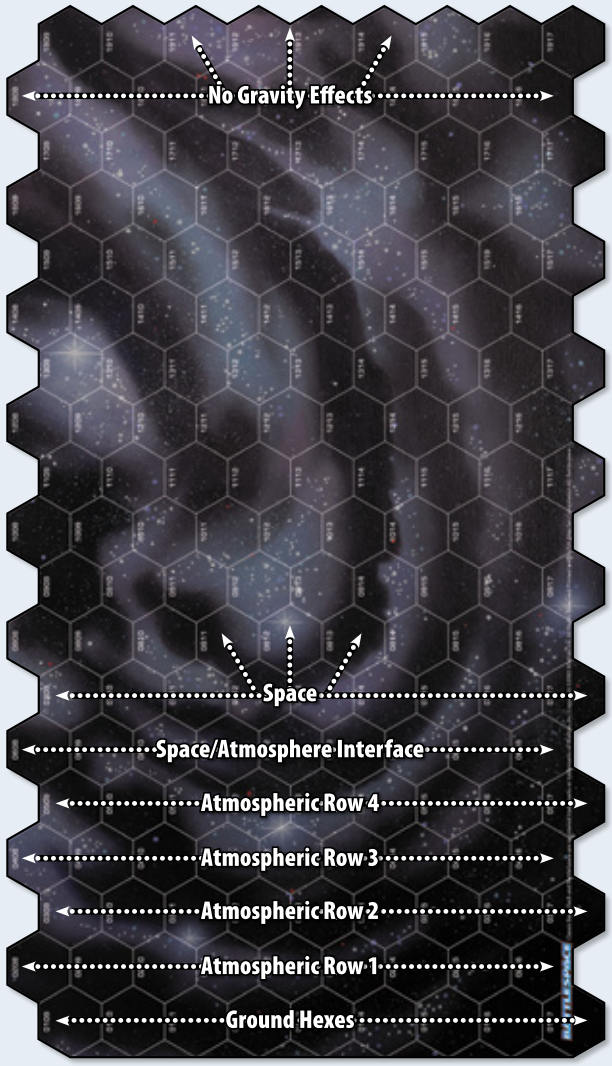
The term "Large Craft" is used in these rules when the rules apply to more than one type of Large Craft, in order to make the integration of additional Large Craft (such as WarShips, which are described in *Strategic Operations*) simpler. Whenever the rules only apply to DropShips, the term DropShip is used; WarShips cannot operate in atmosphere, and so all rules for atmospheric movement use the term DropShip.

Low-Altitude Map

A low-altitude map is where aerospace unit movement is tracked whenever such units are interacting directly with ground units; the aerospace units are not on a space map, or in an atmospheric hex on a high-altitude map (see *High-Altitude Movement*, p. 79). Each hex on the low-altitude map is roughly equivalent to one *BattleTech* mapsheet.



• SPACE MAP •



• HIGH-ALTITUDE MAP •

Space

The term "space" serves as a prefix to other game terms—space movement, space map, space turn and so on—to describe any portions of a turn, or any actions that occur, in space.

Space Map vs. High-Altitude Map

The only difference between a space map and a high-altitude map (as shown above) is that the high-altitude map has a planet and its corresponding atmosphere noted on one of its edges; i.e. the space map is just that, hexes that represent space (the high-altitude map also has hexes that represent space beyond the atmosphere and planet/ground hexes).

Structural Integrity

A unit's structural Integrity (SI) determines its general resilience, indicating how well it performs at high Gs and when damaged. A unit's SI is noted either in its *Technical Readout* entry or on its record sheet.

Velocity

The velocity of a unit equals the number of hexes that unit must travel during the Movement Phase (Aerospace) of a turn, unless the controlling player spends Thrust Points at the beginning of movement to brake (see *Changing Velocity*, p. 76).

MAPSHEETS

Aerospace units may operate on space maps or atmospheric maps. Not every type of aerospace unit may operate on each map. Players can use the back of any *BattleTech* mapsheet to represent space.

Atmospheric maps may be high-altitude and low-altitude. As noted under *Game Terms*, see p. 74, the high-altitude map is similar to the space map except that one row of hexes represents the planet's surface and additional hex rows represent atmosphere (see *Atmospheric Movement*, p. 78). The low-altitude map can be represented by any *BattleTech* mapsheet (see *Low-Altitude Movement*, p. 80).

SCALE

Space turns—those where the aerospace action does not occur in atmosphere—represent one minute of "real time," meaning that six ground turns occur between each space turn. Each hex on a space map represents roughly eighteen kilometers.

An atmospheric turn equals a ground turn of ten seconds, with each atmospheric hex representing five hundred meters (roughly corresponding to one *BattleTech* mapsheet).

This information is provided solely for reference. Players should remember to not let these "real-world" numbers come between them and having fun.

SPACE MOVEMENT

Unlike ground units, aerospace units do not expend Movement Points (MP) to enter hexes. Instead, aerospace units have a velocity that indicates the number of hexes through which they *must* travel.

In the frictionless vacuum of space, a moving unit continues in a straight line at a constant speed unless affected by an outside force. This application of force can alter velocity or direction. It may be a natural force, such as gravity, or a generated force, such as the thrust from a unit's engines. A similar principle applies in atmosphere, with momentum carried forward from one turn to the next. However, atmospheric friction drag will steadily decrease a unit's velocity unless engine thrust is applied.

MOVEMENT DIRECTION

An aerospace unit can move forward into the hex it is facing. It cannot move backward or into any other hex unless it first changes its facing (see below).

MOVEMENT SUBPHASES

Within the Movement Phase (Aerospace), each type of unit moves within its own subphase. All units of a single type (fighters, DropShips and so on), regardless of the controlling player(s), move only in their subphase. Within each subphase, the *Unequal Number of Units* rule applies (see p. 39). The following list shows the movement subphases in order (all players start at 1, resolve all movement, move to 2 and so on).

1. DropShips
2. Small Craft
3. Fighters

A pair of Clan Snow Raven Carrier-class DropShips on maneuvers.

THRUST POINTS

Each unit capable of movement has two thrust values. Safe thrust is the number of Thrust Points a unit can spend in a single turn without suffering adverse effects. Maximum thrust is the total number of Thrust Points a unit can spend in one turn and is equal to 1.5 times the safe thrust value (round up). Spending a number of Thrust Points greater than the safe thrust value degrades the unit's handling, making it harder to control and increasing the difficulty of targeting enemy units (see *Aerospace Attack Modifies Table*, p. 237).

Airship Support Vehicles: Airship Support Vehicles also use fractional thrust; see *Airships*, page 204.

USING THRUST POINTS

In space, each unit travels at a constant speed and heading unless thrust from the engines is used or the unit is affected by the pull of a planet's gravity (see p. 80). At the beginning or end of a unit's movement, it can spend Thrust Points to change its velocity or facing. For simplicity, spending thrust does not consume a unit's fuel.

Changing Velocity

Each Thrust Point spent increases or decreases the unit's velocity by 1. Aerospace units have no maximum velocity, though the size of the playing area creates practical limits. A unit's velocity cannot be reduced below zero, because aerospace craft cannot move backward.

Velocity changes made before movement affect the current turn's movement. Velocity changes made at the end of movement take effect in the following turn. A unit that changes velocity at the end of one turn cannot change velocity again at the start of the next turn.

John's fighter has a Safe Thrust of 5 and a Maximum Thrust of 8. He accelerated the fighter in the same direction for the first two turns of the game, spending 5 Thrust Points in the first turn and 6 Thrust points in the second; the unit ends the second turn with a Velocity of 11.

During the Movement Phase (Aerospace) of Turn 3, John's fighter still has a Velocity of 11. He can spend Thrust Points at the start or at the end of the unit's movement. If he spends Thrust Points at the beginning to brake, the number of points spent will subtract from the unit's velocity this turn.

John realizes he needs to move in the opposite direction quickly, but doesn't want to chance forcing a Control Roll. He spends 5 Thrust Points at the start of his turn (his maximum Safe Thrust) to bring his unit's Velocity down to 6; now he must move the fighter six hexes. Unless he spends additional thrust to change facing, the fighter must move forward in a straight line.

If John had chosen to spend his fighter's Thrust Points at the end of the unit's movement, the fighter would need to move 11 hexes, after which it would end the movement with a Velocity of 6. That means the fighter would start the following Movement Phase (Aerospace) with Velocity 6.

Finally, John can choose not to spend any Thrust Points, moving his fighter the required 11 hexes in a straight line for Turn 3's movement and ending the turn with Velocity 11. His fighter then starts Turn 4 with that velocity.

FACING

As with ground units on ground mapsheets, aerospace units in space use a hex map to regulate movement, and every unit must face one of the six sides of the hex in which it is placed. A unit's facing—the direction in which its nose points—determines where it can fire and where attacks against the unit strike. Under standard aerospace unit movement rules, a unit's facing and heading (direction of movement) are the same.

FACING CHANGE

Thrust Points are used to change a unit's facing during movement by 60 degrees (one hexside). The Thrust Point cost to change facing depends on the unit's current velocity, as shown in the Changing Facing Cost Table. Critical damage to the unit can increase this cost. Each point of velocity above 10 increases the cost of a facing change by one Thrust Point.

If a unit does not have enough thrust to change facing at its current velocity, it cannot change facing. Aerospace fighters and other units with a Velocity of 0 can change facing as many hexsides within a single hex as their available thrust allows. When moving, DropShips and small craft can change facing a maximum of two hexsides before moving forward at least one hex.

Forward Movement: Each unit must move a number of hexes equal to its velocity. Unless it has a Velocity of 0, an aerospace unit must move forward at least one hex before it makes any facing changes.

CHANGING FACING COST TABLE

Current Velocity	Thrust Point Cost
0-2	1
3-5	2
6-7	3
8-9	4
10	5
11	6
12+	+1 per point

EVASIVE ACTION MODIFIERS TABLE

Evading Unit is:	Target's Evasive Action Modifier	Attacker's Evasive Action Modifier
Fighter	+3	N/A
Small craft, Fixed-Wing Support Vehicle	+2	N/A
DropShip	+2	+2
Airship	N/A	N/A

At the start of Turn 4, John's fighter has a Velocity of 6. Checking the Changing Facing Cost Table, he must spend 3 Thrust Points to turn one hexside. However, he needs to turn two hexsides, requiring him to spend 6 Thrust Points. He decides he doesn't want to do that; he's lining up a good shot at a target for the Weapon Attack Phase and doesn't want the modifier that using maximum thrust will add to the target number.

Instead, at the beginning of his fighter's movement, he spends 1 Thrust Point to brake, which changes its Velocity from 6 to 5. Now each facing change will cost 2 Thrust Points. Before John can make any facing changes, he must move at least one hex forward. He does so, and then spends 4 more Thrust Points, 2 for each facing that he wants to change. John changes his fighter's facing two hexsides to the left and then moves forward 4 more hexes (4 + 1 = Velocity 5), ending the Movement Phase (Aerospace) of Turn 3 with a Velocity of 5.

But that's okay, because he's got a great shot lined up!

SPECIAL MOVEMENT MODES

Aerospace units can use certain optional special movement modes. Unlike ground units, aerospace units may combine normal movement with special movement.

EVASIVE ACTION

Any aerospace unit listed on the Evasive Action Modifier Table can spend 2 Thrust Points to undertake evasive maneuvers, making it harder for an opponent to target it. Increase the to-hit number for attacks against any unit engaged in evasive action as indicated on the table below.

Airships: Airships cannot evade.

Capital Missiles: Capital missiles (standard and tele-operated versions) suffer no to-hit penalties when fired by an evading unit.

Fighters and Small Craft: Fighters and small craft engaged in evasive action may not fire any weapons during the turn they evade (not counting defensive systems).

Large Craft: Large Craft making evasive maneuvers may still fire at their opponents, but suffer a +2 to-hit penalty.

ROLLING

Any aerospace unit can spend one Thrust Point to roll, a move that effectively reverses the unit's right and left sides. A unit may make this maneuver at the beginning or the end of the Movement Phase (Aerospace). Only one roll can be safely made in each Movement Phase (Aerospace). A second rolling maneuver in the same phase forces the player to make a Control Roll (see p. 92). A unit cannot roll in any other phase of a turn.

The rolling maneuver is roughly equivalent to a ground unit's torso/turret twist in that it increases the unit's flexibility, particularly when damaged. In combat, this means weapons mounted in a left-side arc fire into their right-side equivalents, and vice versa. Hits to locations on the left side armor are applied to the right side armor facings. Similarly, any critical

damage that limits turns in one direction limits turns in the opposite direction after a unit rolls.

Atmospheric Flight: A unit may not roll in atmosphere, but may execute a half-roll special maneuver (see *Special Maneuvers*, p. 84).

Normally, a fighter with one box of thruster damage on the left side would pay normal costs to turn left, but one extra point to turn right (see Damage, p. 238). If the unit rolls, it must pay an extra Thrust Point to turn left and normal costs to turn right.

HIGH-G MANEUVERS

Aerospace units and their pilots can sustain only a certain amount of G-forces before suffering adverse effects. If a single expenditure of Thrust Points (in a single hex) to turn or change velocity exceeds a unit's current structural integrity (SI), the maneuver might damage the unit. If the Thrust Points spent on a single maneuver exceed twice the number of pilot/crew boxes not crossed off, the maneuver might damage the pilot/crew. If the thrust spent exceeds both values, then the player must roll to determine if both the unit and the pilot/crew sustained damage.

If the amount of thrust spent exceeds the Structural Integrity, the controlling player must make a Control Roll (see p. 92), adding the Thrust Points spent in excess of the unit's SI to the target number. If the roll succeeds, the maneuver is completed normally. If the roll fails, the maneuver is completed but the unit suffers 1 point of SI damage. For example, an aerospace fighter with an SI of 6 attempts a maneuver that uses 8 Thrust Points. Because this is 2 points higher than the fighter's SI, the pilot must make a successful Control Roll with a +2 modifier (Target Number 7) or suffer 1 point of damage to the unit's SI.

If the amount of thrust exceeds twice the number of pilot/crew boxes not crossed off, the controlling player must roll 2D6 against a target number equal to 2 + (2 x number of pilot/crew boxes crossed off) + excess Thrust Points. Success indicates the pilot/crew is unharmed. Failure inflicts 1 box of pilot/crew damage, and a fighter pilot must make a Consciousness Roll (see p. 41).

An uninjured warrior in an aerospace fighter with an SI of 7 executes a maneuver that uses 14 Thrust Points. This exceeds the fighter's SI, so the player must make a Control Roll with a +7 modifier. Because this is also more than double the number of boxes not crossed off (2 x 6 =12), the player must roll 2D6 to determine whether the warrior suffers damage. The Base Target Number is 2, modified by +2, the difference between the Thrust Points the warrior can sustain (12) and the points spent (14). He rolls 2D6 against Target Number 4, and unfortunately gets a 3. He suffers a point of damage and must make a Consciousness Roll against Target Number 3. If the aerospace fighter has to make another such dice roll anytime afterward, the controlling player must add +2 to the target number to reflect that 1 point of damage.

STACKING

Any number of units can stack in the same hex on the space map, high-altitude or low-altitude map, regardless of the player to whom they belong. Units in the same hex can collide if one or more of them is out-of-control (see *Control Rolls*, p. 92).

Landed Aerospace Units: If an aerospace unit is landed on a ground map—either because it landed or, because it crashed—it follows specific ground stacking rules (see *Stacking*, p. 57 of *Ground Movement*).

ATMOSPHERIC MOVEMENT

Engagements fought in a planet's near orbit almost inevitably spill over into the atmosphere. The following rules reflect this occurrence.

Atmospheric movement can occur at high altitude or low altitude. High-altitude movement is effectively beyond any interaction with ground units, and so is more abstract. Low-altitude movement brings aerospace units into contact with ground units, and so the rules governing it are more complex.

When fighting an engagement near a planet, make the following changes to the space map (to create a high-altitude map) and rules. Nominate one edge of the space map as the planet's surface. Treat the four hex rows above the ground as the planet's high-altitude atmosphere, with the ground row representing low-altitude atmosphere (see *Low-Altitude Movement*, p. 80). The fifth row is the space/atmosphere interface. The Close Up of High-Altitude Map (see p. 79) illustrates the planet to near-orbit setup.

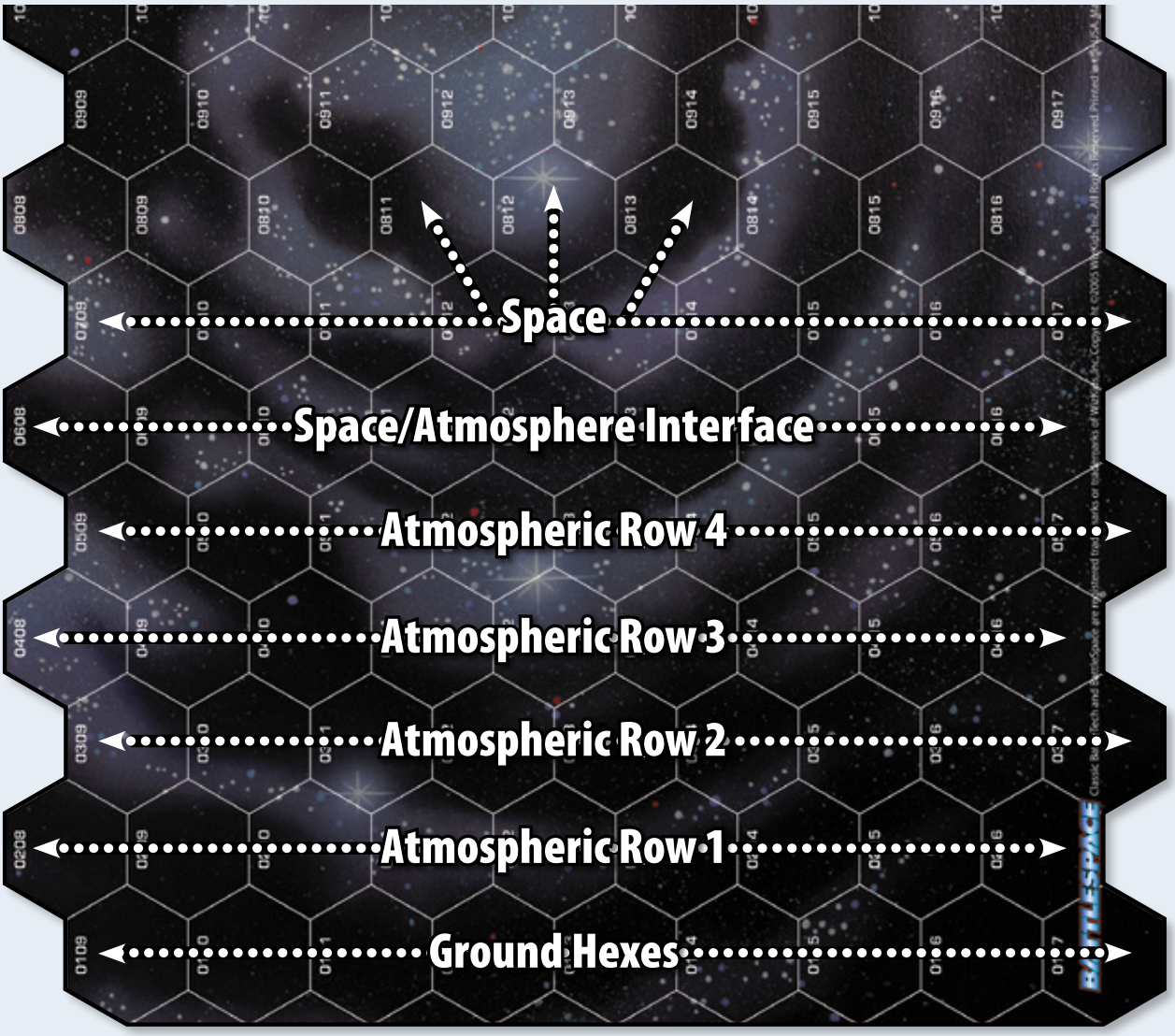
TURN SEQUENCE

Because space turns represent one minute, six atmospheric turns take place for each space turn. During play, the six atmospheric turns come first, followed by one space turn. Units moving between the space map and low-altitude map are removed from the current map at the end of their turn and enter the new map at the beginning of the next appropriate Movement Phase. For example, a unit on the low-altitude map moves to Altitude 11 in the Movement Phase (Aerospace) of Turn 3. At the end of that turn, it is removed from that map. It enters the space map on Row 1 of the atmosphere during the next space Movement Phase, which takes place after the sixth atmospheric turn.

SPACE/ATMOSPHERE INTERFACE

The space/atmosphere interface marks the divide between the vacuum of space and the increasingly dense planetary atmosphere on a high-altitude map. Because it acts as a barrier, the interface can damage or destroy a craft that enters an interface hex. When crossing from a space hex to an interface hex, a unit must make a Control Roll, applying the appropriate modifiers from the Re-Entry Table (to a maximum of 6) in addition to any other applicable modifiers.

If the result is equal to or higher than the target number, re-entry is successful. The unit enters its destination hex and continues its movement. If the result is less than the target number, re-entry has



• CLOSE UP OF HIGH-ALTITUDE MAP •

failed. The unit's Velocity drops to 0 and it remains in the hex from which it tried to enter the interface; its movement turn is over. In addition, for each point of the margin of failure, apply 5 points of damage to the nose of the craft (see *Damage*, p. 238).

Only craft that can currently spend 4 or more Thrust Points can move from an interface hex to a space hex. An out-of-control unit (including fighters) that enters the interface suffers 250 points of damage to its nose per point of Velocity; the specific location determined via a 2D6 roll on the Hit Location Table.

Apply this damage as a single hit to the affected section (transferring to structural integrity as appropriate). If an out-of-control unit enters the interface with a Velocity of 0, the craft suffers 50 points of damage to its nose (or forward facing); the specific location determined via a 2D6 roll on the Hit Location Table.

Bomb Critical Hits: For every bomb critical hit an aerospace fighter has received, apply a +1 modifier to the Control Roll (see *Critical Hit Effects*, p. 239, in *Aerospace Units*).

Door Critical Hits: For every door critical hit a Small Craft or DropShip has received, apply a +1 modifier to the Control Roll (see *Critical Hit Effects*, p. 239, in *Aerospace Units*).

Gravity: Gravity (see p. 80) affects any unit within ten hexes of the space-atmosphere interface.

HIGH-ALTITUDE MOVEMENT

In the atmosphere hexes of the space map, lift and drag alter flight dynamics considerably, giving fighters, aerodyne DropShips and aerodyne small craft a distinct performance edge over spheroid DropShips and spheroid small craft. The following rules reflect this reality and only apply to the atmospheric hex rows 1 through 4 of the space map.

For every unit operating in atmosphere hexes, increasing velocity by 1 costs 2 Thrust Points. Every unit in an atmosphere hex automatically decreases velocity by 1 in the End Phase of every turn. Use the standard rules to decrease velocity by more than 1 point in a turn. If a unit exceeds the safe velocity for the altitude (see High-Altitude Table, p. 80),

it automatically suffers 5 points of damage to its nose armor for each point by which its speed exceeds the safe velocity.

Restricted Units: Airships and VTOLs are prohibited from entering the low- or high-altitude maps. Such a prohibited move automatically fails and the unit's controlling player must immediately make a Control Roll.

Conventional fighters and Fixed Wing Support Vehicles can enter the high-altitude map, but are restricted to the ground row and atmospheric row 1 (see the High-Altitude Map diagram, p. 75). Propeller-driven Fixed Wing Support Vehicles may only move 1 hex per turn when on the high-altitude map.

Aerodyne Units

Aerodyne DropShips, small craft and fighters can operate at higher speeds than spheroid craft by using wings and other lifting surfaces to fly and by using ailerons, flaps and rudders to maneuver. As atmospheric density and friction increase with proximity to the surface, a craft's maximum speed in atmospheric hexes on the space map will decrease, as shown on the Altitude Table.

If a fighter, aerodyne small craft or aerodyne DropShip has Velocity of 0, it will be affected by gravity (see below).

Airship Support Vehicles: Airships maneuver in the same fashion as aerodyne DropShips, but they may also hover like spheroid small craft (see below).

Spheroid Units

Because spheroid DropShips and small craft must use their thrusters to provide lift, control and velocity, they are impractical for atmospheric combat. A spheroid unit in an atmospheric hex on the space map must end its movement facing away from the planet—meaning that its nose is facing either of the two hexsides that point away from the planetary surface map edge—or else make an immediate Control Roll. However, a spheroid unit can hover by pointing its nose to face one of the two hexsides facing away from a planet and reducing its Velocity to 0. The unit must spend 2 Thrust Points each turn to offset gravity. While the spheroid unit is hovering, this thrust will not increase the unit's velocity. A hovering spheroid may move into adjacent hexes without changing facing at a cost of 3 Thrust Points per hex (and without having to pay to offset gravity).

Clan Ghost Bear Beta Galaxy aerospace fighters.

GRAVITY

Gravity influences the position of any units on the same high-altitude mapsheet as the planetary surface, provided they are within ten hexes of the space-atmosphere interface. This game mechanic represents a "standard" world; individual scenarios may extend or reduce this area of effect.

In the End Phase, displace any units in the area affected by gravity one hex row closer to the planetary surface. If a unit can move into two possible hexes, the controlling player selects the hex in which the unit ends the turn. Units displaced into the interface hex must make a Control Roll for re-entry.

Gravity does not influence units in the interface, in atmosphere or in a ground (low-altitude) hex unless their Velocity is 0. Units in a ground hex with a Velocity of 0 must either hover (at a cost of 2 MP) if allowed, land (see *Landing*, p. 87) or crash at the end of the Movement Phase (Aerospace). A unit that crashes may damage ground targets (see *Crashes*, p. 81).

RE-ENTRY TABLE

Situation	Modifier (Maximum 6)
Craft has engine damage	+1 per box crossed out
Craft has damage to thrusters	+1 per box crossed out
Craft has no thrust*	+6

*A craft has no thrust if it cannot generate any due to critical engine damage or lack of fuel.

HIGH-ALTITUDE TABLE

Hex Row	Altitude (km)	Max. Safe Velocity
Ground	0–17	2
Row 1	18–35	3
Row 2	36–53	6
Row 3	54–71	9
Row 4	72–89	12
Interface	90–107	15

LOW-ALTITUDE MOVEMENT

The following rules apply to movement on a low-altitude map, modifying the standard rules where appropriate. Units entering a ground hex on the high-altitude map move to the low-altitude map. In each turn, a unit must move a number of hexes equal to its velocity, though special maneuvers (see p. 85) can reduce this number.

Terrain and Altitude

Low-altitude atmospheric operations use the *BattleTech* hex-based maps, either the terrain side or the blank side. Each hex of the low-altitude map roughly corresponds to one *BattleTech* ground mapsheet.

Atmospheric operations divide mapsheets into ten horizontal layers (altitudes), from the ultra-low Altitude 1 (NOE) (Nape-of-the-Earth) to very high. Each unit in the atmosphere operates at one of these altitudes. As noted in *A Note on Scale and the Rules*, page 36, the "real-world" heights quoted for these altitude bands should not distract players from having fun—the information is provided solely for reference.

If players choose to use the printed side of a *BattleTech* mapsheet for low-altitude movement (as opposed to using the *Aerospace Units with Ground Mapsheets*; see p. 91), the terrain determines where units fly. (Unlike ground mapsheets, which represent human-scale hills, copses of trees and so on, when aerospace units use such maps for low-altitude movement, the various terrain represents continent-scale features; each hill is a mountain range, each woods a giant forest and so on.)

Each level on a ground mapsheet hex corresponds to an aerospace altitude. For example, a hill marked Level 2 equals Altitude 2. Units can enter that hex only if flying at Altitude 3 or higher (or 2 if landing; see p. 87). Wooded hexes rise one altitude above the underlying terrain. For simplicity sake, building hexes do not rise above the underlying terrain and are ignored by aerospace units (unless the unit is attempting to land, see p. 87).

Units with damaged sensors cannot fly at Altitude 1 (NOE). Units dropping from Altitude 1 (NOE) to Altitude 0, or entering a hex with a level equal to the unit's altitude, must land or crash (see pp. 87 and 81 respectively). A unit entering a hex with a level higher than its own altitude automatically crashes. Units that move from Altitude 10 to Altitude 11 have climbed into space (Row 1 of the atmosphere on the space map). Any unit doing so that is prohibited from space operations remains at Altitude 10 and must immediately make a Control Roll.

LOW-ALTITUDE TABLE

Altitude	Minimum (in meters)	Maximum (in meters)
High-Altitude Table	18,000+	
10	5,001	18,000
9	2,001	5,000
8	1,001	2,000
7	751	1,000
6	501	750
5	251	500
4	151	250
3	101	150
2	51	100
1 (NOE)	1	50
0 (Ground)	0	0

Crashes

If a unit's altitude matches the level of the hex it occupies and it does not attempt to land (see *Landing*, p. 87), it crashes. If the unit was Out of Control when the crash happened and is a DropShip or larger craft, it is destroyed. Otherwise, the unit's controller rolls 2D6, multiplying the result by 10 and then multiplying again by the current velocity of the unit. If the unit had no velocity when it crashed, use a value of 2 for velocity when calculating damage. The final result is the number of damage points the unit suffers.

Apply damage to randomly determined locations in ten-point groups. If the unit is a fighter, aerodyne DropShip or aerodyne small craft, use the Nose Hit Location Table for the appropriate unit class. If the unit is a spheroid DropShip or small craft, use the Aft Hit Location Table instead.

If an aerospace unit crashes into a low-altitude hex, it may strike units or buildings on the *BattleTech* mapsheet. If an aerospace unit crashes into a hex occupied by another unit or a building, those targets also take damage. The type of damage and the number of hexes affected depend on the type of unit that crashes, as described below.

Players must make several dice rolls to determine the crash hex on the *BattleTech* mapsheet. Roll 2D6: the result is the number of random movement rolls the controlling player must make to determine the crash hex (see *Random Movement*, p. 93). Beginning with your current hex and direction of travel, move the craft according to the random movement chart until all random movement rolls have been made; all results are multiplied by 8 as the unit is now operating on ground mapsheets. The end result of this movement is the crash hex; if the random movement moves the crashing unit off the playing area, it is automatically destroyed. Non-aerospace units (or grounded aerospace units) near a crash site are unaffected unless they are in the crash hex, or the six adjacent hexes if the crashing unit is a DropShip.

STU-K5 Stuka, *Twentieth Avalon Hussars (House Davion)*

Airship Support Vehicles: Airship Support Vehicles cause less damage to other units and buildings when crashing. Calculate the damage as normal, then reduce it by half.

Fighters, Small Craft and Fixed-Wing Support Vehicles: These unit types only affect the crash hex. For a building hex, apply the same amount of damage the aerospace unit received to the structure's CF; a hardened building hex doubles the standard crashing damage applied to the aerospace unit.

DropShips: DropShips affect the crash hex and the six adjacent hexes surrounding it. Any building hexes the unit hits are automatically destroyed; a hardened building hex doubles the standard crashing damage applied to the DropShip. This is not cumulative; for example, if a DropShip crashes into three hardened building hexes, the damage remains only double, rather than six times the standard crash damage. Any unit in the crash hex automatically takes damage, as described below. Units other than ´Mechs in the crash hex are automatically destroyed.

A crashing DropShip also alters levels in the affected hexes; the crash hex and the six adjacent hexes surrounding it are lowered by two levels. Any adjacent hexes higher than the crash hex are automatically reduced to the level of the crash hex; this takes effect after all ground units in those hexes have taken damage and been displaced.

Avoiding or Taking Damage: All units in hexes affected by a crash have a chance to avoid damage. The controlling player of the crashing unit rolls 1D6 for each unit in the affected hexes. Non-infantry units take no damage on a result of 1–2. On a result of 3–6, non-infantry units take damage. For each such unit damaged, divide by 2 the damage received by the aerospace unit and apply the result to each of the target units in five-point Damage Value groupings. If the crashing unit is a large Fixed-Wing Support Vehicle, double the damage done to the target. When applying damage, use the Punch-Hit Location Table for 'Mechs and the Front column for vehicles. Any unit in the target hex, regardless of whether or not it took damage, is automatically displaced in the direction opposite to the direction the crashing unit was travelling (provided it survived; see *Unit Displacement*, p. 151).

Infantry units take no damage on a result of 1–3. On a result of 4–6, infantry takes damage like non-infantry units. For battle armor, apply each five-point group of damage points randomly to the troopers within the squad or Point; for conventional infantry in clear terrain, double the damage.

All units can likewise avoid damage from a crashing DropShip if they are in one of the six adjacent surrounding hexes with the exception of 'Mechs noted below, all other unit types in the target hex of a crashing DropShip are automatically destroyed. The craft's controlling player rolls 1D6 for each unit. On a result of 1–2, non-infantry units take no damage. On a result of 3–6, they take damage. Apply the amount of damage taken by the aerospace unit to each of the other units in five-point groups. Use the Punch-Hit Location Table for 'Mechs and the Front/Rear column for vehicles.

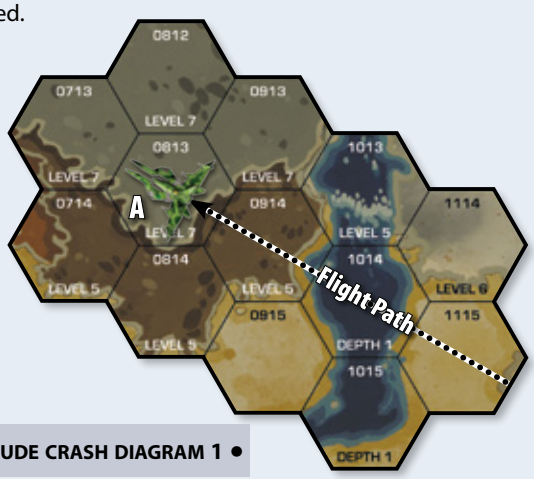
Infantry units take no damage from a crashing DropShip on a result of 1–3. On a result of 4–6, infantry takes damage just like non-infantry units. For battle armor, apply each 5-point Damage Value grouping randomly to the troopers in the squad or Point; for conventional infantry in clear terrain, double the damage.

Any 'Mech in the DropShip crash hex, as well as any units in the six adjacent hexes, are automatically displaced (with the exception of infantry, which can occupy the same hex as a DropShip; if two infantry units on the same side occupy such a hex, one of them will be displaced, see *Stacking*, p. 57)—provided they survived the damage. This can mean that a unit gets displaced two hexes (see *Unit Displacement*, p. 151); in a case where a unit is displaced two hexes, the unit must roll twice to avoid damage. A unit that is displaced must, where possible, move into a hex other than the crash hex or one of the six surrounding hexes, even if this means moving into prohibited terrain (which may destroy the unit); a unit displaced two hexes cannot move from the impact hex to one of the surrounding hexes then back to the impact hex, nor may it move from one of the hexes surrounding the impact hex of a DropShip to another hex immediately adjacent to the impact hex.

Buildings: Any aerospace unit other than a DropShip that survives a crash into a building hex is considered immobile for the rest of the game. Surviving units inside a destroyed building hex must resolve damage caused by the collapse of the building, as described in *Collapse*, starting on page 176, before resolving damage from the crashing unit.

Woods and Water: With two exceptions, aerospace units that crash into woods hexes reduces the terrain in the crash hex: heavy woods become light woods, and light woods become rough terrain. Regardless of the type of woods in the crash hexes, a crashing DropShip reduces the woods in the target hex and the six adjacent hexes to rough; the target hex and six adjacent hexes are also lowered by two levels. In both instances, a rough hex remains a rough hex. Airship Support Vehicles do not change the terrain.

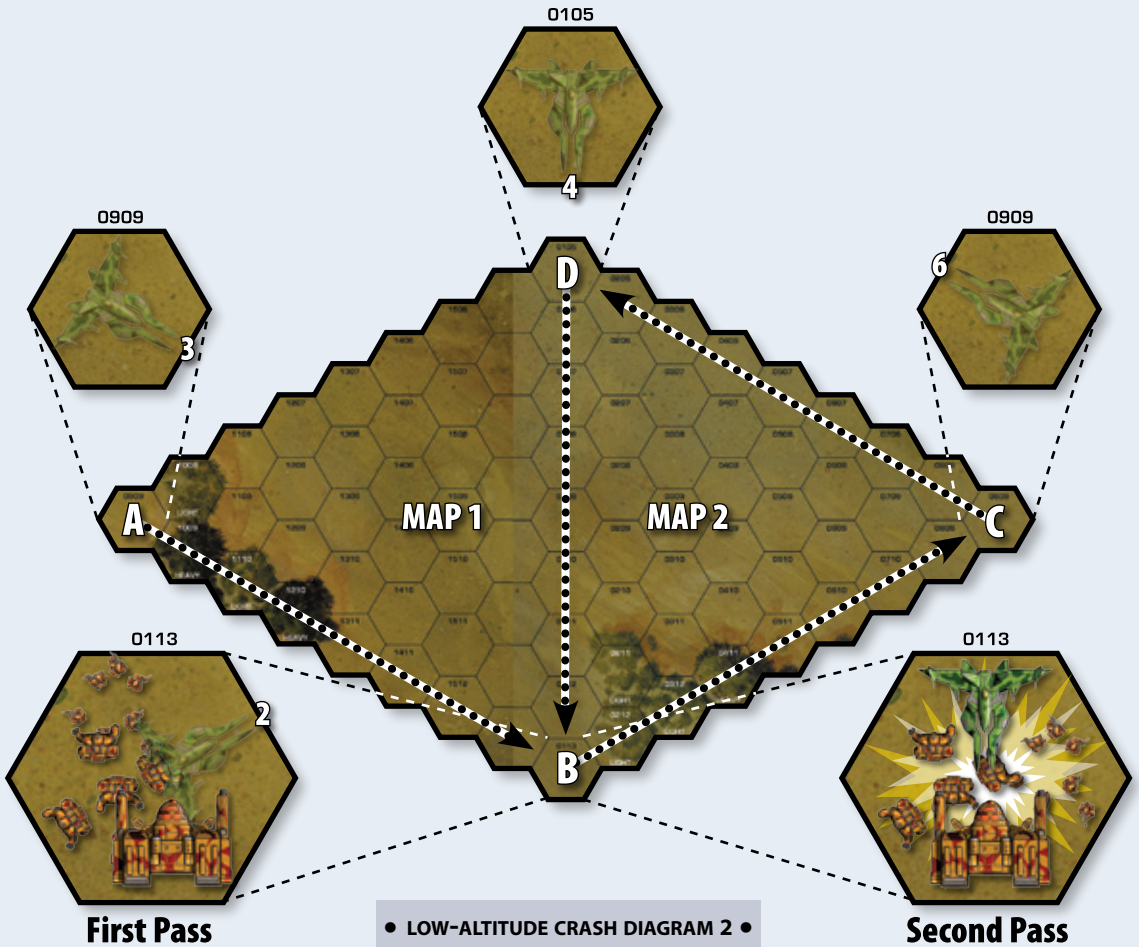
With the exception of DropShips, an aerospace unit that crashes into Depth 1 or greater water is automatically destroyed. If the central hex where a DropShip crashes is Depth 1 water hex, it is immobile for the rest of the game. If the central hex where a DropShip crashes is a Depth 2 or greater water hex, it is automatically destroyed.



• LOW-ALTITUDE CRASH DIAGRAM 1 •

In the Low Altitude Crash Diagram 1 above, during the Movement Phase (Aerospace), an aerospace fighter has a Velocity of 6 and is at Altitude 6 on the Large Mountain #1 map when it enters Hex A, using low-altitude atmosphere rules. As the unit's altitude is one lower than the level of Hex A (Level 7), the fighter crashes; if the hex had been Level 6, the aerospace fighter could've attempted a landing. The player must now resolve the damage before play continues.

Because Hex A is a low-altitude hex, it represents a BattleTech mapsheet. Unfortunately, ground units are active on the mapsheet, so the player must first determine the exact crash location and then determine if he struck any ground units. In this example, the mapsheet represented by Hex A is the Open Terrain #1 map.



• LOW-ALTITUDE CRASH DIAGRAM 2 •

As shown on the Low-Altitude Crash Diagram 2 above, the player rolls 1D6 and gets a result of 3, indicating an initial direction of travel. He then rolls 2D6 and gets a 4, indicating that he must make four random movement rolls to determine the crash hex for his aerospace fighter; at this point the player also remembers that he has to multiply all results by 8, as the fighter is now operating on a ground mapsheet. Starting in Hex 0909 (marked as A in the diagram), he faces his aerospace fighter toward hexside 3 and makes his first random movement roll. He gets a 2, consults the random movement chart, and then moves his fighter into Hex B (which is actually on the adjacent Open Terrain #2 map) and turns one hexside to the left to face hexside 2. His second random movement roll is a 1, and so he moves the fighter into Hex C and turns two hexsides to the left to face hexside 6. His third random movement roll is another 1; the player moves the fighter into Hex D and turns two hexsides to the left to face hexside 4. His final roll, a 4, determines that the fighter actually crashes in Hex B. As luck would have it, a 'Mech and battle armor unit from side A and a conventional infantry rifle (foot) platoon from side B currently occupy that hex.

The controlling player applies damage from the crash to his own unit. He rolls 2D6 and gets a 7, which he multiplies by 10 for a running total of 70. He then multiplies 70 by his fighter's current Velocity of 6, for a total of 420 damage points! Because the unit is an aerospace fighter, the player will roll 42 ten-point hits on the Nose column of the Aerospace Hit Location Table. Perhaps he should have flown a little more cautiously!

Next, regardless of whether the aerospace fighter survives the crash damage, the player must resolve damage to the other units in the hex. The player first determines whether or not he damaged the 'Mech by rolling 1D6. He gets a 5: the fighter hit the 'Mech! The player divides the fighter's total damage of 420 by 2 and gets 210. The player now rolls 42 five-point hits on the Punch Hit Location Table.

Next, the player rolls to determine whether or not he damaged each infantry unit. He gets a 1 for the battle armor unit, which escapes unscathed, and a 4 for the conventional infantry unit. That unit is in clear terrain, and so it takes double the fighter's 420 points of damage, for a grand total of 840 points. Talk about overkill!

If the crashing aerospace unit had been a DropShip, it would have destroyed both infantry units, while the 'Mech would have to make two avoid rolls or take 420 points of damage, applied in 84 five-point hits on the Punch Hit Location Table. No 'Mech can survive such damage, and so the player would not need to consult the displacement rules. As a final note, the player marks on the map that the target hex and the six adjacent hexes are now Sublevel 2.

Velocity Loss, Stalling and Overspeed

Units moving on the low-altitude map steadily lose speed unless they spend Thrust Points to offset the atmospheric resistance. At the beginning of each turn, reduce the velocity of atmospheric units by half (rounding fractions down). For example, a unit ending the turn at Velocity 6 starts the next turn at Velocity 3, while one ending a turn at Velocity 5 begins the next at Velocity 2 (2.5, rounded down).

Fighters, aerodyne DropShips and aerodyne small craft that drop to a Velocity of 0 stall. Stalled units fall one altitude and must make a Control Roll. Units equipped with VSTOL do not stall if their Velocity is 0, provided they can still expend thrust. If the aerospace fighter, aerodyne small craft or DropShip still has unspent thrust for this turn they may expend thrust to hover, requiring 2 Thrust Points to do so. If insufficient thrust is available to hover then the craft will stall. If hovering thrust expenditure causes the craft to exceed safe thrust for the turn a Control Roll is required.

Units may not fly at a velocity greater than twice their safe thrust in atmosphere. If forced to do so by damage or circumstances (for example, a unit at high velocity suffering damage and finding itself at more than twice its safe thrust) must make a Control Roll, applying a +1 modifier for each point of excess velocity.

Facing Changes

While operating in a atmosphere hex, fighters, aerodyne DropShips and aerodyne small craft need not spend Thrust Points to change facing. Instead, they use control surfaces built into their wings to change facing and altitude. These surfaces allow the unit to make a number of free facing changes, depending on unit type and velocity. The faster a unit moves, the fewer free facing changes it receives.

Before it can make a facing change on the low-altitude map, a unit must move in a straight line at least the number of hexes shown on the Straight Movement Table below. In both cases, this movement may be split across two turns. For example, an aerospace fighter traveling at Velocity 7 must move two hexes forward before making a facing change. A conventional fighter at the same effective velocity would need to move only one hex between facing changes. An aerodyne DropShip would need to move three hexes. Regardless of velocity, a unit can only make one facing change one side in each hex.

Additional Facing Changes: Aerospace fighters and aerodyne DropShips and small craft can also spend Thrust Points to gain additional facing changes. At any point in their movement, such units may spend Thrust Points equal to half their current velocity (round up) to change facing one hexside. However, they may not do so if they have already changed facing in that hex or if this is the first hex of their movement on the low-altitude map. On the ground map, each such change must be preceded by at least eight hexes of movement, which may be split across two turns. For example, the pilot of an aerospace fighter with a Velocity of 7 wants to make an additional facing change. This will cost 4 MP (half the fighter's current velocity, rounded up).

Fixed-Wing Support Vehicles: These units must move double the minimum straight movement requirement of a conventional fighter.

Rolling Maneuvers: Units in atmosphere cannot roll simply by spending Thrust Points. They must instead perform the maneuver as a half-roll (see the Special Maneuvers Table, p. 85).

Airships: Airships make facing changes like aerodyne DropShips.

Small Craft: When consulting the Straight Movement Table, treat aerodyne small craft as aerospace fighters and spheroid small craft as spheroid DropShips.

STRAIGHT MOVEMENT TABLE

	Minimum Straight Movement (in hexes)		
Effective Velocity	Aerospace Fighter	Conventional Fighter	Aerodyne DropShip
1–3	1	1	1
4–6	1	1	2
7–9	2	1	3
10–12	3	2	4
13–15	4	3	5
16+	5	4	6

Changing Altitude

Units may also spend Thrust Points to change altitude. Aside from the obvious limits of the ground and the boundaries of the low-altitude and space maps, as well as rules regarding prohibited units, a unit may ascend or descend any number of altitudes in a single turn. Climbing one altitude costs 2 Thrust Points. Units may descend altitudes for no Thrust Point cost, and a fighter that descends two or more altitudes in a turn gains an additional point of velocity (to a maximum Velocity of 12) for that turn. If a unit descends more than two altitudes in a single turn, it must make a Control Roll, with a modifier equal to the number of altitudes descended. A unit attempting an air-to-ground attack this turn must declare it, and any corresponding altitude changes and skill rolls required, during the Movement (Aerospace) Phase.

A unit that ascends when at Altitude 10 leaves the low-altitude map and should be placed in Row 1 of the atmospheric hexes on the space map (unless prohibited from doing so, see *High-Altitude Movement*, p. 79), in the specific hex that corresponds to its present location. If players are not using the space map, such a unit is assumed to have left the engagement.

Spheroid DropShips

Spheroid DropShips handle facing differently from fighters, aerodyne DropShips, and aerodyne small craft; see *Attacks By and Against Spheroid DropShips in Atmosphere* on page 250. In order to maintain altitude, spheroid DropShips must spend 2 Thrust Points to hover. They can spend thrust to change altitude in the same way aerodyne craft can, except that they do not gain velocity for decreasing altitude. In addition, spheroid Dropships can spend up to 1 thrust point to move to an adjacent hex. Spheroid DropShips do not carry over velocity between rounds.

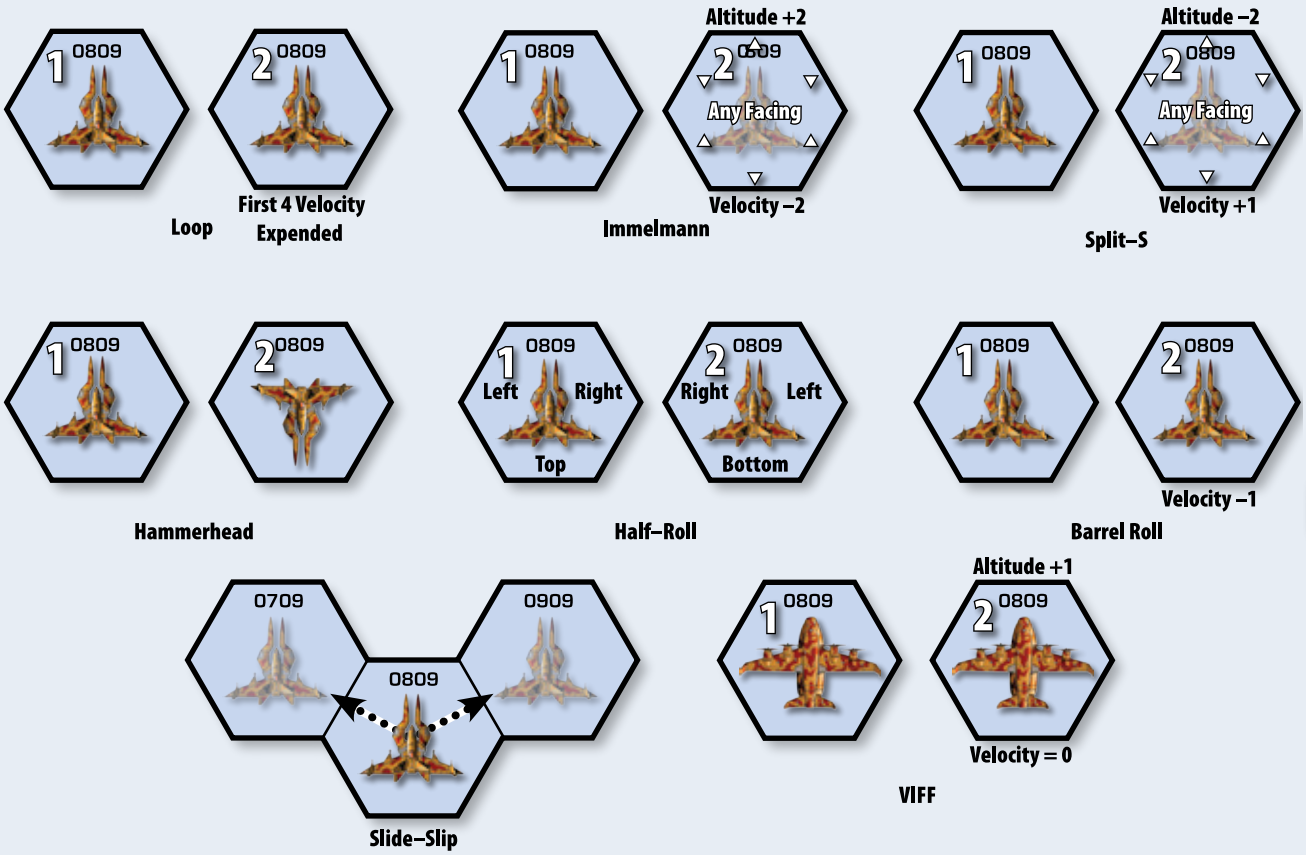
Airship Support Vehicles

Though Airships are treated as conventional fighters under these rules, these units have specialized movement. For more information, see *Support Vehicle*s, page 204.

Special Maneuvers

As shown on the Special Maneuvers Tables, an aerodyne unit's pilot can exploit his craft's agility and the three-dimensional playing area to execute a number of acrobatic maneuvers. Each maneuver has a minimum or maximum velocity at which it can be executed, as well as a Thrust Point cost. All special maneuvers require a Control Roll with the indicated modifiers. A successful result means the maneuver succeeds. Failure means the unit must move forward in a straight line a number of hexes equal to half its current velocity, rounded up, for a minimum of one hex. With the exception of a sideslip, which can be executed at any time during movement, special maneuvers occur at the start of the Movement Phase (Aerospace). Each unit can make only one special maneuver per turn.

Support Vehicles: Airship and Fixed-Wing Support Vehicles cannot make any special maneuvers.



• SPECIAL MANEUVERS DIAGRAM •

SPECIAL MANEUVERS TABLE

Maneuver	Min/Max Velocity	Thrust Cost	Control Modifier	Effect
Loop	Min 4	4	+1	The unit spends its first 4 points of velocity in the loop, though the actual velocity remains unchanged. It ends in the same hex where it started the move, then spends the remainder of its velocity normally.
Immelmann	Min 3	4	+1	The unit gains two altitudes and ends the maneuver facing any hexside. Velocity drops by 2. The remainder is spent normally.
Split-S	Any	2	+2	The unit loses two altitudes and ends the maneuver facing any hexside. Velocity increases by 1.
Hammerhead	Any	Velocity	+3	The unit remains in the hex it started, but changes facing 180 degrees.
Half-roll	Any	1	–1	The unit rolls 180 degrees, reversing left and right sides and up/down facings.
Barrel roll	Min 2	1	0	The unit rolls 360 degrees, ending with the same facing. Velocity drops by 1.
Side-slip	Any	1	0/–1 (VSTOL units only)	Instead of moving into the hex directly ahead, the unit moves into the front-left or front-right hex without changing facing. (Modifier is –1 for conventional VSTOL-equipped fighters only.) When using *Aerospace Units on Ground Mapsheets* rules (see p. 91), the unit moves 8 hexes in the front-left or front-right hex direction and then an additional 8 hexes directly forward.
VIFF	Any*	Velocity +2	+2	Successfully using this "Vector in Forward Flight" maneuver, any VSTOL unit halts its forward momentum and gains one altitude.

LAUNCHING/RECOVERING FIGHTERS/SMALL CRAFT

Small craft and fighters may take off (called launching while airborne) and land (called recovering while airborne) on an airborne Large Craft that is equipped with a small craft or fighter bay.

Launching

Fighters and small craft may launch from a carrier only at the end of that carrier's movement. Two fighters or small craft can exit each fighter/small craft bay door each turn at no risk; the number of fighter/small craft bay doors on the Large Craft will be noted in either the unit's technical readout or record sheet game stats. Additional fighters/small craft may attempt to launch from the same bay door in a turn, but if they do, each unit (including the first two) must make a Control Roll with a +1 penalty per additional fighter/small craft launched beyond the first two.

If this roll succeeds, that fighter/small craft launches successfully, and occupies the same hex, with the same heading and velocity as the carrying unit; it may expend its standard Thrust MP in the same turn it launches and may make attacks during the Weapon Attack Phase of the same turn (this may require players to revisit the order of movement determined by Initiative and *Unequal Number of Units* (see p. 39).

If it fails, the fighter/small craft still launches, but suffers 10 points of standard-scale damage to the nose (the specific location determined via a 2D6 roll on the Hit Location Table) per point of MoF.

A fighter or small craft should not launch from a unit that is out-of-control or operating in atmosphere at a velocity higher than 2. If they attempt to do so they suffer 2D6x10 points of standard-scale damage to the nose. Fighters or small craft with destroyed landing gear cannot launch at all. Damaged landing gear has no effect on launches unless more than two units are attempting to launch from the same bay door in a single turn, as per above, in which case the +5 modifier for having damaged gear is applied to the Control Roll as normal.

When more than two fighters/small craft attempt to launch from a single bay door in a single turn, for every unit that launches beyond the first two, the controlling player rolls 2D6 (this roll is also made if a fighter/small craft launches while the carrying unit is out of control). On a result of 2, while the unit successfully launches, the door is damaged and cannot be used for the rest of the scenario (it is considered to have been critically hit; see *Critical Hit Effects*, p. 239, in the *Aerospace Units* section).

Recovering

Fighters and small craft may only be recovered by a carrier at the end of that carrier's movement. Each operational fighter/small craft bay door allows two fighters or small craft every five turns to be recovered; this process cannot be accelerated. For example, on Turn 1, the Large Craft recovers a single fighter. That single fighter takes up one of the two 'recovering slots' for an operational fighter/small craft bay door for five turns. In Turn 1, 2, 3, 4 or 5 another fighter/small craft may be recovered by that same door. So if in turn 3, another fighter is recovered through that same door, both "recovering slots" are occupied and no other fighter/small craft may be recovered by that door until turn 6, when the "recovering slot" occupied by the first fighter has passed its five turns.

To be recovered, a small craft or fighter must end its turn in the same hex as the transport unit, with the same heading and velocity. Make a Control Roll for each individual small craft or fighter in the turn of recovery. If the transport unit spends Thrust Points during the turn in which the recovery takes place, increase the target number by +5. The unit is successfully recovered if the Control Roll succeeds. If the result is less than the target number, the recovery fails. Apply 2 points of standard-scale damage to the fighter or small craft to the

LANDING MODIFIERS TABLE

Condition	Modifier
Unit has damaged thrusters	+4
Unit is out-of-control	Automatic failure (assume MoF of 10)
Unit is attempting vertical landing	+1 per point of Velocity above 1
Unit is attempting horizontal landing	+1 per point of Velocity above 2
Landing gear damaged	+5

Condition	Modifier
Nose armor destroyed (fighters and aerodyne units)	+2
Unit reduced to 50% or less of starting thrust	+2
No thrust available (aerodyne)	+4
No thrust available (spheroid)*	+8
Runway too short for unit	+2
Aerospace fighter making vertical landing	+2/+0†
Conventional fighter making vertical landing	NA/NA†
Conventional fighter with VSTOL making vertical landing	+0/NA†
Fixed-Wing Support Vehicle making vertical landing	NA/NA†
Fixed-Wing Support Vehicle w/VSTOL making vertical landing	+2/0†
Aerodyne small craft and DropShips making vertical landing	+2/+0†
Spheroid small craft and DropShips making vertical landing	+0/+0†
Terrain Modifiers‡	
Unit landing at manned, friendly airfield‡‡	–2
Unit landing at unmanned, friendly airfield‡‡	–1
Unit landing on road or paved hex	0
Unit landing at unfriendly airfield‡‡	+1
Unit landing in clear hex	+2
Unit landing in water hex	+3
Unit landing in rough or rubble hex (landing gear damaged, cross off 1 box)	+3
Unit landing in elevated hex (non-vertical landing)§	+3
Unit landing in building hex (non-vertical landing)§§	+3
Unit landing in light woods hex	+4
Unit landing in heavy woods hex	+5

* Only applies if spheroid unit lost thrust this turn, otherwise the unit falls and is destroyed (see *Crashes*, p. 81).

† Number on left applies to atmospheric vertical landings, number on right applies to vacuum vertical landings (see *Vacuum,* p. 55, *Tactical Operations: Advanced Rules*). NA means the craft cannot land vertically; use stalling rules (see p. 84).

‡ Determine all appropriate modifiers based on the hexes of the landing area and then apply only the highest modifier (if there are multiple "highest" modifiers, still only add a single hex modifier). These modifiers are halved for vertical landings.

‡‡ The placement of such features, which do not appear on *BattleTech* maps, depends on the scenario being played or a designated gamemaster.

§ If the hex is greater than a one level change, the unit automatically crashes in the elevated hex (see *Crashes*, p. 81); determine all damage normally, than reduce to half (round down) before applying.

§§ The unit automatically crashes in the building hex (see *Crashes*, p. 81); determine all damage normally, than reduce to half (round down) before applying. If a unit makes a successful vertical landing into a building hex, immediately check for a collapse (see *Collapse*, p. 176).

nose for each point of MoF; the specific location determined via a 2D6 roll on the Hit Location Table. The fighter must wait another turn before attempting another recovery.

If the dice roll result of the Control Roll was a 2, the door is damaged and cannot be used for the rest of the scenario (it is considered to have been critically hit; see *Critical Hit Effects*, p. 239, in the *Aerospace Units* section).

Fighters and small craft cannot launch or be recovered directly by a landed DropShip (see *Carrying Units*, p. 89).

LANDING AND LIFTOFF

The following rules cover how aerospace units land or lift off during game play.

Note that "In-universe" DropShips range in size from forty-two meters wide and fifty meters in length to two hundred and seventy-seven meters in width and length. However, for simplicity, all DropShips use the same "footprint" when landed, as noted above.

Similarly, aerodyne units (from DropShips to fighters) present widely differing appearances, from the more spheroid-like, to ships that mount landing skids in place of wheels and so on. For simplicity, the landing rules center on the concept of a wheeled model and apply that template to all aerodyne units, regardless of their artistic portrayal—or how the source-book fiction describes said units—in a technical readout.

Landing

Any units beginning the movement phase one altitude above the underlying terrain can attempt to land on any available ground hex on a map. They may make either a vertical or horizontal landing. The landing replaces the unit's normal movement for the turn, preventing any other air or ground movement. Units using the *Aerospace Units on Ground Mapsheets* rules, page 91, must use the hex they currently occupy instead of choosing any hex on the mapsheet.

Vertical landings require the least amount of space, but cause significant damage to the ground. All spheroid small craft and spheroid DropShips must land vertically. Conventional fighters mounting VSTOL equipment may also attempt vertical landings in atmosphere, as may all aerospace fighters. Units making vertical landings reduce by half (round down) the terrain modifiers on the Landing Modifiers Table, p. 86. If the hex in which a DropShip lands is not a paved, road or water hex, the landing hex and the six adjacent hexes are reduced by 1 level; any adjacent hexes higher than the central hex are automatically reduced to the level of the central hex. If any of the seven hexes were building hexes, they are automatically reduced to rubble, while woods hexes are automatically reduced to rough.

Conventional Fighters (without VSTOL), aerodyne small craft, and aerodyne DropShips must make horizontal landings. To make such a landing safely, a DropShip requires a flat surface on the ground map three hexes wide and fifteen hexes long (referred to as a landing strip). Conventional fighters and small craft need a landing strip only a single hex wide and eight hexes long. Fighters equipped with VSTOL require five ground-map hexes in which to land.

This landing strip must be in a continuous line, unobstructed by level changes, buildings or other units. An airfield or other continuous strip of paved hexes is preferred, but any other terrain types listed on the Landing Modifier Table above may be present along the landing strip (for DropShips, this means any such terrain types anywhere in the width or length of the landing strip). In such a case, note all applicable terrain types appearing along the landing strip, adding each appropriate modifier once. For example, if there are 3 light woods hexes in the landing strip, the modifier is +4 for light woods terrain, not +4 for *each* hex of light woods.

The pilots of aerodyne DropShips can attempt to reduce the landing distance by up to half the base distance by tilting the nose of the craft upward, cutting the aft drive and using the bottom-mounted drive to provide braking thrust. To accomplish this maneuver, the pilot must make a Control Roll (see p. 92) with a +4 modifier. If the roll succeeds, reduce the required landing distance by 1 ground-map hex for every point of the MoS, to a minimum of half the standard landing distance. If the roll fails, consult the Failed Braking Maneuver Table, below.

For every landing attempt, the pilot must make a Control Roll to determine the success of the landing, applying modifiers for critical damage and failed braking maneuvers if necessary, and any appropriate modifiers from the Landing Modifiers Table. If the landing roll is successful, the craft touches down safely. If the roll fails, the unit suffers 10 points of standard-scale damage on the nose (or aft, for spheroid units) per point of MoF.

Once an aerospace unit finishes landing, if it occupies a water hex (or if the central hex for DropShips is a water hex), use the rules for crashing into a water hex (see *Woods and Water*, p. 82).

Once grounded (provided it was not destroyed), regardless of spheroid or aerodyne shape, all DropShips occupy a central hex and the six adjacent hexes, while fighters and small craft occupy only a single hex (see *Stacking* and *Line of Sight*, pp. 57 and 99 respectively, for the height of such grounded units as it applies to both rules).

FAILED BRAKING MANEUVER TABLE

Margin of Failure	Effect
1–4	Landing requires full distance. The pilot can attempt to land normally or abort the landing, circle and try again in a subsequent turn.
5	The unit must land. However, the unit becomes harder to control, adding 1 to the landing Control Roll target number.
6+	The unit must land and requires 20 hexes of runway to do so, regardless of unit type. The unit suffers 20 points of damage on the nose and the landing gear is destroyed. Add 2 to the landing Control Roll target number.

Liftoff

Aerodyne DropShips, fighters and small craft can lift off from a ground map during the Movement Phase (Ground) by accelerating along a runway or open ground until they reach liftoff velocity. The distance required for all units is twenty clear or paved hexes in a continuous line that do not change levels at any point. Any VSTOL-equipped units can take off in ten hexes. Players need not make a Control Roll for a horizontal liftoff. A horizontal liftoff takes 2 Thrust Points, and places the aerospace unit on the appropriate hex of the atmospheric map at Velocity 1 heading in the direction the landing strip was oriented on the ground map, and may not spend further thrust points that turn. The unit is not subject to Gravity (see p. 80) this turn.

Aerospace fighters and VSTOL-equipped conventional fighters may lift off or land vertically. Aerodyne small craft and DropShips may land and takeoff vertically only in a vacuum (see *Vacuum,* p. 55, *TO*); all spheroid DropShips and spheroid small craft lift off vertically. A vertical liftoff requires a Control Roll with modifiers as shown on the Vertical Liftoff Modifiers Table. If the roll succeeds, place the unit in the appropriate hex on the atmospheric map. If the roll fails, calculate the Margin of Failure (MoF) and refer to the Failed Liftoff Table. The unit is placed on the appropriate hex of the atmospheric map at Velocity 1, heading in any appropriate direction desired by the pilot, and may not spend further thrust points that turn.

In both cases, destroyed landing gear prevents any liftoff attempt.

Taxiing: Grounded aerospace fighters, aerodyne small craft and aerodyne DropShips may need to taxi along the ground after landing (or a crash) to find a suitable stretch of hexes for liftoff. All such units are considered wheeled vehicles for the purpose of terrain restrictions, with a Cruising MP rating equal to one-half (round down) their Safe Thrust. They may not expend any greater movement.

Spheroid small craft and spheroid DropShips cannot move along the ground once landed. Destroyed landing gear prevents taxiing altogether (merely damaged landing gear has no effect).

Proximity Damage

The fusion exhaust of a DropShip can cause immense damage to units too close to the ship when it lands or takes off. Any unit within six hexes of a spheroid unit as it lands or takes off suffers damage according to the DropShip Exhaust Damage Table below, broken into 5-point Damage Value groupings and applied using the appropriate hit location table; that is, the "attack" occurs along the line of sight between the DropShip's center hex and the affected unit's hex. Spheroid DropShips inflict this damage on any unit within six hexes of the ones adjacent to the central landing hex, rather than on units within six hexes of the central hex.

This damage only applies to units in the rear arc of an aerodyne DropShip when it takes off.

Fighters: The exhaust of a fighter landing or taking off causes no damage.

VERTICAL LIFTOFF MODIFIERS TABLE

Conditions	Modifier
Landing gear damaged	+1
Maneuvering thrusters damaged	+3
Unit lifting off from a crater	+3
Unit lifting off from an airfield or landing pad	–1
Non-spheroid making vertical liftoff	+2

FAILED LIFTOFF MANEUVER TABLE

Margin of Failure	Effect
1–2	Unit lifts off. Landing gear damaged.
3–4	Landing gear damaged. The pilot must make an additional Control Roll with no modifiers. If the roll is successful, the unit has lifted off. If the roll fails, the unit falls back to the ground, suffering 20 points of standard-scale damage on the aft side.
5	The landing gear is damaged and the unit strikes the ground, causing 50 points of standard-scale damage to the aft side.
6+	The landing gear is damaged and the unit strikes the ground, causing 100 points of standard-scale damage to the aft side.

DROPSHIP EXHAUST DAMAGE TABLE

Distance	Damage
Same Hex	Destroyed
1 Hex	12D6
2 Hexes	10D6
3 Hexes	8D6
4 Hexes	6D6
5 Hexes	4D6
6 Hexes	2D6

CARRYING UNITS

The following rules cover how non-aerospace units mount and dismount grounded Small Craft and DropShips.

Carrying units do not suffer reductions in Thrust for hauling units. Units may not mount enemy aerospace units using these rules.

Mounted units may not fire weapons, spot for indirect fire or take any action other than dismounting from the carrier and any electronic equipment that might interfere with an enemy unit does not function.

Infantry: Infantry mount and dismount from carrying Small Craft and DropShips as though the units were Large Support Vehicles (see *Infantry Carriers*, p. 223). The carrying unit's capacity is limited to the tonnage of its cargo area. The Generic Conventional Infantry Units and Battle Armor Organization/Weight Table (see pp. 213 and 214 respectively) indicate how much tonnage each type of infantry unit occupies. Do not reduce these tonnages for units that have suffered casualties.

Infantry are the only unit type that may mount or dismount a fighter during a game, provided the fighter has dedicated cargo space (as above, the carrying unit's capacity is limited to the tonnage of its cargo); infantry mount and dismount fighters as though the fighters were vehicles (see *Infantry Carriers*, p. 223).

Dropping Troops: While non-infantry units can be dropped from airborne aerospace units, those rules are beyond the scope of *Total Warfare* and are found in *Strategic Operations*.

Hot Zone: It is important to remember that these rules approximate the mounting and dismounting of units directly within the "hot zone" of a scenario; in other words fast and furious, with weapons blazing on all sides. Outside of a scenario (i.e. outside of direct combat), when forces have the time to dedicate to mounting and dismounting, many of the restrictions noted below do not apply; for example units can be mounted into cargo holds, no roll is made to see if a door is damaged and so on. Rules for mounting and dismounting units outside of game play are found in *Strategic Operations*.

SMALL CRAFT/DROPSHIP BAY TABLE

Unit Type	Bay
'Mech	'Mech Bay
ProtoMech	ProtoMech Bay or Vehicle Bay
Vehicle	Light, Heavy, or Super-Heavy Vehicle Bay
Infantry	NA
Fighters and Small Craft	Fighter or Small Craft Bay

Mounting

To mount a carrying unit during a turn, the carrying Small Craft or DropShip must have grounded (either crashed or landed) in a previous turn and must still be operational; i.e. it is not destroyed.

A carrying Small Craft or DropShip can mount a number of units each turn equal to its operational door capacity (i.e. if a door is damaged either through critical damage or through

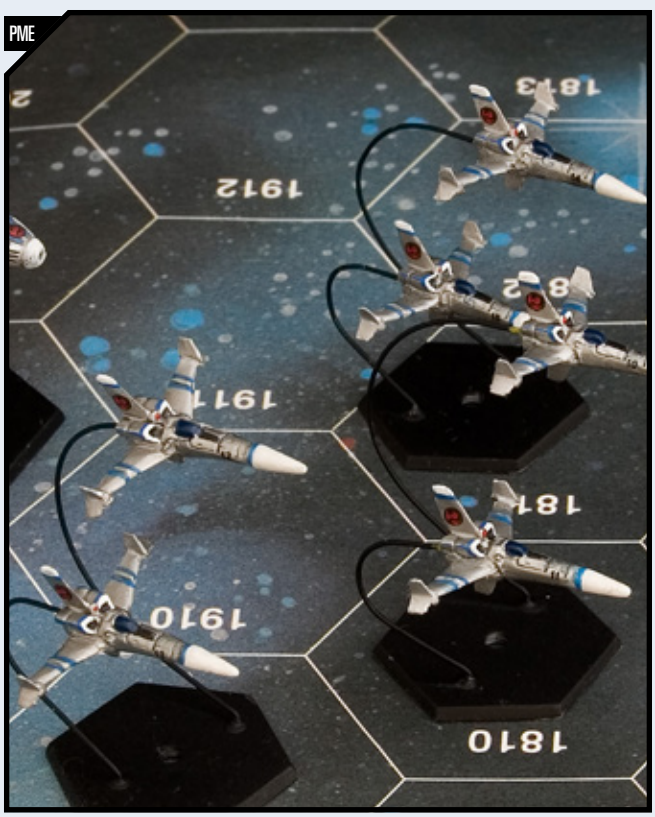
Victor Steiner-Davion and his Tenth Lyran Guards disembark from a grounded Leopard*-class DropShip.*

mounting and dismounting a unit that results in critical damage, no units can use that door for the remainder of the scenario). Doors noted as pure cargo bay doors, or fighter/small craft bay doors, cannot be used; the number of 'Mech/ProtoMech/vehicle bay doors a Small Craft or DropShips has will be noted in either the unit's technical readout or record sheet game stats.

Additionally, the carrying Small Craft or DropShip must contain an appropriate bay for the type of unit mounting, as shown on the Small Craft/DropShip Bay Table (see p. 89). If a Small Craft or DropShip does not contain an appropriate bay that a unit can use, that unit cannot mount the Small Craft or DropShip; as with the bay doors, the type of bays each Small Craft or DropShip mounts will be noted in either the unit's technical readout or record sheet game stats.

The mounting unit must be in an adjacent hex to the Small Craft or DropShip (any adjacent hex, though the hex must be within two levels of the level of the underlying hex(s) of the aerospace unit), and then expend half its standard Walking/Cruising MP to enter the carrying Small Craft or DropShip. Units cannot have declared Running/Flank in a turn they will mount a Small Craft or DropShip. If a unit enters an adjacent hex using Walking/Cruising MP and then does not have sufficient Walking/Cruising MPs to enter the Small Craft or DropShip hex, it must wait until the following turn's Movement Phase (Ground) to enter the Small Craft or DropShip. If a unit starts its Movement Phase in an adjacent hex and still does not have sufficient Walking/Cruising MP (i.e. for any reason, such as damage, heat and so on), the unit may use the *Minimum Movement* rule (see p. 49) to enter the Small Craft or DropShip hex.

Every time a unit mounts a Small Craft or DropShip, the controlling player rolls 2D6. On a result of 2, while the unit successfully mounts the Small Craft or DropShip, the door is damaged and cannot be used for the rest of the scenario (it is considered to have been critically hit; see *Critical Hit Effects*, p. 239, in the *Aerospace Units* section).



A squadron of Corsairs *from House Kurita's Galedon Regulars.*

VTOLs, Small Craft and Fighters: These units cannot expend MP to mount an aerospace unit; i.e. they cannot mount a Small Craft or DropShip under their own power. Instead, they must be in an adjacent hex (within two levels of the level of the underlying hex of the carrying Small Craft or DropShip) during the End Phase of a turn. It then takes four subsequent turns for the DropShip to use cranes to load the units into the carrying aerospace unit; during the End Phase of the fourth turn after the turn in which the units were in an adjacent hex, they are loaded and strapped down. Doors are not occupied when loading units in this fashion..

Carrying Aerospace Unit Attacks: Fighters and Small Craft can only make weapon attacks with weapons mounted in the nose or aft arcs when mounting non-aerospace units; DropShips can make any kind of weapon attack.

Critical Damage: Critical damage that occurs to a carrying aerospace unit affects its cargo in different ways (see *Critical Hit Effects*, p. 239, in the *Aerospace Units* section).

Destruction: If an aerospace unit is destroyed in the air or in a crash, all units mounted in it are also destroyed. If an aerospace unit survives a crash, roll 1D6 for each mounted unit. On a result of 1-2, the unit survives and may move and fire normally in the turn after the crash; on a result of 3-6, the unit is destroyed.

If at the end of the phase in which the carrying aerospace unit was destroyed, any surviving units violate stacking rules, the controlling player must move those non-aerospace units into an adjacent hex using the following rules:

- Only the minimum number of units are moved to ensure that the stacking rules are not violated in the hexes where the carrying aerospace unit was destroyed.
- The adjacent hex that requires the least expenditure of MP to enter is used first, with the next lowest MP expenditure second, and so on.
- If a unit cannot be moved into an adjacent hex because of prohibited movement, lack of available MP, or because it would violate the stacking rules, the unit is destroyed (though such a unit may use the *minimum movement* rule to enter a hex; see p. 49).

Non-aerospace units in this situation may move and fire normally in the turn after the aerospace unit is destroyed.

Lift-off: A carrying aerospace unit can lift off at any time during the Movement Phase (Ground), even if units are still attempting to mount the carrying unit (see *Lift-off*, p. 88). However, the exhaust of an aerospace unit taking off can cause tremendous damage to any units (friendly or enemy) caught in the blast (see *Proximity Damage*, p. 88).

Additionally, a Small Craft or DropShip must wait for the mounting units to be secured, or they will cause damage. A Small Craft or DropShip must wait until the Movement Phase (Ground) of the turn immediately following the turn when the last unit mounted.

If the Small Craft or DropShip lifts-off in the same turn as it mounted a non-infantry unit, the controlling player must automatically roll once on the Above/Below column of the Aerospace Units Hit Location Table and apply the critical hit. Any

non-infantry units that mounted the carrying Small Craft or DropShip in the same turn in which it takes off must apply 25 points of damage in 5-point Damage Value groupings to the front column of the appropriate Hit Location Table.

Dismounting

To dismount a carrying Small Craft or DropShip during a turn, the carrying aerospace unit must have grounded (either crashed or landed) in a previous turn.

A carrying Small Craft or DropShip can dismount a number of units each turn equal to its operational door capacity (i.e. if a door is damaged either through critical damage or through mounting and dismounting a unit, no units can use that door for the remainder of the scenario). Doors noted as pure cargo bay doors, or fighter/small craft bay doors cannot be used; the number of 'Mech/ProtoMech/vehicle bay doors a Small Craft or DropShips has will be noted in either the unit's technical readout or record sheet game stats.

To dismount, a unit must spend half its standard Walking/Cruising MP (round cost up); units cannot declare Running/Flank in a turn they will dismount a Small Craft or DropShip. Units carried by Small Craft and DropShips dismount into adjacent hexes (any adjacent hex, though the hex must be within two levels of the level of the underlying hex(s) of the aerospace unit), with a facing of their choice, and the dismounting unit must be able to enter the terrain (though a unit may use the *Minimum Movement* rule, p. 49, to enter a hex, but it still cannot be prohibited from entering that hex). The dismounting unit may not violate the stacking limits.

Units can, once they have successfully entered an adjacent hex, continue their movement provided they have sufficient MP remaining to continue movement (this may require players to revisit the order of movement determined by Initiative and *Unequal Number of Units* (see p. 39). The move of the dismounting unit from the carrying Small Craft or DropShip to an adjacent hex is considered a single hex of movement for purposes of target movement modifier.

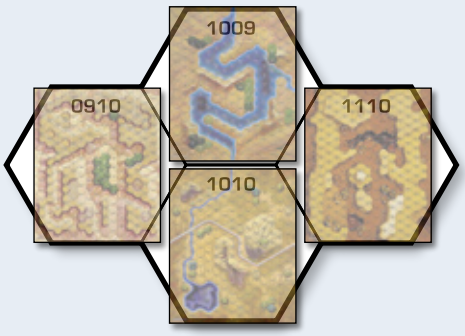
Every time a unit dismounts a Small Craft or DropShip, the controlling player rolls 2D6. On a result of 2, while the unit successfully dismounts the Small Craft or DropShip, the door is damaged and cannot be used for the rest of the scenario (it is considered to have been critically hit; see *Critical Hit Effects*, p. 239, in the *Aerospace Units* section).

VTOLs, Small Craft and Fighters: These units cannot expend MP to dismount a grounded aerospace unit; i.e. they cannot dismount an aerospace unit under their own power. Instead, it takes three turns for cranes to unload the units from the carrying aerospace unit; during the End Phase of the third turn after the turn in which the units began to dismount, they are dismounted into an adjacent hex (the hex must be within two levels of the underlying level of the hex occupied by the aerospace unit), with a facing of their choosing. In the turn following, such units may move and fire normally.

Carrying Aerospace Unit Attacks: Fighters and Small Craft can only make weapon attacks with weapons mounted in the nose or aft arcs when dismounting non-aerospace units; DropShips can make any kind of weapon attack.

MATCHING MAPSHEETS TO LOW-ALTITUDE HEXES

Though each ground mapsheet roughly corresponds to one hex on a low-altitude map, the rectangular mapsheets and the hexagons do not precisely match. Players can approximate the relationship between *BattleTech* mapsheets and low-altitude map hexes by arranging the ground mapsheets as shown in the diagram below.



• MATCHING GROUND MAPSHEETS TO LOW-ALTITUDE HEXES •

AEROSPACE UNITS ON GROUND MAPSHEETS

The most exciting way to use aerospace units in the game is to fly them directly onto the ground maps playing area, moving them and engaging the enemy in the same way as other battlefield units.

It is important to note, however, that aerospace units still operate (with the few exceptions noted below) as though they were moving on the low-altitude map. This means that they operate using altitudes (as defined in *Game Terms*, see page 43; aerospace units, even if operating directly on ground maps, never use elevations). More importantly, the speed of aerospace units when translated from a low-altitude map to moving directly on ground mapsheets—a ground map hex equals 30 meters, while a low-altitude hex equals 500 meters (roughly the size of an entire ground map)—means that aerospace units move substantial distances (see *Movement*, on p. 92). With that in mind, to use aerospace units directly on ground maps requires a very large playing area; ideally an arrangement of nine, twelve, sixteen or more mapsheets. These should be laid out 3 x 3, 3 x 4 and so on to provide enough room for the aerospace units to maneuver.

At anytime during their movement on a low-altitude map, a player can choose to have their aerospace unit exit a low-altitude map and enter the corresponding ground mapsheet. Before moving to the ground mapsheet, the orientation of the ground mapsheet to the low-altitude map must be determined (if it hasn't already; see the diagram above). Next, the player must nominate a hex the fighter will first enter along the ground mapsheet edge; the edge of the mapsheet must be parallel to the final facing of the aerospace fighter on the low-altitude map (if there are two edges that are equally appropriate, the player can choose either edge). As soon as the aerospace fighter appears on the ground mapsheet it moves according to the rules governing such movement.

Movement

Aerospace units operating on ground maps ignore all terrain features for movement (and combat, see *Air-to-Ground Attacks*, p. 242) and are not counted for ground units' stacking purposes in any way.

At anytime during their movement, a player can choose to have their aerospace unit exit a ground map edge (even if the ground map edge leads to another ground map), and appear on the corresponding low-altitude map hex and move according to the appropriate rules. Or, if an aerospace unit leaves a ground playing area edge (i.e. there is no new ground map to enter), the unit automatically appears on the corresponding low-altitude map hex and moves according to the appropriate rules.

Aerodyne Units: Aerodyne units use the rules for low-altitude movement (see p. 80) when operating on ground maps, except that an aerodyne unit must move sixteen *BattleTech* hexes for each point of Velocity. Aerodyne units also use the facing changes rules for low-altitude movement, except that the straight movement required before making a facing change has a greater effect at this scale. See the column appropriate for the unit's class on the Straight Movement on Ground Maps Table, below, for the minimum number of ground map hexes a unit must move in a straight line between one-hexside facing changes. This movement may be split across two turns. For example, a fighter with a Velocity of 1 finished its movement in Turn 6 by moving straight ahead five hexes. If it does not change its velocity in Turn 7, it can make a facing change after moving straight for three hexes.

Spheroid Units: Spheroid units may move into any ground hex within eight hexes of their current position at a cost of 1 MP.

Large Support Vehicles: Airborne Large Support Vehicles use the Small Craft column on the Straight Movement on Ground Maps Table.

STRAIGHT MOVEMENT ON GROUND MAPS TABLE (AERODYNE CRAFT ONLY)

	Minimum Straight Movement (in hexes)		
Velocity	Fighter	Small Craft	DropShip
1	8	8	8
2	12	14	16
3	16	20	24
4	20	26	32
5	24	32	40
6	28	38	48
7	32	44	56
8	36	50	64
9	40	56	72
10	44	62	80
11	48	68	88
12	52	74	96

Units on ground maps cannot reach a velocity above 12. If required to gain a velocity above 12 (through special maneuvers, for example) the unit remains at Velocity 12 and must make a Control Roll.

CONTROL ROLLS

Some situations or types of damage can cause an aerospace unit to crash or make it difficult for the pilot to control the unit. Aerospace units use Control Rolls (similar to Piloting Skill rolls for ground units) to represent a pilot's attempts to handle a unit's movement in difficult situations.

To make a Control Roll, a player rolls 2D6 against a target number based on Piloting Skill, damage and environmental factors, per the Control Roll Table. If the result is equal to or greater than the target number, the unit remains in control. Otherwise, the unit is considered out of control. Control Rolls are made in the End Phase of the turn in which the conditions creating the potential loss of control occurred, unless the specific rule in question requires the Control Roll to be made immediately.

Some game mechanics use Control Rolls to determine success or failure of an action, rather than determining whether or not a unit is out of control. The Control Roll actions that may result in the unit going "out of control" are shown in the Situation column of the Control Roll Table.

You can never choose to automatically fail a Control Roll.

Shutdown Units: Shutdown units are automatically out of control.

OUT-OF-CONTROL EFFECTS

An out-of-control unit cannot spend Thrust Points. It cannot change velocity or facing and must continue on its present heading, moving the appropriate number of hexes in a straight line for its velocity.

Out-of-control units also risk colliding with other units. If an out-of control unit enters the same hex as another unit, friendly or enemy, roll 2D6; only a single roll is made, regardless of how many units are in the hex. On a result of 11 or higher—10 or higher if either or both units are Large Craft—the out-of-control unit may collide with that unit. If multiple units are in the hex, use the Movement Subphases (see p. 76) to determine which unit gets hit first; i.e. a DropShip will always be struck before a small craft, which will always be struck before a fighter. If the units in the hex are all the same type (or there are two or more of the same type), randomly determine which one gets hit. After determining the target, if that unit has not yet moved in a turn and has at least 1 Thrust Point, the controlling player may attempt to avoid the collision. To do so, the controlling player makes a standard Control Roll. If successful, the unit avoids the collision, but expends all its available Thrust Points in getting out of the way.

House Kurita Slayer *aerospace fighters pass overhead.*

CONTROL ROLL TABLE

Base Target Number: Piloting Skill	
Situation*	
Movement	
Exceed normal operational ceiling (conventional fighters, Airships and Fixed Wing Support Vehicles)	
Rolling more than once in a turn	
Using thrust in excess of current SI rating	
Unit with velocity over 2x Safe Thrust in a atmosphere hex	
Stalling	
Descending 3+ altitudes in a single turn	
Damage	
Avionics critical	
Control critical	
Sustaining damage while in atmosphere	
Modifiers	
Pilot/crew damage	+1 per crossed box
Avionics damage	+1 per crossed box
Life support damage	+1 per crossed box
Atmospheric operations	+2
Above safe thrust	+1
Above 2x Safe Thrust	+1 per velocity point above 2x Safe Thrust

*Requires a Control Roll; apply all appropriate modifiers

This expenditure does not effect a unit's velocity or heading. The out-of-control unit continues moving. If the Control Roll fails, a collision occurs as normal, ending the out-of-control unit's movement. See *Collisions and Ramming*, page 241, for details of the damage suffered by both units.

In addition, out-of-control units suffer a +2 modifier on to-hit numbers and cannot attempt to land, launch or recover fighters, or dock with other units. If an out-of-control unit attempts to re-enter the atmosphere, it takes damage (see *Space/Atmosphere Interface,* p. 78).

Airships: In addition to the normal effects, out-of-control Airships roll once on the Airship Random Altitude Change Table each turn that they are out-of-control (see p. 205).

Recovering Out-Of-Control Units: During the End Phase of each turn after the turn in which the unit went out-of-control, the controlling player rolls 2D6. If the result is equal to or greater than a standard Control Roll with all applicable modifiers from the Control Roll Table, the unit regains control and can move normally at the start of the following turn.

Random Movement

When a Control Roll fails by a margin of 5 or more points, or when indicated by critical hits or heat effects, a unit might suffer random movement in its next Movement Phase. For each point of velocity, roll 1D6 instead of moving the unit forward and compare the result to the Random Movement Table, carrying out the indicated movement. This movement occurs regardless of what type of unit is out of control, or whether the unit is operating on the space map, high-altitude map or low-altitude map. The starting hex for a unit's random movement is either the hex closest to the unit that shot at it (essentially, the hex it was in when it was struck), or the hex it performed an air-to-ground attack in, whichever is further along its flight path. If multiple hexes apply (such as if the unit attacked multiple hexes or was attacked by multiple ground units), use the hex furthest along the flight path. If the aerospace unit in question did not interact with ground units in any way (such as one struck solely by air-to-air fire), use the hex closest to the flight path's midpoint. Out of Control aerospace units using the *Aerospace Units on Ground Mapsheets* rules, see p. 91, multiply the distances moved by 8 hexes and roll twice per velocity point. Repeat this process until all points of velocity have been used.

RANDOM MOVEMENT TABLE

1D6 Result	Effect
1	Forward 1 hex, turn left 2 hexsides
2	Forward 1 hex, turn left 1 hexside
3–4	Forward 1 hex
5	Forward 1 hex, turn right 1 hexside
6	Forward 1 hex, turn right 2 hexsides

The controlling player should note the number of Thrust Points he would normally spend to carry out each maneuver at the unit's current velocity (effective Thrust Points) and apply the appropriate effects for high-G maneuvers (see *High-G Maneuvers*, p. 78). Random movement allows units to execute maneuvers normally considered impossible for their class or velocity (i.e. a unit with Velocity 10 and only 5 thrust points making a two-hexside turn). In such cases, double the effective Thrust Point cost when calculating the effects for high-G maneuvers. For example, a unit undertaking an "impossible" manuever that exceeds its SI by 3 would apply a +6 modifier to the Control Roll rather than the usual +3, making it unlikely that the unit or crew will avoid further damage. A unit experiencing random movement may exceed its maximum thrust for purposes of calculating these effects.

Simon makes a Control Roll for his Shilone fighter and fails by a margin of 6, meaning the unit undergoes random movement. The fighter has a Velocity of 4 and so Simon must make four rolls on the Random Movement Table. The first result is a 3; the fighter moves forward one hex. The second result is a 4, and the unit moves forward another hex. The third result is a 6, which means the fighter moves forward one hex, then turns right two hexsides—a maneuver that normally costs 4 Thrust Points. The final result is a 5; the unit moves forward one hex and turns another hexside right, which would normally cost 2 Thrust Points. The Shilone has an SI of 6, and so neither of the maneuvers exceeds the restrictions on high-G maneuvers.

FIGHTING WITHDRAWAL

Steven Mohan, Jr.

LAKE CARANTHA, ALRAKIS
DIERON MILITARY DISTRICT
DRACONIS COMBINE
24 APRIL 3039

The powerful *crump* of *Tai-sa* Esau Olivares' heavy artillery rolled over the sparkling blue water of Lake Carantha like a peal of thunder heralding the coming of a great storm. It was a unique sound, deeper and more substantial than the *crack* of a tank's gun, more sonorous and stately than the deadly rattle of a 'Mech's autocannon.

To Olivares it was the sound of salvation.

The rain of carefully placed shells ripped into the Lyran striker company, forcing back the light, fast 'Mechs. Buying his support troops precious time to evac.

Time.

From this point on, everything would be measured in time.

Olivares stalked his *Dragon* forward, *toward* the whistle of falling shells. It was a dangerous, desperate maneuver, but now was the time for dangerous, desperate maneuvers. He came upon a flat white *Locust*, the light 'Mech painted in the colors of the Twenty-third Arcturans—the Frost Giants. The battered *Locust* was moving back, pushing its way through spruce and beech, and some trees that looked like giant orange willows.

Trying to get clear.

Olivares pulled his reticle over the light 'Mech's back. The symbol flashed gold and his finger curled around his secondary trigger. His autocannon/5 tore into the *Locust's* rear armor, followed by twin beams of emerald fire. Heat spiked in his cockpit, but he held the shot despite the sweat that stung his eyes and made his hand slippery on the trigger. Despite the shrill cry of the heat alarm.

The *Locust* shuddered and went down, with a crash that shook the trees and drowned out the roar of artillery.

Olivares studied the fallen machine for an instant. The pilot would be rattled, dazed.

Ignoring the shells falling all around him, Olivares strode forward, crouched down and pointed his left arm at the *Locust's* canopy. He never decided to fire, but suddenly emerald light was melting through the ferroglass and blasting the cockpit into smoldering wreckage.

Olivares spared no thought for the pilot whose life he'd just brutally ended. He planned to give the Twenty-third Arcturan a bloody nose. Faced with such savagery, the Steiner commander might hesitate: a minute, five, maybe even ten.

And everything was measured in time.

He glanced down at his tactical schematic. Blue triangles were falling back through the forest. The plan was working. But it could only work for so long.

Olivares stepped back out of his own artillery's fire zone, pulling out of the woods and taking station with his regiment north of the woodland. What was left of his regiment.

Olivares was a big man, two meters of lean muscle crammed into his *Dragon*'s tight cockpit. He rubbed his chin, feeling the stubble against his palm. During his long journey to respectability he'd given up the nose stud and the blood-red scharacki feather. But shave? That was asking too damn much.

He glanced out his canopy. Fate had sent them a gorgeous summer day. Sunlight glistened on the surface of the blue lake like spun gold. Sigmundrac's white skyline was visible on the far side. Olivares knew if he cracked his hatch he'd catch the perfume of blooming wildflowers carried on a cool breeze.

Only the desperate roar of combat marred the illusion.

Eight days before, a surprise attack by the Elsies had pushed his troops out of Sigmundrac. Olivares had lost a company of 'Mechs and a battalion of infantry. And now the Lyrans were driving him toward the Caradhradene Mountains, where they'd

crush his force like a piece of iron worked between a hammer and an anvil.

The battle was over. But with the planetary HPG in enemy-held territory, Olivares could not request permission to retreat off-world. He pushed the thought away. Allowing his troops to be slaughtered was no way to serve the Dragon. So he'd ordered a fighting withdrawal. That order had been the beginning of his troubles rather than the end. Somehow he had to hold his line while the bulk of his troops embarked their DropShips, leaving a rapidly shrinking force to fight a horribly dangerous delaying action.

Olivares saw movement and looked down. A pair of troopers was moving left. His artillery spotters, brave souls who had crept up on the Steiner line to call in the deadly rain of shells.

A Steiner *Phoenix Hawk* pushed through the trees. The 'Mech was slim and humanoid. Except for its immense size, it might've been a soldier in heavy armor.

Olivares scarred the flat white paint on the *Hawk's* chest with his lasers, melting the armor below. Two other gray and red Combine 'Mechs stepped forward to help, but the enemy 'Mech ignored them. It raised the laser clutched in its right hand and the spotters disappeared in a flash of ruby light. Then the *Phoenix Hawk* rose on its jump jets, fleeing its enemies.

Olivares stepped his *Dragon* forward and released a flight of LRMs. The missiles caught the *Hawk* in the back. A plume of plasma stuttered out and the *Phoenix Hawk* tumbled out of the sky.

Which didn't solve Olivares' main problem. Suddenly, his artillery had lost its eyes.

For a moment he considered calling a light 'Mech forward to spot, and then thought better of it. At some point his artillery would have to withdraw anyway. "Artillery Actual, this is Legion Actual. Tiger Six Orange."

"Tiger Six Orange," answered the artillery commander. "*Hai*, Olivares-sama."

And just like that, the heavy *crump* of the big guns fell silent.

Olivares keyed the loadmaster's frequency. "*Sho-sa*, report status."

Static flared briefly before Olivares heard *Sho-sa* Leonardo Nicosia's deep voice. "At least an hour, *Tai-sa*."

Olivares' heart sank. "Come again, *Sho-sa*."

"We require six zero minutes for evac."

Olivares closed his eyes. His forces couldn't hold out that long. "Dammit, Nicosia, that ain't gonna cut it."

"It requires time to load and secure equipment," Nicosia said stiffly. Then, perhaps remembering who he was talking to: "The *Snow Crane* is fully loaded. I could order her to boost."

"Hell, no," Olivares snapped. "I mean, *iie*." He'd need the *Leopard's* guns later. "Just hurry it up. Load the people first. If necessary we'll spike the guns and leave them."

"*Hai*, *Tai-sa*."

He glanced toward the city and saw one of his *Lightning*s dropping like a stone. Suddenly the sleek fighter pulled out of its power dive and shot away fifty meters off the deck. Incandescent white fire rippled along the ground in the *Lightning's* wake.

The Elsie commander was trying to bring up his armor and artillery. Olivares' aerospace forces were fighting a desperate holding action to keep them out of the fight, buying precious minutes with their daring attacks. But their efforts wouldn't turn the battle. Olivares didn't have many support forces either—his were boarding DropShips.

Damn it, he needed those minutes.

As he watched, one of the *Lightning*s dove for the ground, pursued by an Elsie *Stuka*. Coherent light sparked between them. The *Lightning* never pulled up. An immense orange fireball rose on the horizon.

"*Iie*," Olivares whispered fiercely. "*I will not break*."

The Lyrans were advancing through the evergreen forest that shadowed the lake's shore line. Smart move. It prevented Olivares from deploying his armor. He considered detaching his lance of Manticores, then thought better of it. The tanks would only end up waiting to embark. He'd leave them at the border between the woods and the grassy plain that separated him from his DropShips to the north, waiting to pound the first Lyran 'Mech to poke its head out of the trees. But he still had to slow the Lyrans down.

Olivares keyed his tactical channel. "Armor, wheel about and stand by to engage at Grid Six Four One. All 'Mechs, press into the forest."

A chorus of *hai*s sounded over the tactical channel as his warriors threw themselves into the teeth of the Lyran advance.

Olivares stalked his *Dragon* forward. A quick glance at his schematic told him his artillery had cut the Lyran striker company down to size. A limited victory. His warbook identified a *Victor*, a *Zeus*, two *Crusaders* and a *Grasshopper*. The Elsie commander had brought up his assault battalion.

He saw a flash of white against dark green and charged forward. The *Quickdraw* pilot didn't see him until the last minute. By then it was too late.

Olivares rushed forward at full speed, pulling up at the last minute and clipping the *Quickdraw* in the leg. The limb wasn't designed to take a 60-ton 'Mech smashing into it at eighty kph. It snapped like a dry twig. The *Quickdraw* tumbled to the ground. Olivares knelt and gutted the cockpit with laser fire. Then he turned and ran in the direction the *Quickdraw* had been heading.

He found *Gunsho* Lukin's gray and red *Trebuchet* shuddering under the attack of an Elsie *Marauder*. For a second the *Marauder* pilot must have thought the 'Mech moving in on his back was the friendly *Quickdraw*.

That second was all Olivares needed. He let loose with lasers and autocannon. The *Marauder* staggered under the brutal assault. Lukin darted toward the bigger machine and took a point-blank shot at its knee.

The Lyran pilot ejected before his *Marauder* went down. Olivares clubbed him out of the air with his 'Mech's left arm. A glance at his tactical schematic told him they'd stopped the Lyran advance cold, but the victory had come at a fearsome price. A third of the Combine 'Mechs were down. And it was only going to get worse.

A flicker of orange light at Olivares' feet caught his attention. A stray laser beam had ignited the underbrush.

Suddenly he had an idea.

He sprayed laser fire into a pine tree. For a heartbeat the tree withstood the assault, and then it exploded in a shower of burning embers. It had been a beautiful summer, and the branches and needles that littered the forest floor were dry and brittle.

Ready to burn.

The flames caught. Suddenly, a thousand fires bloomed where there had only been one.

"All 'Mechs, this is Olivares. Withdraw west toward the lake. Fire the forest as you go. Keep your backs to the water. No Elsies get past you." He listened to his commanders acknowledge the order. Then he switched frequencies. "Armor Actual, this is Legion Actual. We're sending them to you one at a time. *Hurt them*."

"*Hai*, *Tai-sa*."

Yellow-orange flames danced along the ground, carpeting the forest floor with fire. A light breeze carried burning embers to the branches. The trees were starting to catch. A pine to Olivares' left popped as its needles caught, flashing into orange flame. Soon the forest would blaze with a crown of fire, racing from tree to tree and roaring with the fury of a thousand 'Mechs.

Olivares and Lukin came across Smith's *Warhammer* trying to hold back an *Awesome*. Olivares pounded the assault 'Mech with his autocannon to give the pilot something to think about while the world around him burned.

The *Awesome* broke and ran. Nothing terrified MechWarriors more than fire.

Olivares tied into his armor's tactical channel just to hear the whine of the tanks' PPCs. His Manticores were picking off the panicked Lyran 'Mechs one at a time. A glance at his rear monitor showed patches of blue through the burning branches. He turned, stepped out of the forest and crossed a short beach, the mud giving under his *Dragon's* 60-ton weight. Then he was in the water, where seventeen of his 'Mechs waited for him.

His cockpit temperature dropped five degrees in thirty seconds. The heat alarm fell silent.

An Elsie *Stinger* came stumbling out of the forest and pulled back as every Combine 'Mech targeted it at the same time. Jeweled lines marked the air: ruby, emerald and sapphire energies slicing into the little 'Mech. It fell forward into the lake.

"Legion Actual, this is Armor Actual, we are engaging a large enemy force."

"On our way," Olivares shouted. "'Mechs, one hundred meters north and cut right. *Now*."

His pilots slogged through the lake, then cut across the plain to the north of the woodland. Olivares turned a corner and saw his two remaining Manticores pulling back, firing all the way. Two more of his tanks were gutted hulks, but the Lyrans had paid a heavy price for those tank kills. Five Elsie 'Mechs lay crumpled on the grass. And now a force of Combine 'Mechs lurked at their rear.

Olivares keyed his transmitter. "All units, *fire*."

Autocannons, lasers and missiles rippled out from the Combine line. The Lyrans buckled under the sudden volley of fire from behind. One 'Mech fell. Then a second. Some of the Lyrans turned to face the new threat, while others continued to work the tanks. Now they were the ones caught between hammer and anvil.

They started to fall back, to regroup.

Olivares had won a temporary advantage. He was still outgunned and outmanned, and once the Lyrans formed up, they'd slaughter his troops, but he had the opening he'd been looking for.

"Eleventh Legion of Vega, all forces, this is Legion Actual. *Fall back to the DropShips. I say again, FALL BACK TO THE DROPSHIPS*."

It was a race. A running firefight all the way back to the LZ, until Olivares lumbered up over a shallow ridge and saw his waiting DropShips below: a *Leopard*, two *Union*s, his *Fortress*-class flagship and more descending to provide fire support.

A Lyran *Stalker* followed him up over the ridge. The big guns on all four DropShips opened up. The Elsie 'Mech *dissolved*.

At that moment, Olivares knew the Eleventh Legion of Vega would survive the battle of Alrakis.

FORTRESS-*CLASS DROPSHIP* ASTRINGENT BEAUTY
EN ROUTE TO NADIR JUMP POINT, ALRAKIS
DIERON MILITARY DISTRICT
DRACONIS COMBINE
24 APRIL 3039

Tai-sa Esau Olivares centered the elegant rice paper on the desk and taped it down so it would not flit away during the many odd accelerations that came to a DropShip. The same message was recorded in his command log, but it might matter that he had composed the note in his own hand.

It might matter a great deal.

He lighted a candle, trusting the ship's ventilation system to filter out the trace of smoke. His white silk kimono shifted against his skin as he carefully arranged the ceremonial items: the large white cushion on a *tatami* mat, a second piece of rice paper resting on a black tray along with a brush and ink block, a lacquered cup, a flask of sake.

His *wakizashi*. The sword's blade was carefully wrapped in rice paper and bound with a red cord.

He knelt on the white cushion and drew a deep breath, composing himself for what must come next.

This was not how *seppuku* was supposed to be. He should have been attended by his officers and family. But he took on the added burden of performing the ritual alone as a message to the Coordinator, the same message written in delicate *kanji* calligraphy on the rice paper taped to the desk.

I alone am responsible for the debacle on Alrakis.

For centuries, no Combine commander could retreat offworld without the Coordinator's explicit permission. The penalties were harsh: death for the commander, his staff and a third of the unit's soldiers.

And so Olivares had compounded his shame with a lie. In his note he had said he'd quieted his officers' objections by telling them he had permission to withdraw. In truth, the subject had never come up.

But perhaps the lie would be enough to save his people.

A small *ding* told him there was someone at his stateroom hatch.

"Go," Olivares snapped.

The hatch swung open. *Sho-sa* Leonardo Nicosia entered. "*Gomen nasai*, *Tai-sa*, but I—" The man's eyes widened as he took in the scene. Shock warred with despair on his face, but then he got control of himself. "*Tai-sa*, perhaps if you petition the Coordinator—"

"*Silence*," Olivares roared. "I left orders not to be disturbed."

Nicosia bowed his head. "*Hai*, *Tai-sa*. But we just received this." He handed Olivares a message.

The *Tai-sa* took the paper without looking at it. "Get out."

"Sir, it's a transmission from an ISF operative who managed to get to the Sigmundrac HPG—"

"*Get out*."

Nicosia blanched. "*Hai*, *Tai-sa*." He bowed from the waist and quickly departed, shutting the hatch softly behind him.

Olivares fingered the printout. Perhaps Nicosia was right. The Coordinator might not forgive an unauthorized retreat, but his son? Theodore Kurita was more pragmatic. Less bound by tradition. And as *Gunji-no-Kanrei*, Deputy for Military Affairs, his influence within the Draconis Combine Mustered Soldiery was considerable. Maybe...

Iie.

Olivares had served with Theodore, owed his command to Theodore. It was the Kanrei's example that had caused him to fight so long and hard to regain his honor. He would not abandon it now.

He drew a deep breath. His gaze fell across the message.

A chill took him.

The message was brief, a list of worlds: Alnasi, Kessel, Vega. Athenry, New Mendham, An Ting. It went on from there. Alrakis was not alone. The Federated Commonwealth had launched a massive assault along four separate axes, striking at the heart of the Draconis Combine.

Ten years before, during the Fourth Succession War, Hanse Davion had digested large chunks of the Capellan Confederation. Now it was the Combine's turn.

The message revealed the work of the yellow bird, the mythical creature capable of killing the Dragon.

He let the paper fall from his hand. If the yellow bird truly threatened the Combine, then she would need all her warriors to survive. Perhaps a small role remained for him to play.

Olivares rose to his feet, crossed the room and detached the piece of rice paper he'd taped to his desk. He touched it to the candle flame, allowing the yellow fire to consume his final words.

Perhaps he was wrong. Perhaps the Coordinator would still order him to commit *seppuku*. If that day came, he would face it like the samurai he was. But until it did, he would fight the yellow bird with all his strength, all his will.

And if he *were* wrong, the sword would still be there.

Hai.

The sword would always be there.

A lance of Otomo, led by Chu-sa *Lainie Shimazu in her NG-C3A* Naginata*, confront rebels from the Second Sword of Light outside of Imperial City.*

After all players complete Movement Phase (Ground) and Movement Phase (Aerospace) of a turn, units engage in combat. *BattleTech* units use two forms of combat: weapon attacks and physical attacks. Units make weapon attacks using armaments such as missiles, lasers and autocannons. For physical attacks, each unit has a variety of options. Most physical attacks rely on the weight of the attacking unit to inflict damage.

In *BattleTech*, weapon and physical attacks (as well as any other type of damage, such as falling) first inflict damage on the outer armor that protects every unit (except conventional infantry). When an attack or series of attacks destroys all of a location's Armor Points, any remaining damage affects the unit's internal structure in that location (or eliminates the trooper, in the case of battle armor). Anytime a unit's internal structure takes damage, a critical hit may result that can knock out a weapon or movement system or even destroy the unit.

Infantry: Infantry units absorb damage differently than other units (see *Infantry*, p. 212).

Non-'Mech Special Combat Rules: As discussed in *Individual Unit Rules* (see p. 36), the primary focus of *BattleTech* is 'Mechs. The *Combat* section fully covers 'Mech combat, but also includes rules that can apply to multiple unit types. Specific combat rules unique to ProtoMechs, Combat Vehicles, Support Vehicles, infantry and aerospace units appear on pages 184, 192, 204, 212 and 234, respectively. Unless specifically stated otherwise in those specific rules, the following rules apply equally to all units.

Aerospace Units: This section only touches on aerospace combat as it applies to ground units, and assumes the aerospace unit is in flight. For rules governing aerospace units vs. aerospace units in atmosphere or space (and for landed or crashed aerospace units), see *Aerospace Movement* and *Aerospace Units*, pp. 74 and 234, respectively.

GAME TERMS

Before reading this section, players should revisit the definitions of the most important game terms in *BattleTech*, which will provide a solid framework from which the rules in this section can build (see *Game Terms*, p. 42). Players should also familiarize themselves with the record sheets of the various units (especially 'Mechs), paying particular attention to the definitions of location, internal structure, slot and so on (see *Record Sheets*, p. 11).

ATTACK DECLARATION

As described in *Playing the Game* (see p. 36), all attacks are declared before any are resolved. Only weapon attacks declared during weapon attack declaration are resolved in the Weapon Attack Phase. Likewise, only physical attacks declared during physical attack declaration are resolved in the Physical Attack Phase (except Charging and Death From Above, which are declared during the Movement Phase).

All declared attacks must be resolved, even if the intended target is destroyed before all attacks against it have been made (though an attack may be aborted if the Modified To-Hit Number is greater than 12; see *Modified To-Hit Number*, p. 42). Likewise, attacks not declared cannot be made, even if the opportunity presents itself during play.

TORSO TWIST/TURRET ROTATION

As part of each unit's weapon attack declaration, players can twist the torsos of their 'Mechs (except for four-legged 'Mechs, which cannot torso twist) or rotate the turrets of any turreted vehicles. This twist or rotation lasts for the remainder of the turn,

affecting firing arcs for the Weapon Attack and Physical Attack phases. The torso or turret returns to its forward position in the End Phase (unless the turret jams, see Ground Combat Vehicle Hit Location Table, p. 193 of *Combat Vehicles*).

'Mechs: A 'Mech can twist its torso one hexside (60 degrees) to the left or right of the direction in which its feet are pointing. This new alignment modifies a 'Mech's upper body firing arc as described in *Firing Arcs*, p. 104, but for movement and hit location purposes the 'Mech is still considered to be facing in its pre-twist direction.

Vehicles: Vehicles with turrets may align the turrets to any hexside. Rotating its turret modifies a vehicle's firing arc as described in *Firing Arcs*, page 104.

Line of Sight

In order to attack a target, a clear line of sight (LOS) must exist between the target and the attacker. A straight line running from the center of the attacking unit's hex to the center of the target unit's hex defines the LOS between two units (see *Attacks by Grounded Aerospace Units*, p. 249, for the exception). Any hexes through which this line passes lie along the LOS, even if the line barely crosses a given corner of a hex.

If the LOS passes exactly between two hexes, the player controlling the targeted unit decides which of the two hexes lie along the LOS. This choice can also affect the attack direction for incoming attacks (see *Attack Direction*, p. 119). The chosen hexside is used for all attacks between those two units for the remainder of the turn (see Line of Sight Between Two Hexes diagram on p. 101).

The hexes containing the attacking and target units are not considered when determining LOS, and they almost never interfere with LOS (see *Water Hexes*, p. 102, and *Terrain Modifiers*, p. 107, for the sole exceptions to this rule).

Adjacent Ground Units: Units in adjacent hexes always have LOS to each other, unless one unit is completely underwater and a unit in an adjacent hex is not (see *Terrain Modifiers*, p. 108). Likewise, if both units are in adjacent building hexes but at different levels, LOS may not exist (see *Combat Within Buildings*, p. 175).

Airborne Aerospace Units and LOS: Airborne aerospace units always have LOS to one another, unless players are using the printed side of a *BattleTech* map for low-altitude movement, in which case terrain intervenes in the same manner as for non-aerospace units (see *Low-Altitude Movement*, p. 80, and *Air-to-Air Attacks*, p. 241).

Airborne Aerospace Units vs. Non-Aerospace Units: All non-aerospace units (including grounded aerospace units) not submerged in a water hex always have LOS to airborne aerospace units that are operating anywhere from Altitude 1 (NOE) to Altitude 8 on the low-altitude map, provided the aerospace units ended the Movement Phase (Aerospace) in a low-altitude map hex corresponding to the unit's ground mapsheet. Ground units do not have LOS to aerospace units flying at Altitude 9 or 10 (or on any row of the atmosphere on a high-altitude map; see p. 79) and so cannot attack them.

The same LOS rules apply if using the *Aerospace Units on Ground Mapsheets* rules (p. 91), except that LOS always exists regardless of the size of the playing area, or where the aerospace units ended their movement in relation to the non-aerospace units.

Aerospace units can only attack non-airborne units along their nominated attack path (see *Air-to-Ground Attacks*, p. 242)

UNIT HEIGHTS TABLE

Type	Heights*
'Mech	2 levels**
ProtoMechs, vehicles, infantry and fighters	1 level
Submarines	1 depth
Large Support Vehicles and small craft	2 levels
Aerodyne DropShips	5 levels
Spheroid DropShips	10 levels

*A unit's height levels (or elevations, if airborne) must be included in the level of the underlying hex for determining a unit's total height; the height of aerospace units for LOS purposes is irrelevant while airborne.

**Prone 'Mechs rise one level above the level of the underlying hex.

LEVELS AND HEIGHT

Terrain and units apply the following height rules for purposes of LOS (unit heights are also summarized on the *Unit Heights Table*).

Unit Heights

Unit height applies to LOS in the following manner:

'Mechs: Standing 'Mechs rise 2 levels above the level of the underlying hex; prone 'Mechs rise 1 level above the underlying hex.

ProtoMechs, Vehicles and Infantry: ProtoMechs, vehicles and infantry rise 1 level above the level of the underlying hex.

Submarines: While submerged, submarines subtract their depth from the surface of the water hex they occupy (normally Depth 0), but add 1 depth to the depth of the hex they occupy; a submarine at Depth 1 is still considered underwater. A vessel on the surfaces rises 1 level above the level of the hex.

Large Support Vehicles: Large Support Vehicles rise 2 levels above the level of the underlying hex(s).

Airborne Non-Aerospace Units: VTOLs and WiGE vehicles, or other units expending such MP (such as a battle armor unit expending VTOL MP), add their elevation +1 to the level of the underlying hex; airborne Large Support Vehicles add their elevation +2.

Grounded Aerospace Units: For purposes of LOS, treat grounded aerospace units as follows:

- Fighters rise 1 level above the level of the underlying hex they occupy
- Small craft rise 2 levels above the underlying hex
- Aerodyne DropShips rise 5 levels above the levels of the underlying hexes they occupy
- Spheroid DropShips rise 10 levels above the underlying hexes they occupy.

Terrain Height and Depth

A hex's level is marked on the map. Hexes with levels higher than 0 are also referred to as hills. Hexes with levels lower than 0 are also referred to as sinkholes. All affect LOS in the same way.

If targeting a hex, the level of the adjacent hex along the LOS between the attacker and target is considered to be 1 level lower.

Woods: Woods rise 2 levels above the level of the underlying hex they occupy. Units occupying woods hexes are standing on the underlying terrain, not on top of the trees (see *VTOL Movement*, p. 54, for an exception to this rule).

Buildings: Buildings rise above the level of the underlying hex they occupy for a number of levels equal to the level listed for the building. For example, a Level 2 building on a Level 4 hex makes Level 6 the total height of the hex.

Water: Water hexes descend to a specific depth below the surface; the surface of the water is actually at the same level as the surrounding terrain. The depth represents the bottom of the body of water. This means that water intervenes for LOS purposes as if it is at the level of the surrounding terrain, while a 'Mech in the water stands on the bottom, at the depth level of the hex, and rises 2 levels above that depth.

INTERVENING TERRAIN

Terrain along the LOS between the attacker and the target that actually lies within the LOS (not including the hexes occupied by the attacker and target) has the potential to be intervening terrain. The terrain of these hexes may or may not intervene in LOS, depending on the terrain's level relative to the attacker and target. Likewise, features of the terrain in the hexes along the LOS (buildings, water, woods and so on) may or may not intervene in LOS, depending on their level relative to the attacker and target. Only terrain features that have levels, such as trees and buildings, can intervene in LOS. For example, rubble would not intervene, though the hex containing the rubble might (depending on its underlying level).

Terrain along the LOS between two units intervenes if:

- The level of the terrain or feature is equal to or higher than the level of both units; or
- The terrain or feature is adjacent to the attacker and equal to or higher than the attacker's level; or
- The terrain or feature is adjacent to the target and equal to or higher than the target's level.

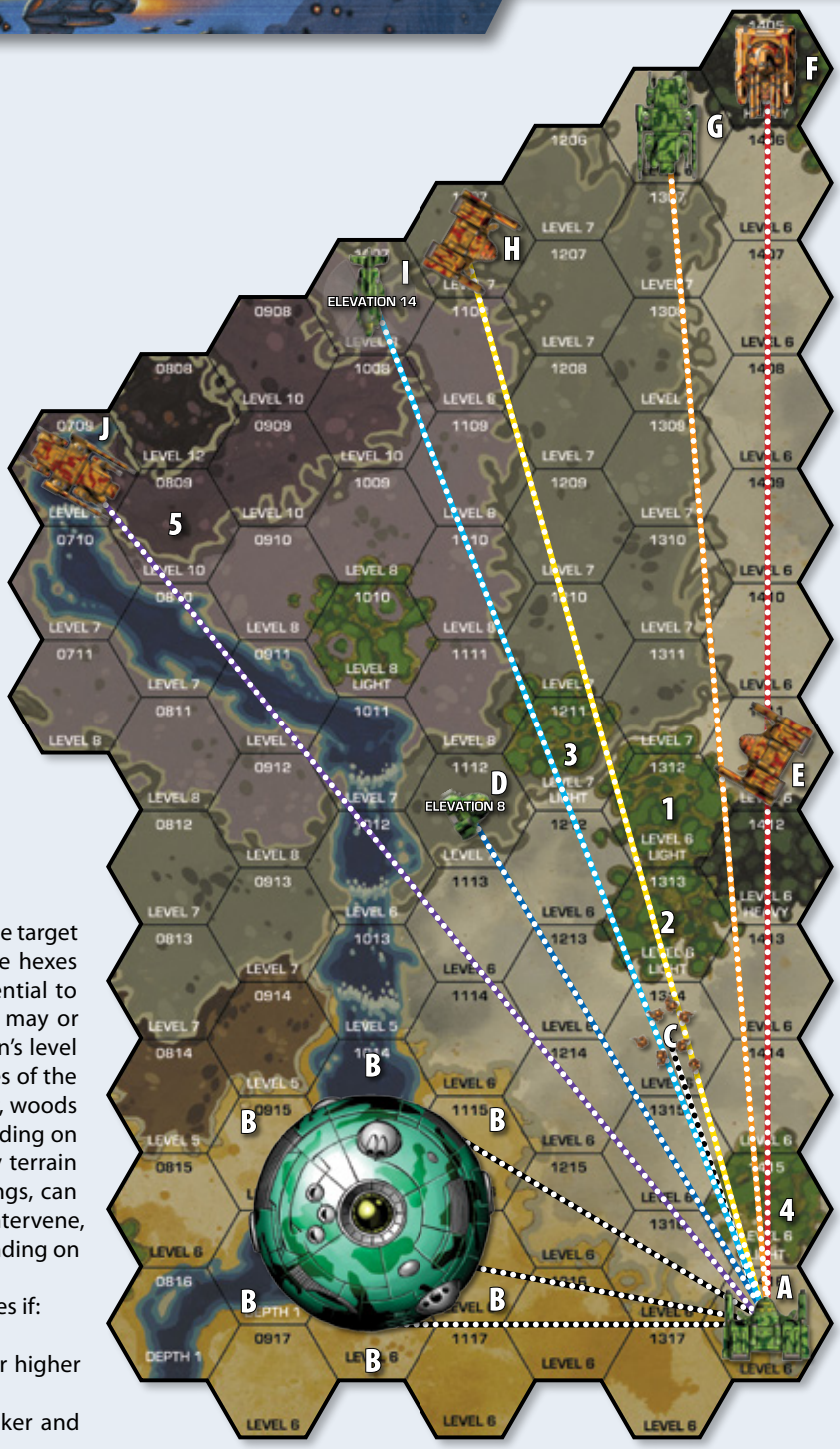
Effects of Intervening Terrain

Intervening terrain has the following effects on LOS.

Buildings and Bridges: Intervening building hexes block LOS; bridges, however, do not.

Heavy Woods: Two or more hexes of intervening heavy woods block LOS. One hex of intervening heavy woods combined with one or more hexes of intervening light woods will also block LOS.

Hills: Intervening hills block LOS.



• LINE OF SIGHT DIAGRAM •

Light Woods: Three or more hexes of intervening light woods block LOS. One hex of intervening light woods combined with one or more hexes of intervening heavy woods also block LOS.

Water: Intervening water blocks LOS unless attacker and target are completely submerged and no other terrain intervenes. See also *Water Hexes*, p. 102; *Terrain Modifiers*, p. 107; and *Partial Cover*, p. 102 (see Torpedo Launcher, p. 138, and Multi-Purpose Missiles, p. 229, for the exceptions).

Other Units: Except for grounded DropShips, intervening units have no effect on LOS or attacks; grounded DropShips block LOS.

The LOS diagram on p. 100 of numerous units on the Large Mountain #1 map illustrates many of the principles governing line of sight.

The BattleMech in Hex A wants to attack in this turn. It is standing in a Level 6 hex, and is therefore considered to be at Level 8 for purposes of LOS. Checking LOS for the BattleMech in Hex A to the other units shown, we find the following conditions:

'Mech A has a clear LOS to several of the B hexes occupied by the DropShip. The ship is considered to be at Level 8 for purposes of LOS; the original central hex on the map was Depth 1, but a landing spheroid DropShip increases that depth by 1 for a total Depth of 2; 10 (height of a spheroid DropShip) – 2 (depth of underlying hex) = Level 8.

LOS to the infantry unit in Hex C passes through one hex of light woods, and so is not blocked.

The WiGE vehicle in Hex D is at Elevation 8 (1 elevation above the Level 7 of the underlying hex) and since it rises one level above its underlying terrain, for purposes of LOS it is considered to be at Elevation 9. However, as the woods in Hex 4 are equal to or higher than the attacker and also adjacent to the attacker, and since the LOS from the 'Mech in Hex A to the WiGE in Hex D passes directly between the clear hex and that light woods hex, the target WiGE's controlling player decides that the LOS is affected by the light woods; they do not block LOS, however.

LOS to the 'Mech in Hex E passes through one light woods and one heavy woods hex, and so is blocked. Likewise, LOS to the ground vehicle in Hex F is blocked because it passes through one light woods and one heavy woods hex.

LOS to the 'Mech in Hex G passes through two light woods and a heavy woods hex, and so is blocked.

The 'Mech in Hex H is standing in a Level 7 hex, and is therefore considered to be at Level 9 for LOS purposes. Even though the LOS passes through hexes 1 and 2, those woods are at Level 8 for purposes of LOS and so do not intervene. The woods in Hex 3, however, are in the LOS and are at Level 9 for purposes of LOS. Because these woods are equal to or higher than both attacker and target, they intervene. As with the LOS to the WiGE, the woods in Hex 4 are equal to or higher than the attacker and adjacent to the attacker, and so they intervene as well; only two of these light woods hexes intervene, however, and so they do not block LOS.

The VTOL in Hex I is at Elevation 14, and because it only rises one elevation above its terrain, it is considered to be at Elevation 15 for the purposes of LOS. However, as with the units in Hexes D and H, the woods in Hex 4 are equal to or higher than the attacker and adjacent to the attacker, and so they intervene. Only 1 light woods hex intervenes, which does not block LOS.

Finally, the 'Mech in Hex J is in a Level 9 hex and so is at Level 11 for LOS purposes. LOS is not blocked.

Use the diagram to practice finding LOS with the other units. Try to determine how many targets each unit can see, and compare your results to the correct results that follow: Hex B has 9 targets, Hex C has 8 targets, Hex D has 9 targets, Hex E has 7 targets, Hex F has 7 targets, Hex G has 7 targets, Hex H has 8 targets, Hex I has 8 targets and Hex J has 5 targets.

• LINE OF SIGHT BETWEEN TWO HEXES DIAGRAM •

In the LOS Between Two Hexes diagram, Controlling Player 1 wants his 'Mech and conventional LRM (Foot) Platoon in hex A and Combat Vehicle in Hex B to attack Controlling Player 2's 'Mech in Hex C on the Woodland map.

Fortunately for Player 1, Player 2 lost the Initiative and so must make his weapon declaration before Player 1 must announce any attacks from his three units. Unfortunately for Player 1, however, Player 2 is well aware of what he's doing and declares an attack against the conventional LRM (Foot) Platoon in Hex A. As the LOS between the attacker and target falls exactly between two sets of paired hexes (1 and 2 on the diagram), it is up to Player 1—who controls the targeted unit in Hex A—to determine which side of those hex pairs the LOS will pass. He cannot choose one hexside (Side I on the diagram) in the first pairing and then another hexside in the second pairing (Side II on the diagram), but must instead choose one hexside that will affect all such hex pairings. Player 1 knows that such an attack is likely to hit the infantry unit hard, especially as it is in a clear hex, but he is desperate to try to damage Player 2's 'Mech again, as it is already heavily damaged and any additional damage might destroy it. He also knows that once the defender chooses the path for the LOS, it is "locked in" between those two units for the rest of that turn. He therefore chooses Side I for the LOS to pass, allowing Player 2's 'Mech to attack him, but knowing his infantry can counterattack. If he had chosen Side II, the LOS would have passed through two intervening light woods hexes and an intervening heavy wood hex, blocking LOS and making an attack between either unit impossible for this turn.

When the infantry attacks the 'Mech, any damage inflicted will be rolled on the Front column of the 'Mech Hit Location Table to determine location, as the attack is striking the front (see Attack Direction, p. 119).

After Player 2 announces his attack, Player 1 is free to announce attacks for his three units. The LOS between the LRM (Foot) Platoon and the enemy 'Mech is already "locked in" and so he announces that attack.

However, even though the infantry in Hex A can fire at the target in Hex C, when Player 1 announces an attack from the 'Mech in Hex A to the 'Mech in Hex C, Player 2 controls the targeted unit, and so can choose Side I or Side

II of the paired hexes (1 and 2 in the diagram). In an attempt to protect his 'Mech as much as possible, he chooses Side II for the LOS to pass through. Two light woods hexes and a heavy wood hex intervene between the attacker and target, blocking LOS and making an attack between either unit impossible for this turn. (Had Player 2 chosen Side II, the Level 1 hill next to the targeted 'Mech would have provided partial cover from attacks by the 'Mech in Hex A, if the woods hexes had not already blocked LOS; see Partial Cover, below.)

Player 1 then announces that his Combat Vehicle in Hex B is attacking the target 'Mech in Hex C. Once again, as the LOS passes between the single pairing of hexes (1 in the diagram), the target 'Mech's controlling player may choose Side I or Side II for the LOS to pass through. Once again, Player 2 chooses Side II in order to protect his 'Mech. This means that only a single light woods hex intervenes between attacker and target; however, because the Combat Vehicle is considered to be at Level 1 (the underlying hex is Level 0), and the Level 1 hex adjacent to the Combat Vehicle lies between attacker and target and is higher than the attacker, LOS is completely blocked, leaving only the attacks between Player 1's infantry and Player 2's 'Mech to be resolved.

If Player 2 had chosen Side I, any damage inflicted by the attack would have been rolled on the Front column of the 'Mech Hit Location Table to determine location, as the attack is hitting the front. If no Level 1 hill existed between attacker and target and the target's player chose Side II, any damage from the attack would have been rolled on the Left Side column of the 'Mech Hit Location Table to determine location, because the attack would have struck the left side (see Attack Direction, p. 119).

If no one moves during the next turn's Movement Phase (Ground), both players may choose different paths than in the previous turn for each attacker and target unit during attack declaration in the Weapon Attack Phase.

Finally, Player 2 could have announced that he was making no attacks in the turn, which would have left Player 1 announcing an attack from his LRM (Foot) Platoon to the target 'Mech in Hex C. Player 2 could then have chosen Side II for the LOS, thus blocking all attacks in that turn.

PARTIAL COVER ('MECH ONLY)

Only a standing 'Mech can receive partial cover from terrain. Even though Large Support Vehicles, grounded small craft and grounded DropShips rise more than a single level above the underlying terrain of the hexes they occupy, they never receive partial cover.

To receive partial cover, a 'Mech must be adjacent to a hex one level higher than the level of the underlying hex it occupies, and that hex must lie between it and the attacking unit. For example, a 'Mech standing on Level 0 terrain is at Level 2 for determining LOS. An adjacent Level 1 hex lying between the attacker and the target would provide partial cover. The firing unit must also have an LOS level equal to or lower than the defending unit's LOS level in order for the target to receive partial cover. In other words, an attacker firing downhill (regardless of how many hexes lie between attacker and target) negates its target's partial cover.

Cauldron-Born, *Second Sword of Light (House Kurita)*

The intervening level can be a hill, a building (but not a bridge, which does not provide partial cover), a DropShip or any combination. Partial cover does not block LOS, but it adds a +1 modifier to the attacker's to-hit number. The attack is then resolved normally, but if the hit location roll indicates a leg, the attack strikes the cover instead. If the partial cover is a building or grounded DropShip, the hit damages the building or DropShip; see *Buildings and Attacks by Grounded Aerospace Units*, pages 166 and 249 respectively. For four-legged 'Mechs, a leg hit means any leg at all, front or rear. For further explanation, see *To-Hit Modifiers*, page 106.

ProtoMechs: Because they are only the height of vehicles, ProtoMechs never benefit from partial cover.

Woods: A 'Mech does not receive partial cover from woods.

WATER HEXES

A Depth 1 Water hex provides partial cover for a standing 'Mech occupying that hex. Because the water surrounds the 'Mech, the partial cover applies even if the attacker is at a higher level than the target.

Depth 2 or deeper water completely blocks LOS to and from the 'Mech standing in that hex, while LOS is blocked to a prone 'Mech in Depth 1 or deeper water. This means that units above the water, such as hover or WiGE vehicles, never have LOS to a submerged unit, even if they occupy the same water hex.

Vehicles: Hovercraft moving over water and surface naval vessels rise 1 level above the surface level of the water hex. Submarines can be at any depth on or under the water (see *Naval Movement*, p. 56). Other types of vehicles cannot enter water hexes (except for a Support Vehicle with the Amphibious chassis modification).

Underwater Attacks: Special rules apply to attacks that travel through water. See *Terrain Modifiers*, page 107.

The Line of Sight diagram on p. 100 illustrates some examples of partial cover.

The 'Mech in Hex G has partial cover from the units in Hexes A, B, C and E because it is adjacent to a level that is one level below its own LOS height, along the LOS between the 'Mech and those three units, and the LOS height of those three units is equal to or less than the LOS height of the 'Mech.

The 'Mech in Hex H has partial cover from the units in Hexes A, B, C, D and E for the same reason. In the case of the 'Mech in Hex E, the target 'Mech in Hex H would only receive partial cover if the 'Mech in Hex E declared its attacks first—the LOS passes exactly between the hexes that would allow the partial cover to intervene, which means the target can choose the partial cover hex. Even though the WiGE in Hex D is at Elevation 9 for LOS purposes (all WiGEs are one elevation above the level of their underlying hex, which is Level 8), the WiGE's LOS height is not greater than that of the target, and so partial cover still applies.

Finally, the 'Mech in Hex J has partial cover from the units in Hexes A, B, C, D and E. For the units in Hexes A, C, D and E, the partial cover comes from the terrain in Hex 5, which is one level

below the LOS height of the 'Mech in Hex J, and is adjacent to the 'Mech in Hex J along the LOS. For the DropShip in Hex B, whose LOS does not pass through Hex 5, the 'Mech still has partial cover because it is standing in Depth 1 water.

Weapon Attacks

During the Weapon Attack Phase, players use their units' armaments to attempt to inflict damage on targets. Players should not consider the list below a hard-and-fast set of rules for exactly how to resolve weapon attacks, but instead as a way to lay the framework, from which the specific rules in the rest of this section can easily build a full understanding of how to resolve combat in *BattleTech*.

The rough order of such actions is as follows:

- An attacking unit fires a weapon at an enemy target unit;
- If the weapon hits, it inflicts a certain amount of damage;
- The attacker rolls a hit location;
- The targeted player marks off in that location a number of armor circles equal to the amount of damage inflicted;
- If no more armor circles remain in a location and damage from the attacking weapon remains, that damage affects the location's internal structure;
- The targeted player marks off a number of internal structure circles equal to the remaining damage inflicted;
- The attacker rolls to determine critical hits;
- Critical hits, if any, are applied;
- If a location is destroyed and damage from the attacking weapon remains, that damage is transferred to the next location inward;
- This basic procedure repeats until all weapons fire is resolved.

For one unit to fire at another, the attacking unit must have a valid line of sight to the target, and the target must be within the range and firing arc of the weapons the attacking player wishes to use. The attacking player then calculates the likelihood of a shot hitting the target based on range to the target, target and attacker movement, intervening terrain and other factors.

Players fire each weapon on a unit individually (see *Infantry* and *Large Craft Weapon Bays* for the exceptions, pp. 212 and 234 respectively), and can fire as many or as few of their unit's weapons at the target as they wish, within the restrictions described below. Unless otherwise stated, each weapon may be fired only once per turn. Each weapon only gets one to-hit roll per turn, even though some weapons may inflict damage more than once against the target.

If the attack hits the target, the attacking player determines the damage location and the target player records the result on the damaged unit's record sheet.

The rules for weapon attacks provide general guidelines for 'Mech firing arcs, inflicting damage and critical hits (the specific rules governing such situations for other units are covered in those units' respective sections). These rules also apply to physical attacks (see p. 144).

AMMUNITION EXPENDITURE

Units carry a limited amount of ammunition for missile launchers, machine guns, autocannons and other ballistic and missile weapons. Weapons that require ammunition indicate the number of shots available for that weapon in the Ammo column of the Weapons and Equipment Tables (see p. 303). A "shot" in this case represents a single use of the weapon in a single turn, not a single missile or round of ammunition. For example, an LRM-20 with one ton of ammo has six shots, so the weapon can be fired six times (once a turn, for a total of six turns), each shot launching twenty missiles. Every time one of these weapons is fired, one shot of ammo is expended.

The exception to this rule is rapid-fire weapons (such as Ultra autocannons, rotary autocannons and so on; they are noted as such in the Type column of the Weapon and Equipment Tables). Such weapons can fire multiple shots in a single use in one turn. For example, a rotary AC/5 can fire anywhere from one to six shots in a single turn, as designated by the player. A rotary AC/5 with one ton of ammo has 20 shots. This weapon can be fired at a rate of one shot per turn for twenty turns, or fired three times at a rate of six shots in three different turns, which would consume 18 shots—meaning it could then only fire two single shots in two separate turns, or two shots in a single turn, or any combination thereof (see *Rapid-Fire Weapons*, p. 114).

The record sheet for each unit indicates the available number of shots for each weapon in the actual ammo slot(s) on the Critical Hit Table (older record sheets included that information in the Weapons Inventory as well). The player should keep a tally of shots fired using the Critical Hit Table, making a hash mark (when the attack is declared) next to the appropriate ammo slot every time he fires the corresponding weapon. When the number of marks equals the amount of ammo carried in that slot, that ammo bin is empty. If no other bins in the unit carry that type of ammo, the weapon is out of ammunition and cannot be fired for the rest of the game.

OBK-M10 O-Bakemono, *Fifth Sun Zhang Cadre (House Kurita)*

Each weapon can draw ammo from any ammo bin that carries the right ammunition for that weapon. The ammo need not be carried in the same location as the weapon. For example, an LRM-15 in the left arm of a 'Mech can use LRM-15 ammo carried in any location, but cannot use LRM-5, -10, or -20 ammo. In addition, provided the weapon is drawing from the correct ammo slot and multiple ammo slots of the correct type exist, a player can draw ammo from whichever slot he wants in a given turn, switching around each turn at his discretion. For example, a 'Mech mounting an LRM-15 has three LRM-15 ammo slots, one in the right arm, one in the left torso and one in the left arm. In three consecutive turns the player fires the LRM-15. In each turn, the player can put a hash mark next to a different ammo slot (one for each turn); three hash marks in one location (again, one for each turn); two in one slot and one in another slot; and so on. This rule also applies to rapid-fire weapons; a 'Mech mounting a rotary AC/5 with three different ammo slots of the correct type can "rapid-fire" six shots in a single turn and then mark off all six shots in any combination in the three different ammo slots (two shots in each, all six shots in one, three shots in two and so on).

Infantry: Infantry units do not need to keep track of ammunition, with the exception of certain battle armor missile attacks (see *Battle Armor Attacks*, p. 217).

Dumping Ammunition

During a game, a player might wish to dump the ammunition carried by his 'Mech or vehicle. He accomplishes this by opening the ammo loading doors on the back of the 'Mech or rear of the vehicle and allowing the ammunition to feed out.

During the End Phase of a turn, a player can announce that his unit will dump ammunition in the next turn. The unit may dump any or all of the ammunition it carries, but ammunition must be dumped by slot (or by ton on vehicles; .5 tons if it is the only MG ammo on the vehicle); if any ammo in a slot is dumped, all of it must be dumped (for vehicles, the entire ton must be dumped). Dumping is carried out during the following turn.

TSH-7S Tai-sho, *Twenty-second Dieron Regulars (House Kurita)*

When a player announces that his unit will dump ammunition, that ammunition is immediately unavailable for use, and so that weapon may not be fired from this point on (unless there is another ammo slot, or ton, of the same type of ammo available). However, the ammunition is not actually gone from the unit until the End Phase of the following turn. For that one turn, the ammunition remains onboard in its normal location and critical slot, and can suffer critical hits (or heat build-up for 'Mechs).

A unit dumping ammunition cannot run/flank or jump in that turn. Any hit against the dumping unit on any rear location during the Weapon Attack or Physical Attack phases inflicts normal damage, but it also causes all dumping ammunition that can explode to do so. (Rear locations include the rear torso on 'Mechs, but not the turret on a vehicle that mounts one.) Ammunition can be stored in many different 'Mech locations, but it is loaded and unloaded through the rear torso.

Ammunition dumped in a hex cannot be exploded or used for any type of attack.

Aerospace Units: Grounded aerospace units dump ammunition like vehicles; airborne aerospace units may not expend Maximum Thrust, and any hit against a dumping unit's aft armor causes the ammunition to explode.

Prohibited Units: Only ProtoMechs cannot dump ammunition.

Underwater: Units may not dump ammunition when submerged. If a unit submerges during the turn it is dumping ammunition, all three torso locations automatically flood (see *Underwater Units*, p. 121).

Firing Arcs

If an attacking unit has LOS to its intended target, the attacking player can then check the firing arcs of his unit's weapons to see which weapons can hit the target. There are four firing arcs as shown on the Firing Arcs Diagram: the forward arc (in yellow), left side arc (in blue), right side arc (also in blue), and rear arc (in red).

The firing arcs extend from the firing unit to the edge of the playing area. The maximum ranges for weapons are described in the Weapons and Equipment Tables, beginning on page 303.

Infantry: Infantry do not have firing arc restrictions.

ProtoMechs: ProtoMechs use the firing arcs for 'Mechs and can twist their torsos according to the standard rules (see *Rotating the Firing Arc*, p. 105). If the ProtoMech is carrying a main gun, that weapon can be fired at targets in the forward, right side and left side firing arcs. The weapon is rotated if the torso is twisted, giving it a potential 360-degree field of fire.

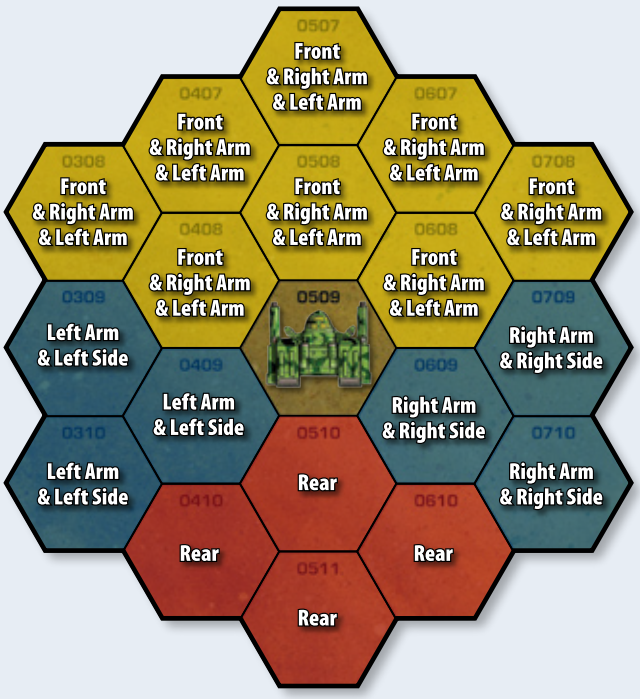
Split-Location Weapons: A weapon on a 'Mech whose critical slots are split between a torso and arm location uses the torso firing arc.

Vehicles: Vehicles use the firing arcs for 'Mechs. If a vehicle has a turret, weapons in it fire into the forward arc, but this firing arc can be rotated as described in *Rotating the Firing Arcs*, page 105.

Aerospace Units: Aerodyne units have four arcs: nose, left, right and rear (see Aerodyne Firing Arcs, p. 236.)

Spheroid units have six arcs: nose, front left, front right, aft left, aft right and aft (see Spheroid Firing Arcs, p. 235).

Grounded aerospace units have specific rules for firing arcs (see *Attacks By Grounded Aerospace Units*, p. 249).



• 'MECH FIRING ARCS DIAGRAM •

Non-Aerospace Units to Airborne Aerospace Units: When non-aerospace units attack airborne aerospace units, normal firing arcs apply.

Whether the airborne aerospace unit is operating on a low-altitude map, or whether it is using the Aerospace Units on Ground Mapsheets rules, LOS to the target from the attacker is drawn to the hex on the designated flightpath that is closest to the attacker. If the attacker is on the flightpath, LOS is drawn to the hex the fighter would be in prior to entering the hex of the attacker. The attacker must take the angle of attack into account when firing at an airborne aerospace unit (see *Angle of Attack*, p. 236).

FORWARD ARC

Weapons mounted in the three forward torso locations, the legs or the head of a 'Mech may fire only at targets in the forward arc. Arm-mounted weapons may fire into the forward arc plus the appropriate side arc.

Leg-Mounted Weapons: Leg-mounted weapons may not fire through a hex that provides the firing 'Mech with partial cover. The firing arc is always "forward" for forward-mounted leg weapons, and is not affected by torso twisting.

Vehicles: Weapons mounted on the front location of a vehicle may only fire into the front arc. Weapons mounted in the turret can also fire into the forward arc, though this firing arc can be rotated as described in *Rotating the Firing Arcs*, below.

Prone 'Mechs: The standard arcs for attacker and target do not change if either one is a prone 'Mech.

LEFT SIDE ARC

Weapons mounted in a 'Mech's left arm may fire at targets in the left side arc and forward arc.

Vehicles: Weapons mounted on the left side of vehicles may only fire at targets in the left side arc.

RIGHT SIDE ARC

Weapons mounted in a 'Mech's right arm may fire at targets in the right side arc and forward arc.

Vehicles: Weapons mounted on the right side of vehicles may only fire at targets in the right side arc.

REAR ARC

Weapons mounted in any of a 'Mech's three rear torso locations may only fire into the rear arc. Weapons may also be rear-mounted on the head and legs (rear legs only for four-legged 'Mechs). All rear-mounted weapons are indicated by an (R) on a unit's record sheet and may only fire at targets in the rear firing arc.

Leg-Mounted Weapons: Leg-mounted weapons may not fire through a hex that provides the firing 'Mech with partial cover. The firing arc is always to the rear for rear-mounted leg weapons, and is not affected by torso twisting.

Vehicles: Weapons mounted on the rear of vehicles may only fire at targets in the rear arc.

ROTATING THE FIRING ARCS

During weapon attack declaration, a 'Mech can rotate its torso one hexside to the left or right while keeping its feet pointed straight ahead. This means that a 'Mech can move in one direction while firing in another. A 'Mech's upper-body firing arcs are determined by the direction in which its torso is turned, not by the 'Mech's facing; leg-mounted weapon firing arcs, including kick attacks, are always aligned with the feet.

When the 'Mech's torso rotates, all upper-body firing arcs rotate with it as shown on the diagram.

• ROTATING FIRING ARCS DIAGRAM •

Four-Legged and Prone 'Mechs: These units cannot torso twist.

Vehicles: Turret-mounted weapons in vehicles can be positioned to fire through any hexside, per the *Torso/Turret Twist* rules, page 37. Treat turret arcs as the forward arc, except that they are defined by the hexside at which the turret is currently pointing, not the hexside toward which the vehicle is facing.

REVERSING (FLIPPING) ARMS

'Mechs constructed without hand and lower arm actuators in both arms and which do not have any weapons split between torso and arm locations can flip their arms over and fire backward. This ability only applies to 'Mechs originally constructed without those actuators (or OmniMechs that remove their hand and lower-arm actuators for a certain configuration), not 'Mechs that lose them due to critical damage.

A 'Mech that intends to reverse its arm-mounted weapons must flip both arms during weapon attack declaration. This maneuver takes the place of a torso twist (a 'Mech cannot torso twist and reverse its arms simultaneously). After flipping its arms, the 'Mech may then fire any arm-mounted weapon into the rear firing arc instead of the usual firing arcs for those weapons.

If a 'Mech that can reverse its arms loses one during a game, it can still reverse the remaining arm. During the End Phase, reversed arms automatically return to the standard front arc.

Prone 'Mechs and ProtoMechs: Neither of these units may reverse their arms.

FIRING WEAPONS

After a player has determined that a target lies within LOS and has determined the firing arc of his weapons, the unit may make a weapon attack. The player counts the range in hexes to the target to find the base to-hit number for the attack. For each weapon he fires, the player determines if the shot is more or less difficult than normal by factoring in terrain, movement, specific weapon effects and other conditions. These factors add modifiers to the base to-hit number, creating a modified to-hit number. The more difficult the shot because of distance, concealment by terrain or movement, the higher the modified to-hit number. The player then rolls 2D6 to see if the attack hits the target. If the result is equal to or greater than the modified to-hit number, the attack hits.

Each weapon may be fired only once per turn, including weapons that can fire more than one shot in a single turn (see *Rapid-Fire Weapon*, p. 114).

A unit cannot make a weapon attack against another unit occupying the same hex. See *Point-Blank Weapon*, page 114**,** and *Infantry*, page 212, for exceptions.

As defined under *Game Terms* (see p. 42), a target can be another unit, or a clear hex, or almost anything in between. Players can fire weapons at almost anything, even if the result will not inflict any damage. For example, a player can shoot at a hex to heat up his 'Mech so that it can use triple-strength myomer (see p. 143), or a player may simply wish to expend ammunition. Regardless of why or what target is chosen, if a weapon is fired, all its effects must be taken into account (ammunition must be expended, heat tracked, specific weapon effects dealt with and so on, as appropriate for each weapon).

BASE TO-HIT NUMBER (GATOR)

The base to-hit number for a weapon attack is equal to the firing unit's Gunnery Skill Rating (see *Skills*, p. 39).

MODIFIED TO-HIT NUMBER

The modified to-hit number equals the base to-hit number plus all applicable modifiers for range, minimum range, movement, terrain and other factors discussed in *To-Hit Modifiers*.

If the modified to-hit number is greater than 12, the shot automatically misses. If a player determines that his unit's declared attack will automatically miss, he can choose not to make the attack, thereby avoiding a waste of ammunition and some heat build-up. He may not switch his attack to another target.

If the modified to-hit number is 2 or less, the shot automatically hits. Because some weapons have additional effects based on the to-hit roll result, even automatic hits may require the player to make a to-hit roll (see *Weapons and Equipment*, p. 113).

TO-HIT MODIFIERS

The base to-hit number may be modified by several factors, including range, terrain, movement, multiple targets, heat and damage, and prone or immobile targets. All modifiers are cumulative.

Attacker Movement (GATOR)

A moving attacker must constantly adjust his aim to compensate for his movement, so an attacking unit's to-hit number is modified by its own movement using the values in the Attack Modifiers Table. The attacker movement modifier is based on the movement mode the attacking unit used in the turn, regardless of the actual MP expended or distance moved.

Infantry: Attacker movement modifiers do not apply to infantry units when they attack.

G.A.T.O.R.

The attack process is not complicated—simply a matter of rolling 2D6 and trying to equal or exceed your modified Target Number. However, it's the "modified" part that can trip a player up: juggling the many potential modifiers can be imposing.

After you understand the *Target Number Modifiers* section below, you'll find that "GATOR" is a helpful mnemonic that reminds you what needs to be taken into account:

- **G** Gunnery Skill Rating of the attacker (the base Target Number for the attack). Then add:
- **A** Attacker movement modifier
- **T** Target movement modifier
- **O** Other modifiers (potentially a big category, but typically only includes woods, partial cover, and heat)
- **R** Range modifiers

You start with your Gunnery Skill Rating, then add all other applicable modifiers as indicated, and the result is your modified Target Number to roll against. In the Target Number Modifiers section that follows, modifiers are listed in GATOR order, beginning with the Attacker Movement Modifier.

Target Movement (GATOR)

A moving target is harder to hit, and so an attacking unit's to-hit number is modified by its target's movement using the values in the Attack Modifiers Table. The target movement modifiers are based on the hexes traversed rather than the number of Movement Points spent. If the target moved backward and forward in the turn (regardless of facing changes), base the movement modifier on the number of hexes moved from the hex in which the unit last reversed its movement. For example, if the target moved backward three hexes and then forward two hexes, the target movement modifier would be based only on the final two hexes of movement, resulting in a Target Movement Modifier of 0. If the target jumped in the current turn, the player must add a jump modifier in addition to the modifier for the number of hexes moved.

• TARGET MOVEMENT DIAGRAM •

The Target Movement Diagram at right, of units on the Open Terrain #1 map, illustrates the to-hit modifiers discussed so far. The Jenner *has used its Walking movement of 7 MP to move from Hex A to Hex B. Though it expended 7 MP in the move, it actually traveled five hexes, as shown. The* JagerMech *had to run to get from Hex C to Hex D facing the* Jenner. *It spent a total of 5 MP but only traveled two hexes. Finally, the* Atlas *remained standing in Hex E. All of the 'Mechs have standard Gunnery Skills of 4.*

The Jenner *is firing four medium lasers at the* Atlas. *The target is four hexes away, which is in the medium range for the lasers, adding a Range Modifier of +2. The* Jenner *used Walking movement this turn, so the Attacker Movement Modifier is +1. The target did not move. The Base To-Hit Number is 4, so the Modified To-Hit Number is 7 (Base 4 + Range 2 + Attacker Movement 1 = 7).*

The JagerMech *is attacking the* Jenner *with its AC/5s. The* JagerMech *used Running movement this turn, so it must add an Attacker Movement Modifier of +2 to its to-hit number. The target traveled five hexes, creating a +2 Target Movement Modifier. The range to the target is two hexes, which is in short range for the AC/5s. However, the AC/5 has a minimum range of 3. This means an attack at a range of three hexes would be modified by +1, while an attack made at two hexes—such as this attack—is modified by +2. The Modified To-Hit Number for the JagerMech's AC/5s is 10 (Base 4 + Attacker Movement 2 + Target Movement 2 + Minimum Range 2 = 10).*

The Atlas *is launching its LRMs at the* JagerMech. *The range to the target is four hexes, which is short range for that weapon, but the LRMs have a minimum range of 6. This means a +3 Minimum Range Modifier applies to the attack. The* Atlas *did not move, and so no attacker movement modifier is applied. The* JagerMech *spent 5 Running MP, but only traveled two hexes, and so no target movement modifier applies. The Modified To-Hit Number for the LRM attack is 7 (Base 4 + Minimum Range modifier 3 = 7).*

Terrain Modifiers (GATOR)

Terrain can affect the probability of a successful shot by forcing the attacker to account for intervening land features and partial cover. Specific terrain modifiers appear below.

Light Woods: Add a +1 terrain modifier if the target occupies a light woods hex. In addition, modify the to-hit number by +1 per hex of light woods intervening between the attacker and the target. (The woods must be intervening as defined in *Line of Sight*, p. 99. If the treetops lie below the LOS between the units, do not apply this modifier.)

Heavy Woods: Add a +2 terrain modifier if the target occupies a heavy woods hex. In addition, modify the to-hit number by +2 per hex of heavy woods intervening between the attacker and its target. (The woods must be intervening as defined in *Line of Sight*, p. 99.) If more than one heavy woods hex intervenes, the woodland blocks LOS.

Partial Cover: Partial cover only applies to standing 'Mechs. Add a +1 terrain modifier to the to-hit number if the target 'Mech is partially concealed (see *Line of Sight*, p. 99). When a 'Mech receives the partial cover modifier, resolve damage using the standard 'Mech Hit Location Table, but any hits against the target's legs strike the intervening terrain. Remember that an attacker firing downhill negates its target's partial cover (see *Partial Cover*, p. 102).

Depth 1 Water: 'Mechs in Depth 1 water receive partial cover (see *Partial Cover*, p. 102).

A 'Mech standing in Depth 1 water may make underwater attacks with leg-mounted weapons, as well as attacks from weapons mounted in any other location against units not underwater, provided the target unit meets the normal requirements for each type of attack.

Other underwater units can attack a standing 'Mech in Depth 1 water; the target has partial cover, and an attack striking any location except for a leg strikes the intervening terrain.

UNDERWATER LINE OF SIGHT TABLE

Attacker is:	Target is:				
	Underwater[1]	*Surface Naval*	*Airborne*	*Ground*[2]	*'Mech at Depth 1*
Underwater[1]	Yes	Yes	No	No	Yes[4]
Surface Naval	Yes	Yes	Yes	Yes	Yes[3]
Airborne	No	Yes	Yes	Yes	Yes[3]
Ground[2]	No	Yes	Yes	Yes	Yes[3]
'Mech at Depth 1	Yes[6]	Yes[7]	Yes[5]	Yes[5]	Yes[8]

[1]Includes standing 'Mechs at Depth 2+ and prone 'Mechs at Depth 1; see *Multi-Purpose Missiles* for exception, p. 229.
[2]Includes 'Mechs standing at Level 0+.
[3]At +1 for partial cover; use the appropriate column of the 'Mech Hit Location Table, with any leg hits striking the water and inflicting no damage.
[4]At +1 for partial cover; use the appropriate column of the 'Mech Hit Location Table, with any location hit but leg hits striking the water and inflicting no damage.
[5]Can only fire torso, arm or head weapons.
[6]Can only fire leg weapons.
[7]Can fire any weapon, but hit location and damage to target may vary (see Depth 1 Water above, as well as *Hull Integrity*, p. 198, in the *Combat Vehicles* section).
[8]Can only fire leg weapons at legs and upper-body weapons at upper bodies; +1 for partial cover (see *Depth 1 Water*, above).

A battle armor unit in Depth 1 water carrying multi-purpose missiles can attack non-submerged targets (see p. 229).

Depth 2+ Water: A unit underwater cannot fire on or take fire from other units unless those units are also underwater, with the two exceptions listed below. (For 'Mechs, being underwater means standing in a Depth 2 or deeper water hex, or lying prone in a Depth 1 water hex.)

- Other units can attack a standing 'Mech in Depth 1 water; the target has partial cover, and an attack striking any location except a leg strikes the intervening terrain.
- An attack against a surface vessel can always be made. Regardless of whether or not the vessel has a turret, treat it as though it has no turret.

Calculate line of sight normally, treating depth as negative numbers. For example, Depth 1 is at Level –1 and so is two levels below a Level 1 hill.

Units without a clear line of sight cannot attack one another. The Underwater Line of Sight Table below summarizes which units can fire at each other, and with what modifications.

Only lasers and PPCs may be used in an underwater attack; torpedo launchers (see p. 138) are the sole exception (see Underwater Range Table, above).

Multiple Targets Modifier (GATOR)

A player may declare that his unit will engage more than one target in a turn and allocate different weapon systems to fire at different targets. The only real limit on the number of targets is how many weapons a unit mounts.

The player designates one of the targets as the primary target. If any of the declared targets are in the attacker's forward arc, one of those must be the primary target. If the attacker is declaring attacks only against targets in the side and rear arcs, he may choose any target as the primary target. The remaining targets are considered secondary, and the player must add a multiple targets modifier to the to-hit numbers for those attacks. Against secondary targets in the forward arc, the modifier is +1; against secondary targets in the side and rear arcs, the modifier is +2. This modifier is not cumulative—the modifier for the third and each subsequent target remains only +1 (or +2).

All the rules above apply regardless of where the weapons are mounted. For example, a 'Mech with three medium lasers in the right arm fires one medium laser at a target in the front arc, designated as the primary target; the second medium laser at a target in the right side arc; and the third medium laser at another target in the right side arc. The primary target receives no additional modifier at this stage, while the secondary target in the right side arc receives a +2 to-hit modifier and the second target in the right side arc also receives a +2 to-hit modifier.

Multiple Firing Arcs: Through torso twisting, a 'Mech with both upper-body and leg-mounted weapons may have more than one firing arc at once. Regardless of its number of firing arcs, a 'Mech may only have one primary target each turn.

Physical Attacks: The multiple targets modifier does not apply to physical attacks.

Aerospace Units: Aerospace units handle multiple targets differently than ground units (see *Aerospace Units*, p. 234).

Battle Armor: As battle armor units do not have firing arcs, they only apply a +1 modifier for secondary targets (never a +2 modifier for secondary targets).

Conventional Infantry: Conventional infantry may only engage one target per turn.

Vehicles: Treat turret rotation on a vehicle exactly like a 'Mech's torso twist for purposes of multiple target modifiers.

Heat and Damage Modifiers (GATOR)

The attacking 'Mech may need to modify its base to-hit number for current combat damage and heat build-up. Modifiers for these conditions are discussed in *'Mech Critical Hits*, p. 124, and *Building Up Heat*, p. 158. The Heat Data section of the record sheet summarizes the modifiers for the effects of heat build-up.

Lower Arm and Hand Actuators: Certain 'Mechs are designed without lower arm actuators in one or both arms. Such 'Mechs do not suffer actuator damage modifiers to weapon attacks because they do not include that actuator, though the missing actuator still affects physical attacks.

Physical Attacks: Though damage modifiers apply, heat to-hit modifiers never apply to physical attacks (see *Physical Attacks*, p. 144).

IndustrialMech Modifier (GATOR)

IndustrialMechs suffer a +1 to-hit modifier to all weapon attacks. If an IndustrialMech mounts advanced fire control, this to-hit modifier does not apply.

Support Vehicles Modifier (GATOR)

Support Vehicles also suffer additional to-hit modifiers unless they mount additional fire control systems (see *To-Hit Modifiers*, p. 206).

Range Modifier (GATOR)

The farther away the target is from the firing unit, the more difficult it is to hit. The range to the target, which is the distance between the target and the attacking unit, determines the range modifier for an attack. To determine range, find the shortest path to the target and count the hexes between target and attacker, starting with the hex adjacent to the attacker's hex along the line of sight and including the target's hex. This total number of hexes between attacker and target (including the target's hex) is the range.

The ranges for all available weapons appear in the Weapons and Equipment Tables, beginning on page 303. A weapon's maximum range is divided into short, medium and long distances. Find the distance to the target in the row for the appropriate weapon, and determine if the unit's current range is short, medium, long or out of range. A shot at short range requires no to-hit modifier. A medium-range shot has a +2 to-hit modifier, while a shot at long range has a +4 modifier.

Weapons cannot hit a target at a distance greater than the weapon's long range.

Non-Aerospace Units Attacking Airborne Aerospace Units: The range from any attacking non-aerospace unit, or grounded aerospace unit, to an airborne aerospace unit is based on the distance from the attacker's hex to the hex of the airborne unit's designated flight path (see p. 242) that is closest to the attacker, regardless of whether the airborne aerospace unit is operating on a low altitude map (see p. 80) or is using the *Aerospace Units on Ground Mapsheets* rules (see p. 91).

Add two hexes to this range for each altitude the target is operating at. (For example, a fighter flying at Altitude 3 on the low-altitude map, whose flight path lies 4 hexes away at its closest point to the attacker, would add 6 hexes to the 4-hex attack range for altitude, for a final attack range of 10 hexes.) Weapon minimum ranges are not taken into account when attacking airborne aerospace units.

If the attacking unit lies within the airborne aerospace unit's flightpath, the base range to the target is considered to be 1 hex, plus 2 hexes for each altitude level the aerospace unit is operating at.

Airborne Aerospace Units: Airborne aerospace units do not use weapon ranges when making attacks against non-aerospace units (including grounded aerospace units). Instead, they select from a specific list of attacks, each with its own rules for determining targets, success or failure, damage and so on. For more information, see *Air-to-Ground Attacks*, on page 242.

Airborne aerospace units also use different rules when figuring ranges against other airborne units (see *Air-to-Air Attacks*, p. 241).

Equipment: Some equipment can increase the range modifiers against a target (see *Other Combat Weapons and Equipment*, p. 129).

Underwater Ranges: In addition to the special-case rules that apply to attacks traveling through water (see *Terrain Modifiers*, p. 107), water greatly reduces the ranges of all energy weapons. When a submerged unit makes an attack (in Depth 2+ water, or Depth 1 for a prone 'Mech), use the weapon ranges shown on the Underwater Range Table to determine range modifiers. If a weapon listed in the Weapons and Equipment Tables does not appear on the Underwater Range Table, it cannot be used underwater; see *Torpedo Launchers*, page 138, for the sole exception.

UNDERWATER RANGE TABLE

Weapon	Min.	Short	Medium	Long
Small Laser	0	1	2	—
Medium Laser	0	1–2	3–4	5–6
Large Laser	0	1–3	4–6	7–9
Light PPC	3	1–4	5–7	8–10
PPC	3	1–4	5–7	8–10
Heavy PPC	3	1–4	5–7	8–10
Snub-nose PPC	0	1–6	7–8	9
Support PPC	0	1	2–3	4–5
ER Micro Laser	0	1	2	—
ER Small Laser (Clan)	0	1	2	3–4
ER Small Laser (IS)	0	1	2	3
ER Medium Laser (Clan)	0	1–3	4–7	8–10
ER Medium Laser (IS)	0	1–3	4–5	6–8
ER Large Laser (Clan)	0	1–5	6–10	11–16
ER Large Laser (IS)	0	1–3	4–9	10–12
ER PPC (Clan and IS)	0	1–4	5–10	11–16
Micro Pulse Laser	0	1	2	—
Small Pulse Laser (Clan)	0	1	2	3–4
Small Pulse Laser (IS)	0	1	2	—
Medium Pulse Laser (Clan)	0	1–3	4–5	6–8
Medium Pulse Laser (IS)	0	1–2	3	4
Large Pulse Laser (Clan)	0	1–4	5–10	11–14
Large Pulse Laser (IS)	0	1–2	3–5	6–7
Small Heavy Laser	0	1	2	—
Medium Heavy Laser	0	1–2	3–4	5–6
Large Heavy Laser	0	1–3	4–6	7–9

Minimum Range Modifier (GATOR)

Some weapons, such as particle projector cannons, autocannons and long-range missiles (LRMs), are designed to be fired at long-range targets. Close-range, targets are more difficult to hit. The minimum effective range of each available weapon, the range at which the weapon becomes less effective than normal, appears in the Weapons and Equipment Tables, page 303.

• MINIMUM RANGE DIAGRAM •

Players can use the following formula to determine the minimum range modifier: [Min. Range] – [Target Range] + 1 = Minimum Range Modifier.

In the Minimum Range diagram above, a 'Mech on the Open Terrain #1 map mounts a particle projector cannon (PPC), which has a minimum effective range of three hexes. If the 'Mech is firing the PPC at a target unit three hexes away, the modifier would be +1 (3 (minimum range) – 3 (target range) +1 = 1). If the target unit is only two hexes away, the modifier is +2 (3 (minimum range) – 2 (target range) +1 = 2). If the target is one hex away, the modifier is +3 (3 (minimum range) – 1 (target range) +1 = 3); these numbers assume a Gunnery Skill of 4.

If the 'Mech in the above example allows its target to move to within two hexes of its position, the player must modify the 'Mech's to-hit number because the target stands inside its weapon's minimum effective range. The Base To-Hit Number is 4 because the MechWarrior's Gunnery Skill Rating is 4, and the Minimum Range Modifier is +2. This gives the attacking 'Mech a Modified To-Hit Number of 6, the same as if the target were at medium range.

SPECIALIZED ATTACKS

Several specialized attacks have their own rules and to-hit modifiers, as outlined below.

Firing at Immobile Targets

Players may aim for a specific hit location, but only against immobile targets (unless the attacker has a Targeting Computer; see below). The following attack types cannot be aimed shots: Area-Effect, Cluster, or Flak (a weapon's type may be found by consulting the Weapon and Equipment tables, beginning on p. 303; see p. 113 for an explanation of each type). Additionally, indirect fire attacks and Rapid-Fire weapons firing more than one shot cannot be aimed shots. Otherwise, any ranged weapon may be used.

When firing on an immobile 'Mech or vehicle (this includes grounded fighters or small craft that are shut down or whose warriors are unconscious), the attacking player can make an aimed shot by naming a target location. Against any hit location except a head, the player makes the to-hit roll using the standard –4 to-hit modifier for firing at an immobile target.

Aimed Shots: Players may make aimed shots against units that are shut down or whose warrior is unconscious, using any weapons other than missile launchers, LB-X autocannon firing cluster munitions, Hyper-Assault Gauss Rifles, or Rapid-Fire weapons firing more than one shot. When firing on an immobile 'Mech or vehicle (this includes grounded fighters or small craft that are shut down or whose warriors are unconscious), the attacking player can make an aimed shot by naming a target location. Against any hit location except a head, the player makes the to-hit roll using the standard –4 to-hit modifier for firing at an immobile target.

If the attack is successful, the player rolls again. On a result of 6, 7 or 8, his shot hits the designated location. For any other result, the player rolls normally on the appropriate Hit Location Table. (This roll may still result in the attack striking the desired location.)

If the attacker is taking an aimed shot at a target 'Mech's head, modify the to-hit number by +3 rather than the normal –4. If the shot hits, the player rolls 2D6. On a result of 6, 7 or 8, the shot hits the head. For any other result, roll normally on the 'Mech Hit Location Table.

Players cannot use the *Aimed Shots* rule to make physical attacks.

Targeting Computer: A warrior can use a targeting computer to make an aimed shot against an active target (see *Targeting Computer*, p. 143). If using a targeting computer to make an aimed shot against an immobile target, the player adds a –1 modifier (representing the targeting computer) to the –4 immobile target modifier. (All other rules remain the same.)

Attacks Against Large Support Vehicles and Grounded Small Craft

All weapon attacks against Large Support Vehicles (including Airships and Fixed-Wing craft) and grounded small craft receive a –1 to-hit modifier, while all physical attacks receive –2 to-hit modifier.

Firing at Grounded DropShips

Treat all weapon attacks against grounded DropShips as though firing at an immobile target, applying the standard –4 to-hit modifier (see *Firing at Immobile Targets*, above). See *Attacks by Grounded Aerospace Units*, page 249, for more information on making attacks against Grounded DropShips.

Non-Aerospace Units Firing at Airborne Aerospace Units

The number of Thrust Points expended by an aerospace unit, or the number of hexes entered, does not affect the to-hit modifier of any non-aerospace unit firing at an airborne aerospace unit (including grounded aerospace units).

Apply a +3 to-hit modifier against any aerospace unit at Altitude 1 (NOE), unless the attacking non-aerospace unit lies in the attack/flight path of the aerospace fighter, or within one hex of the flight path, in which case apply a +1 modifier. Players must take the angle of attack into account when firing at an airborne aerospace unit (see *Angle of Attack*, p. 236).

Jagatai, *Beta Galaxy (Clan Ghost Bear)*

Non-aerospace units firing at airborne aerospace units cannot fire at other non-aerospace units (including grounded aerospace units) in the same turn. Also, a non-aerospace unit cannot attack more than one airborne aerospace unit in a turn. See *Attacks by Grounded Aerospace Units*, page 249, for the exception.

For an extensive example of non-aerospace units attacking an airborne aerospace unit, see page 247 in the *Aerospace Units* section.

Airborne Non-Aerospace Units Firing at Airborne Aerospace Units: Airborne non-aerospace units (VTOL and WiGE vehicles, for example) firing at airborne aerospace units use all the standard rules for ground units.

Infantry: Unless the platoon has Special Feature "A" (see p. 215), or unless specifically stated otherwise by the rules for that unit, infantry cannot attack airborne aerospace units.

Firing at Buildings

Treat all weapon attacks against building hexes as though firing at an immobile target, applying the standard –4 to-hit modifier (see *Attacking Buildings*, p. 171).

LRM Indirect Fire

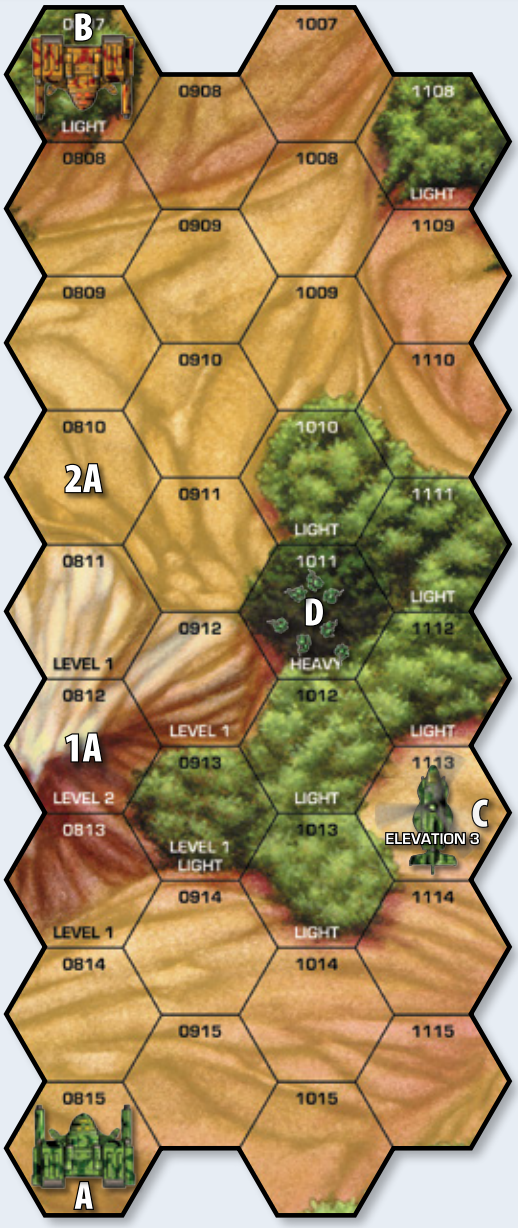
Units armed with LRM-type weapons may fire those missiles indirectly. Indirect fire allows a unit without a direct line of sight to a target to attack that target, though a friendly ground unit must have a valid line of sight to the target (this unit is referred to as the spotter). In order to serve as a spotter, the unit must not have charged or launched a Death From Above attack that turn. An attacker with a valid LOS to a target cannot make an LRM indirect fire attack, even if that attack would have a better to-hit modifier.

Resolve LRM indirect fire attacks in the turn they are launched. The base to-hit number is the firing unit's Gunnery Skill. Use the following modifiers:

- Range modifier based on the range between the target and the firing unit, including minimum range modifiers;
- +1 for indirect fire;
- All standard modifiers for target movement;
- All standard modifiers for attacker movement and a modifier for the spotter's movement (infantry have no attacker movement modifier for spotting);
- Terrain modifiers based on line of sight from the spotting unit; this includes the +1 modifier if partial cover exists between the spotting unit and the target. If no spotting unit is required (due to an attached Narc beacon, for example), no terrain modifiers apply. (Regardless of whether partial cover shields the target from either the spotting unit or the attacking unit, Damage Value groupings from LRM indirect fire always strike the target and not the partial cover, even if they hit a leg location. The exception is if the partial cover is provided by water: in this case, the indirect fire strikes the water and does no damage, unless it is an area effect weapon (see *Partial Cover*, p. 102, and *Area-Effect Weapon*, p. 113).

Finally, if a unit makes any attacks during the Weapon Attack Phase of a turn that it also spots for another unit, apply a +1 modifier to those attacks, as well as a +1 modifier to the indirect fire attack. If the spotting unit makes no attacks, do not apply these additional modifiers. The spotter can spot for any number of attacking units to a single target, but it cannot spot for multiple targets.

Aerospace Units: Aerospace units (with the exception of grounded spheroid DropShips) cannot spot for LRM indirect fire unless they strike a target with Target Acquisition Gear (since TAG automatically spots the target for indirect fire as well).



• LRM INDIRECT FIRE DIAGRAM •

In the LRM Indirect Fire Diagram above on the Woodland map, Controlling Player 1 has walked his 'Mech into Hex A, and wishes to attack the enemy 'Mech in the light woods Hex B; the enemy 'Mech did not move this turn. Normally, as the LOS between the attacker and target passes through a hex whose elevation is equal to or greater than either unit (the Level 2 hill in Hex 1A), neither 'Mech could attack the other. However, the 'Mech in Hex A mounts LRMs and the 'Mech in Hex B is within their range. Player 1 also has two friendly units on the board that have LOS to the target: the VTOL in Hex C (which expended Flanking MP this turn) and the infantry in Hex D that did not move this turn. The player can choose which of these units will spot for LRM indirect fire.

For VTOL spotting, the modified to-hit number is 11: 4 (´Mech A's Gunnery Skill) + 2 (medium range for the LRMs) +1 (indirect fire modifier) +1 ('Mech A walked) + 2 (VTOL spent Flanking MP this turn) +1 (light woods in target hex) = 11.

For infantry spotting, the modified to-hit number is 10: 4 (´Mech A's Gunnery Skill) + 2 (medium range for the LRMs) +1 (indirect fire modifier) +1 ('Mech A walked) +1 (intervening light woods between spotter and target) +1 (light woods in target hex) = 10.

Even though the infantry is spotting through an extra intervening light woods hex compared to the spotting VTOL, because the attacker movement modifier does not apply to infantry units, the spotting infantry has a better modified to-hit number. If Player 1 chose to have the infantry spot for the LRM indirect fire and make an attack of its own, a +1 to-hit modifier would apply to the indirect attack (making the Modified To-Hit Number 11) and to the attack by the infantry unit.

If the target occupied Hex 2A, it would lie within the LRM's minimum range. Assuming the infantry spotted again, the modified to-hit number would be 8: 4 (´Mech A's Gunnery Skill) +0 (short range for the LRMs) +2 (6 [minimum range] – 5 [target range] + 1 = 2 [minimum range modifier]) +1 (indirect fire modifier) +1 ('Mech A walked) = 8.

Clearing Woods

Units can use weapon attacks to clear wooded hexes. Each type of woods hex is rated to describe the damage it can withstand.

The Terrain Factor (TF) determines the number of damage points a woods hex can take before being reduced from heavy to light, or cleared of trees completely (the fallen trees convert the hex to rough rather than clear terrain). Regardless of when it occurs, this damage is tracked across a game until the TF of the woods hex drops below the threshold required to reduce the woods.

TERRAIN FACTOR AND CONVERSION TABLE

Terrain Factor	Former Terrain	New Terrain
Heavy Woods: 90	Heavy Woods	Light Woods
Light Woods: 50	Light Woods	Rough
Rough: 0	All others	No change

Regardless of a woods hex's current Terrain Factor, its type does not change until the TF falls below the value of the reduced hex shown on the Terrain Factor column of the Terrain Factor and Conversion Table. For example, a heavy woods hex that takes 35 points of damage remains a heavy woods hex; if the same hex takes 6 more points of damage it is automatically reduced to light woods. A heavy woods hex can be changed to a rough hex in a single Weapon Attack Phase, provided enough damage is inflicted.

Finally, clearing woods requires a conscious effort. If an attack against a unit passes through or into wooded hexes, the attack does not reduce that hex's TF.

Area-Effect Weapons: As Area-Effect weapons target the hex, AE weapons always damage a woods hex; double the Damage Value of these weapons against woods hexes.

Cluster Weapons: For weapons that use the Cluster Hits Table, use the weapon's total Damage Value.

Infantry: Infantry cannot clear woods.

LOS: When trying to clear a woods hex, treat the woods as a standing 'Mech. If the "'Mech" would have partial cover from the attack (see p. 102), than the attacker cannot attempt to clear the woods.

A ForestryMech clears back undergrowth to allow a Davion military caravan quick passage along a seldom used road.

PRONE 'MECHS

Prone 'Mechs may still make weapon attacks. Because they are largely stationary, they also often make better targets.

Firing When Down

A 'Mech that has fallen or dropped to the ground may fire some of its weapons as long as neither of its arms has been destroyed. The warrior uses one arm to support the 'Mech as it fires, and so the weapons on that arm cannot fire. The warrior may fire all weapons mounted on the other arm, and the 'Mech may fire any weapons mounted in its head or torso (including rear-mounted weapons). A prone 'Mech may not fire any leg-mounted weapons.

Add a +2 to-hit modifier for firing when down, in addition to any other standard modifiers. For example, if a 'Mech runs and then drops prone, it receives a +4 to-hit modifier for any attacks (+2 modifier for running + 2 for firing when prone = 4), in addition to any other modifiers that might apply.

Four-Legged 'Mechs: A prone four-legged 'Mech (provided it has 4 legs, and has taken no hip critical hits) fires as though it were standing; the +2 to-modifier does not apply.

Attacking Prone Targets

A 'Mech that has fallen or dropped prone makes an easier target for an opponent in an adjacent hex and a more difficult target at longer ranges.

Apply a –2 modifier to the to-hit number of any physical or weapon attack made against a prone 'Mech from an adjacent hex. Add a +1 to-hit modifier for all other attacks made against a prone 'Mech. Both modifiers are in addition to any other standard modifiers. For example, if a 'Mech runs seven hexes and then drops prone, it receives a +4 to-hit modifier for attacks made by non-adjacent units (+3 for entering seven hexes + 1 for firing at non-adjacent prone 'Mech = 4), or a +1 to-hit modifier for attacks made by adjacent units (+3 for entering seven hexes – 2 for firing at an adjacent prone 'Mech = 1). In both instances, these modifiers are cumulative with any other modifiers that might apply.

WEAPONS AND EQUIPMENT

Once a player has determined the to-hit modifiers for terrain, target and attacker movement and so on—as well as the modifiers for any specialized attacks—the player then determines if the weapon also has additional special effects.

To fire a weapon at a target, the player should determine if the weapon in question has additional to-hit modifiers, or other special rules that might affect the way it is fired or interacts with the target, before making the final to-hit roll. These special rules might include other equipment tied to the weapon that can also affect to-hit modifiers, how the weapon is fired and interacts with the target and so on. Look on the unit's record sheet to verify what weapon is being fired and then consult the Weapons and Equipment tables beginning on p. 303**.** Remember to look on the appropriate technology table, Inner Sphere or Clan. The player should also consult the appropriate unit table (battle armor and aerospace units have their own tables). All the tables use a standardized abbreviation (found in the *Type* column, directly to the right of the *Item* column) for the type of weapon used: direct-fire energy, missile, rapid-fire and so on. The type of weapon determines what additional effects the weapon may have beyond a simple "point and fire." Additional rules, if any, are noted on the table.

Players should also consult *Other Combat Weapons and Equipment* (see p. 129) at the end of this section, to determine if any other equipment the unit may carry might affect the weapon(s) the attacker is firing, or affect any weapon attacks against the unit. Finally, the player should consult with the target unit's controlling player to determine if the target unit mounts any equipment that might affect the attack.

Below is a complete list of abbreviations, along with the description of the weapons' effects. Many weapons fall under multiple types, so make sure to verify the various effects of each weapon.

- **AE: Area-Effect Weapon.** Area-effect weapons damage all units in the target hex. Some AE weapons can also damage all the surrounding hexes adjacent to the target hex. Area-effect weapons always deal their full damage to each trooper in a battle armor unit, and deal double damage to conventional infantry (this damage doubles again if the conventional infantry unit is located in a clear hex). If an area-effect weapon strikes a water hex, treat the water hex as though it were a building hex and resolve damage as appropriate. For example, an AE weapon that damages a single water hex would apply its standard damage to all units on the surface of that water hex (this includes any hover vehicles in that hex), while it would deal half its standard damage (round up) one elevation above the surface of the water (which would damage a WiGE Vehicle, if it were in the target hex), and Depth 1 below the surface of the water. See *Resolving Damage*, p. 173, for full details.
- **C: Cluster Weapon.** Cluster weapons roll on the Cluster Hits Table to determine damage, with each type of weapon dividing its damage into different Damage Value groupings. The groupings are then assigned separate hit locations (see *Cluster Hits*, p. 116). LB-X weapons may fire as a direct-fire ballistic or cluster weapon.
- **DE/DB: Direct-Fire Energy or Ballistic Weapon.** These weapon types (except flamers and machine guns) can use a targeting computer when making attacks (see *Targeting Computer*, p. 143).
- **P: Pulse Weapon.** Apply a –2 to-hit modifier to all weapon attacks. This weapon type can use a targeting computer when making attacks, except for aimed shots (see *Targeting Computer*, p. 143).
- **H: Heat-Causing Weapon.** This weapon type may inflict additional heat, damage or both—the additional heat applies to 'Mechs and aerospace fighters/small craft only, as indicated in the notes on the appropriate Weapon and Equipment tables (see also *Outside Heat Sources* in the *Heat* section, p. 159, for the effects of such weapons).
- **M: Missile Weapon.** Missile weapons use the following rules:
  - Missile weapons deliver damage equal to the number of individual missile hits, times the damage per missile (abbreviated as "X/Msl" on the Weapon and Equipment tables, where "X" is the damage of each missile).
  - Once the attacker has determined the specific number of missiles that struck the target by rolling on the Cluster Hits Table, missile weapons divide the damage

that actually struck the target into specific Damage Value groupings before assigning them to the target; the specifics of how each missile weapon determines its Damage Value groupings are indicated in the Damage column on the appropriate Weapons and Equipment tables. The number to the left of the slash indicates the maximum damage per grouping. The number to the right of the slash indicates what column of the Cluster Hits Table is used (see *Cluster Hits*, p. 116).

- **R: Rapid-Fire (Multi-Firing) Weapon.** Rapid-fire weapons use the following rules:
  - Rapid-fire weapons may fire more than one shot in a single Weapon Attack Phase. The number after "R" in the Damage column of the appropriate Weapons and Equipment tables indicates the total number of rapid-fire shots that can be made (for example, an R2 weapon may fire one or two shots in a single turn, while an R6 weapon may fire anywhere from one to six shots in a single turn).
  - When using the rapid-fire option, the weapon consumes ammo and creates heat equal to the shots fired, times the single-shot ammo/heat costs.
  - Each time a rapid-fire weapon fires more than a single shot in a single turn, the weapon may jam, making it useless for the rest of the game (see *Rotary Autocannon*, p. 140, for the exception); the shots are still fired, however. When firing two or three shots, if the to-hit roll result is a 2, the weapon is useless for the rest of the game; for every two additional shots fired, add 1 to that number. This means that for two or three shots, the jamming only occurs on a to-hit result of 2, for four to five shots the jamming occurs on a to-hit result of 3 or less, and so on.
  - Rapid-fire weapons deliver damage as cluster weapons, resolved using the appropriate column of the Cluster Hits Table (see *Cluster Hits*, p. 116). Each Damage Value grouping is based on the single-shot damage of the rapid-fire weapon (abbreviated as "Sht" on the Weapon and Equipment tables).
  - A rapid-fire weapon is *only* a cluster weapon, and so the attacker rolls on the Cluster Hits Table when making an attack that fires more than a single shot.
  - Rapid-fire weapons can use a targeting computer when making attacks, but cannot use the targeting computer to make an aimed shot if firing more than one shot in a turn (see *Targeting Computer*, p. 143).
- **V: Variable Damage Weapon.** Damage declines over range, assigned in order of short to long (V25/20/10 = 25 damage points at short range, 20 at medium, 10 at long).
- **AI: Anti-Infantry Weapon.** Anti-infantry weapons deliver special damage to conventional infantry in place of standard damage (see *Burst-Fire Weapons* under *Attacks Against Conventional Infantry*, p. 215).
- **OS: One-Shot Weapon.** One-shot weapons can only be fired once in a scenario. The single shot carried by an OS launcher may be of any munition type available to that launcher type. OS type weapons do not explode due to critical hits or excess heat.
- **PB: Point-Blank Weapon.** Point-blank weapons can only be used against targets in the same or adjacent hexes.
- **E: Electronics.** ECM systems may jam electronic equipment (see *ECM Suite*, p. 134). Any Type E item may be turned either on or off in the End Phase of a turn.
- **CE: Counter-Electronics.** These systems negate electronics noted as "E" (see *ECM Suite*, p. 134).
- **T: Targeting System.** This equipment allows for better targeting (see *Targeting Computer*, p. 143).
- **S: Switchable Ammo Supply.** This type of weapon may choose from multiple ammo types (see *Special Munitions,* p. 140).
- **PE: Performance Enhancement.** This equipment is designed to enhance the performance of a specific aspect of a unit, such as improving its speed.
- **F: Flak.** When used against a unit that presently has an Altitude or Elevation, or that expended any VTOL or WiGE MP or Thrust Points that turn (even if it landed at the end of that Movement Phase), apply a –2 to-hit modifier in addition to any other modifiers such weapons might convey. However, flak conveys no bonus above low altitude.
- **X: Explosive Weapon.** Weapon explodes when damaged (see *Gauss Rifle*, p. 135).

TO-HIT ROLL

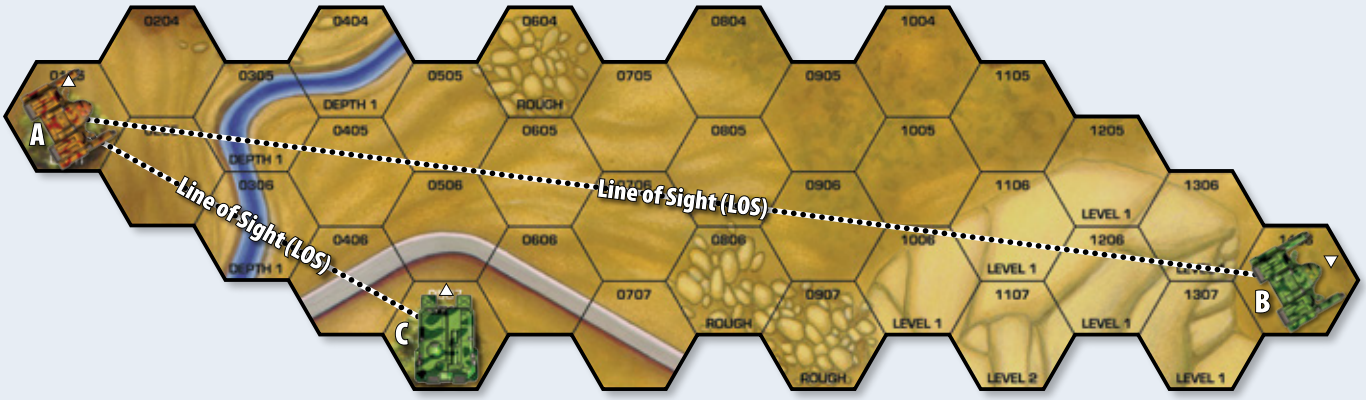
Once the player has determined all the modifiers for the attack (including any special effects provided by the weapon or other equipment mounted by the attacker or target), he makes a to-hit roll. For each weapon attack, the player rolls 2D6. If the result is equal to or greater than the modified to-hit number, the attack succeeds.

Players choose the order in which they resolve the to-hit rolls for all their unit's announced attacks; resolve all attacks against one target before moving on to attacks by the same unit against another target. From turn to turn this order can differ at the player's discretion. For example, in Turn 1, the controlling player of an AS7-D *Atlas* fires all its forward-mounted weapons. He chooses to make the to-hit roll first for the AC/20, then the SRM-6, then the two medium lasers and finally the LRM-20. The player may also fire the rear-mounted medium lasers at a second target, but he must first resolve all the aforementioned weapons fire against the first target. In Turn 2, after announcing that he is firing all the *Atlas*' forward-mounted weapons again, the controlling player can decide to resolve the to-hit roll for the LRM-20 first, then the SRM-6, then two medium lasers, then the AC/20 and finally the rear medium lasers.

In practice, to avoid confusion and ease the tracking of which to-hit rolls have been resolved and which remain, most players simply start at the top of a unit's Weapon and Equipment Inventory on the record sheet and resolve to-hit rolls top to bottom. They need not stick to this order, however.

After looking through the TechManual*, Ray created a new configuration for the* Daishi *OmniMech in* Technical Readout: 3050 Upgrade*—the* Daishi X*, which mounts the following weapons and equipment:*

- *Ultra AC/10*
- *Large Pulse Laser*
- *2 ER Micro Lasers*
- *Heavy Medium Laser*
- *LB 5-X AC*
- *Streak SRM-2*
- *SRM-4 with Artemis IV FCS*
- *ATM-6*
- *LRM-15 with Artemis IV FCS*
- *Targeting computer*



• TO-HIT ROLL DIAGRAM •

Ray takes his creation into a game on the BattleForce 2 map, piloted by a MechWarrior with Gunnery Skill 4, as shown on the To-Hit Roll diagram. During the Movement Phase (Ground) of a turn, Ray walked the 'Mech to enter Hex A, while the enemy tank in the light woods Hex C moved two hexes and the enemy 'Mech in Hex B moved five hexes. During the Weapon Attack Phase of the same turn, Ray decides to fire all his weapons. The weapons can reach the vehicle in Hex C, but Ray considers the 'Mech in Hex B a much more dangerous enemy. Even though it is further away and harder to hit, he nominates the enemy 'Mech as his own 'Mech's primary target, while the enemy vehicle becomes the secondary target. He also decides to torso twist to the right to bring the enemy vehicle into his front firing arc, so that all the weapons mounted in his left arm can strike the vehicle as well.

With a Clan Weapons and Equipment Table at hand, Ray gets to work figuring out his to-hit numbers; he has already determined that he has LOS to both targets.

The range to the enemy 'Mech is thirteen hexes, which means the following weapons can strike that target: Ultra AC/10 (long range), Large Pulse Laser (medium range), LB 5-X AC (medium range) and LRM-15 (medium range). Looking at the ATM (after reviewing its description in the Other Combat Weapons and Equipment section, p. 129), he knows that because he mounted three tons of ammunition for the ATM-6 and designated each ton a different type of submunition before play began, he can use either standard, ER or HE ammo. He cannot use the HE ammo if he wants to attack the 'Mech, as the range is only 9. If he uses standard ammo (which inflicts more damage than extended-range ammo), the weapon will fire at long range, while the ER ammo fires at medium range.

The range to the enemy vehicle is four hexes. After thinking about it, Ray decides to switch the ATM to target the vehicle and use HE ammo (medium range). He can also fire the rest of his weapons at the vehicle: Heavy Medium Laser (medium range), Streak SRM-2 (short range), SRM-4 (medium range) and two ER Micro Lasers (long range).

After carefully looking at each weapon on the Weapons and Equipment Table (and reviewing the Other Combat Weapons and Equipment section) to make sure he has all the applicable modifiers for the various weapon types in mind, Ray determines the modified to-hit numbers for his weapons.

Against the 'Mech:

- *The Ultra AC/10 has a Modified To-Hit Number of 11: 4 (Gunnery Skill) + 4 (long range) +1 (attacker movement) + 2 (target movement) +1 (partial cover) – 1 (targeting computer) = 11.*
- *The large pulse laser has a Modified To-Hit Number of 7: 4 (Gunnery Skill) + 2 (medium range) +1 (attacker movement) + 2 (target movement) +1 (partial cover) – 2 (pulse weapon modifier) – 1 (targeting computer) = 7.*
- *The LB 5-X AC has a Modified To-Hit Number of 9: 4 (Gunnery Skill) + 2 (medium range) +1 (attacker movement) + 2 (target movement) +1 (partial cover) – 1 (LB-X firing cluster ammo) = 9.*
- *The LRM-15 has a Modified To-Hit Number of 10: 4 (Gunnery Skill) + 2 (medium range) +1 (attacker movement) + 2 (target movement) +1 (partial cover) = 10.*

Against the vehicle:

- *The Streak SRM-2 has a Modified To-Hit Number of 7: 4 (Gunnery Skill) + 0 (short range) +1 (attacker movement) + 0 (target movement) +1 (light woods) +1 (secondary target modifier) = 7.*
- *The SRM-4 has a Modified To-Hit Number of 9: 4 (Gunnery Skill) + 2 (medium range) +1 (attacker movement) + 0 (target movement) +1 (light woods) +1 (secondary target modifier) = 9.*
- *The ATM-6 has a Modified To-Hit Number of 9: 4 (Gunnery Skill) + 2 (medium range) +1 (attacker movement) + 0 (target movement) +1 (light woods) +1 (secondary target modifier) = 9.*
- *The two ER micro lasers each have a Modified To-Hit Number of 10: 4 (Gunnery Skill) + 4 (long range) +1 (attacker movement) + 0 (target movement) +1 (light woods) +1 (secondary target modifier) – 1 (targeting computer) = 10.*
- *The heavy medium laser has a Modified To-Hit Number of 9: 4 (Gunnery Skill) + 2 (medium range) +1 (attacker movement) + 0 (target movement) +1 (light woods) +1 (secondary target modifier) +1 (heavy laser modifier) – 1 (targeting computer) = 9.*

Everyone's jaw hits the floor as Ray makes a successful to-hit roll for all weapons to both targets!

Cluster Hits

If a weapon includes a "C" in its Type column on the appropriate Weapons and Equipment Table, it is a cluster weapon. Use the following rules after each successful to-hit attack against a target using a cluster weapon.

On a successful attack, the player determines what size weapon was fired (or the number of shots fired for a rapid-fire weapon), rolls 2D6 and compares the result to the appropriate column of the Cluster Hits Table (see below). First, find the weapon size (or number of shots) fired on the top row of the table; for example, the 4 column for an SRM-4, the 6 column for a Rotary AC/5 rapid-firing six shots, the 12 column for an ATM-12, the 30 column for an MRM-30 and so on. Cross-reference this number to the die roll result in the left column. The result is the actual number of individual shots (whether rounds from an Ultra autocannon, missiles, flechettes from an LB-X autocannon and so on) that hit the target. Unless otherwise noted, once the number of shots is known, the player rolls a separate hit location for each shot.

Some advanced weapon systems modify this roll to reflect their greater accuracy (see *Other Combat Weapons and Equipment*, p. 113).

Anti-Missile System: The target's anti-missile systems may reduce the number of missiles from a missile launch (see *Other Combat Weapons and Equipment*, p. 129).

Infantry: Infantry also use the Cluster Hits Table to resolve damage (see *Infantry Combat* section, p. 214).

From the To-Hit Roll diagram and example, Ray notes that the LRM-15, SRM-4 and ATM-6 each have a "C" in the Type column on the Weapons and Equipment Table. After reviewing Cluster Weapons under Weapons and Equipment (see p. 113), he knows that those weapons always use the Cluster Hits Table to determine how much damage actually strikes the target.

He also notes that the Ultra AC/10 and LB 5-X both have a "C" in the Type column, but they also have a "DB" (Direct-Fire Ballistic) annotation (plus an R2 notation for the Ultra AC/10). After reviewing the appropriate sections, he knows he can fire both weapons either as direct-fire ballistic or cluster weapons. He had already chosen to switch the ammo supply on the LB 5-X to cluster ammo in order to get the –1 to-hit modifier, and so he must now use the Cluster Hits Table. For the Ultra AC/10, R2 means he can fire a single shot or two shots in the same turn; if he fires two shots, he must use the Cluster Hits Table (Ray made this decision before the to-hit roll, and so he will use the Cluster Hits Table for this weapon as well).

Finally, he notes that while a Streak SRM launcher applies the damage from each missile to a separate location, it does not apply its damage using the Cluster Hits Table; if the to-hit roll succeeds, all the missiles strike the target.

Once again, after a review of the appropriate tables, Ray determines the exact damage his cluster weapons inflict against each target by rolling 2D6 for each weapon and comparing the result to the appropriate column of the Cluster Hits Table.

Against the 'Mech:

- *Roll result for the Ultra AC/10 is a 4; only one 10-point Damage Value shot strikes the target.*
- *Roll result for the LB 5-X AC is a 5; three 1-point Damage Value flechettes strike the target.*
- *Roll result for the LRM-15 is a 7; Ray applies a +2 modifier for the Artemis IV FCS and gets a total of 9, meaning twelve missiles strike the target.*

Against the vehicle:

- *Roll result for the SRM-4 is a 2; Ray applies a +2 modifier for the Artemis IV FCS and gets a total of 4, meaning two missiles strike the target.".*
- *Roll result for the ATM-6 is a 9; Ray applies a +2 modifier for the integral Artemis IV FCS and gets a total of 11, meaning all six missiles strike the target.*

CLUSTER HITS TABLE

Die Roll (2D6)	Weapon Size																												
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40
2	1	1	1	1	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10	12
3	1	1	2	2	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10	12
4	1	1	2	2	3	3	4	4	4	5	5	5	6	6	7	7	8	8	9	9	9	10	10	10	11	11	11	12	12	18
5	1	2	2	3	3	4	4	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
6	1	2	2	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
7	1	2	3	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
8	2	2	3	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
9	2	2	3	4	5	6	6	7	8	9	10	11	11	12	13	14	14	15	16	17	18	19	20	21	21	22	23	23	24	32
10	2	3	3	4	5	6	6	7	8	9	10	11	11	12	13	14	14	15	16	17	18	19	20	21	21	22	23	23	24	32
11	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40
12	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40

ATTACK MODIFIERS TABLE

All Attacks: Weapons and Physical	Modifier
Attacker	
*Movement (modifiers are cumulative)**	
Stationary	None
Walked/Cruised	+1
Ran/Flanked	+2
Jumped	+3
Prone	+2 (does not apply to four-legged 'Mechs)
Skidding	+1
Terrain *(modifiers are cumulative)*	
Light Woods	+1 per intervening hex; +1 if target in light woods
Heavy Woods	+2 per intervening hex; +2 if target in heavy woods
Water**	
Depth 1	+1; see *Partial Cover*, p. 102
Depth 2	Underwater units cannot target units that are not underwater (see *Terrain Modifiers*, p. 108).
Partial Cover	+1; see *Partial Cover*, p. 102
Target *(modifiers are cumulative)*	
Prone	–2 from adjacent hex; +1 from all others†
Immobile	–4 (Includes Grounded DropShips)
Skidding	+2
Movement	
Moved 0–2 hexes	0
Moved 3–4 hexes	+1
Moved 5–6 hexes	+2
Moved 7–9 hexes	+3
Moved 10–17 hexes	+4
Moved 18–24 hexes	+5
Moved 25+ hexes	+6
Jumped/Airborne (non-aerospace units)	+1 additional
Battle armor unit (only applies to non-infantry attackers)	+1
Airborne aerospace unit at Altitude 1 (NOE) (attacker in attack/flight path)	+1
Airborne aerospace unit at Altitude 1 (NOE) (attacker not in attack/flight path)	+3

Weapon Attacks Only	Modifier
Attacker	
'Mech Damage	
Sensor hit	+2
Shoulder hit	+4 for weapons in arm, disregard other damaged actuators in arm
Upper or lower arm actuator (each)	+1 for weapons in arm

*Does not apply to infantry units.
**See *Terrain Modifiers*, p. 107, for exceptions.
***If the IndustrialMech mounts advanced fire control, this modifier does not apply.
† Does not necessarily apply to Four-legged 'Mechs (see *Firing When Down*, p. 113).

ATTACK MODIFIERS TABLE (CONTINUED)

Weapon Attacks Only	Modifier
Heat	
0–7	None
8–12	+1
13–16	+2
17–23	+3
24+	+4
Making indirect LRM attack	+1
Attacker is IndustrialMech***	+1
Grounded DropShip	–2
Range and Terrain	
Range	
Short	None
Medium	+2
Long	+4
Minimum range	[Minimum] – [Target Range] +1 (see *Minimum Range Modifier*, p. 109)
Each Intervening Hex/Level between Attacker and Target (as well as target's hex) in same multi-hex building	+1 per hex/level (maximum +3; see *Combat Within Buildings*, p. 175)
Target	
Secondary target in forward arc	+1
Secondary target in side or rear arc	+2
Large Support Vehicle or Grounded Small Craft	–1

Physical Attacks Only	
Attacker	
'Mech Damage	
Shoulder hit	No punching or physical weapon attack with arm; no clubbing attacks; +2 to pushing attack (each)
Upper or lower arm actuator hit (each)	+2 to punching and physical weapon attack with arm; half damage for punching attack with arm; +2 to clubbing attacks
Hand actuator hit	+1 to punching attack with arm; no clubbing attacks; no physical weapon attack with arm
Hip actuator hit	No kicking attacks
Upper or lower leg actuator hit (each)	+2 and half damage to all kick attacks
Foot actuator hit	+1 to all kick attacks
Target	
Infantry	+3 to kicking and death from above attacks
Large Support Vehicle or Grounded Small Craft	–2
Other Modifiers	
Charging attack: Modify for relative Piloting Skills (see p. 40)	
Death from above attack: Modify for relative Piloting Skills (see p. 40)	

*Does not apply to infantry units.
**See *Terrain Modifiers*, p. 107, for exceptions.
***If the IndustrialMech mounts advanced fire control, this modifier does not apply.
† Does not necessarily apply to Four-legged 'Mechs (see *Firing When Down*, p. 113).

'MECH HIT LOCATION TABLE

Die Roll (2D6)	Biped (Four-legged) Left Side	Front/Rear	Right Side
2*	Left Torso [critical]	Center Torso [critical]	Right Torso [critical]
3	Left Leg (Left Rear Leg)	Right Arm (Right Front Leg)	Right Leg (Right Rear Leg)
4	Left Arm (Left Front Leg)	Right Arm (Right Front Leg)	Right Arm (Right Front Leg)
5	Left Arm (Left Front Leg)	Right Leg (Right Rear Leg)	Right Arm (Right Front Leg)
6	Left Leg (Left Rear Leg)	Right Torso	Right Leg (Right Rear Leg)
7	Left Torso	Center Torso	Right Torso
8	Center Torso	Left Torso	Center Torso
9	Right Torso	Left Leg (Left Rear Leg)	Left Torso
10	Right Arm (Right Front Leg)	Left Arm (Left Front Leg)	Left Arm (Left Front Leg)
11	Right Leg (Right Rear Leg)	Left Arm (Left Front Leg)	Left Leg (Left Rear Leg)
12	Head	Head	Head

*A result of 2 may inflict a critical hit. Apply damage to the armor in that section in the normal manner, but the attacking player also rolls once on the Determining Critical Hits Table, p. 124.

HIT LOCATION

When an attack hits its target, the firing player must determine precisely where the attack struck. Hit location is determined by the attack direction and the target's facing.

Attack Direction

When an attack hits a non-infantry unit, it hits from the target's front, rear, left or right side. Lay a straightedge from the center of the attacker's hex to the center of the target's hex. Compare the hexside crossed by the straightedge to the appropriate unit diagram to find the side of the unit hit by the attack. If the straightedge crosses at the intersection of two hexsides, the target chooses which side is hit by the attack before the attacking player makes the hit location roll.

'Mechs: Use the 'Mech Attack Direction Diagram, above. To determine which side of a 'Mech is hit, use the facing of a standing 'Mech's feet to determine its front side, regardless of torso twist. If the target 'Mech is prone, use the hexside toward which its head is pointing as its facing.

• 'MECH ATTACK DIRECTION DIAGRAM (WHITE HEXES = TARGET'S CHOICE) •

ProtoMechs: Regardless of attack direction, ProtoMechs use only a single Hit Location Table (see p. 185).

Vehicles: Use the Vehicle Attack Direction Diagram, page 192. The side on which a vehicle is hit depends on the alignment of its front side.

Grounded Aerospace Units: Grounded aerospace units use slightly different attack direction diagrams (see *Attacks By Grounded Aerospace Units*, p. 249).

Non-Aerospace Units to Airborne Aerospace Units: Use the Above/Below column on the Aerospace Units Hit Location Table p. 237 for attacks from non-aerospace units (including grounded aerospace units) to airborne aerospace units.

Infantry and Buildings: Hits on infantry and buildings do not rely on attack direction. Players who make a successful attack against these targets need not determine attack direction or hit location. Detailed explanations for assigning damage to infantry and buildings appear in their respective sections.

In the To-Hit Roll diagram and example on p. 115, Ray draws a straight line between the center of Hex A (where his 'Mech is located) to the centers of Hex B and C to determine attack directions. After looking at the attack direction diagram for the 'Mech above, Ray determines that the attacks cross the left side, meaning that all his attacks against the 'Mech will use the Left Side column of the 'Mech Hit Location Table. After consulting the attack direction diagram for the ground Combat Vehicle (see p. 192), Ray determines that the attacks cross the vehicle's left side as well, and so all his attacks against the vehicle will use the Left Side column of the Ground Combat Vehicle Hit Location Table.

Determining Hit Location

To determine the exact location of a hit, the player rolls 2D6 and consults the appropriate column of the Hit Location Table for each unit type. 'Mechs use the 'Mech Hit Location Table, above (specific locations for four-legged designs appear in parentheses on the table); other units have their own Hit Location tables, found in their respective sections.

As with resolving to-hit rolls, the players choose the order in which they determine hit locations (and resolve damage to the target) for all of their unit's announced attacks. From turn to turn, players can change this order. However, to avoid confusion and ease the tracking of which hit locations and damage have been resolved, most players simply resolve hit locations and target damage in the same order that they resolved to-hit rolls—starting at the top of a unit's Weapon and Equipment Inventory on the record sheet and moving to the bottom.

Cluster Weapons: As defined under *Weapons and Equipment* (see p. 113), cluster weapons assign their damage as follows:

- **LB-X Weapons:** If an LB-X weapon is fired as a cluster weapon (using cluster munitions, rather than acting as a direct-fire ballistic weapon and using standard munitions), once the actual Damage Value that struck the target is determined, the controlling player makes a different hit location roll for each 1-point Damage Value grouping.
- **Missile Weapons:** Once the Damage Value that actually struck the target is determined, the division of damage into Damage Value groupings and their assignment to the target depend on weapon type, as described under *Weapons and Equipment*, p. 113. Any time damage remaining from a cluster weapon attack does not equal the Damage Value as indicated in the Damage column of the appropriate Weapons and Equipment tables, this leftover damage is assigned to the target as its own "remainder" grouping.
- **Rapid-Fire Weapons:** If a rapid-fire weapon is used as a cluster weapon (firing multiple shots in a single use rather than firing a single shot), once the controlling player has determined the actual Damage Value that struck the target, he makes a different hit location roll for each Damage Value grouping (each grouping is based on the single-shot damage of the rapid-fire weapon, abbreviated as "Sht" on the Weapon and Equipment tables).

Grounded Aerospace Units: Aerospace Units Hit Location Tables appear in *Aerospace Units*, page 237.

Non-Aerospace Units to Airborne Aerospace Units: Aerospace Units Hit Location Tables appear in *Aerospace Units*, p. 237; use the Above/Below column.

ProtoMechs: ProtoMech Hit Location Tables appear in *ProtoMechs*, page 185.

Vehicles: Vehicle Hit Location Tables appear in *Combat Vehicles and Support Vehicles*, pages 193 and 206, respectively.

Now it's time for Ray to determine the locations struck for each weapon from the To-Hit Roll diagram and example. He knows cluster weapons have specific rules when determining location, and so he determines hit locations for the non-cluster weapons first (not because he has to—he knows he can choose any order—but simply because it's easier right now).

Against the 'Mech:

- *Hit Location result for the Large Pulse Laser is a 4: 10 points of damage are applied to the left arm.*
- *Hit Location result for the Ultra AC/10 is a 3, meaning a left-leg location. Because the target has partial cover, the attack strikes the terrain instead of the 'Mech, and so the 10 points of damage is lost (even though the Ultra AC/10 rolled on the Cluster Hits Table because it fired two shots, the damage of each shot always equals the standard Damage Value of the weapon).*

Against the vehicle:

- *Hit Location result for the first ER Micro Laser is a 7: 2 points of damage are applied to the left side.*
- *Hit Location result for the second ER Micro Laser is an 11: 2 points of damage are applied to the turret.*
- *Hit Location result for the Heavy Medium Laser is a 9: 10 points of damage are applied to the rear.*

Next, Ray moves on to the cluster weapons.

For the LB-X AC, Ray knows that cluster ammo is always applied as 1-point Damage Value groupings against the target.

For the LRM and its twelve-missile Damage Value, Ray looks at the Damage Column of the Clan Weapons and Equipment Table, and finds the following annotation: 1/Msl, C5/15. From consulting the Weapons and Equipment Type abbreviations section, Ray knows that those abbreviations mean each missile does 1 point of damage (1/Msl) and that each Damage Value grouping is no more than 5 points (C5); he's already aware that fifteen missiles are fired as a single shot because this weapon is an LRM-15 (the second part of the "C5/15" abbreviation). With 12 points of damage, and no more than 5 points assigned to a single Damage Value grouping, that leaves Ray with two Damage Value groupings of 5 and one grouping of 2 to assign to the target.

For the Streak SRM-2 and SRM-4, the annotations in the Damage Value column are as follows, respectively: "2/Msl, C2/2" and "2/Msl, C2/4." This means that for both weapon systems each missile delivers 2 points of damage, and that the Cluster Damage Value is always 2 no matter how many missiles strike the target.

Finally, for the ATM-6 HE ammo, the annotation in the Damage Value column is the following: 3/Msl, C5/6. As all six missiles struck the target, the total Damage Value is 18 points: 3 (Damage Value of each missile) x 6 (number of missiles that struck the target). That means Ray has three 5-point Damage Value groupings and one 3-point Damage Value grouping.

With all that in mind, he makes the following rolls to determine hit location.

Against the 'Mech:

- *Hit location results for the LB 5-X AC are 5, 9 and 12; a 1-point Damage Value grouping is assigned to the left arm, right torso and head (the 12 result will cause a Consciousness Roll).*
- *Hit location results for the LRM-15 are 7, 6 and 8; a 5-point Damage Value grouping is assigned to the left torso, the second 5-point grouping strikes the hill and does no damage, and the final 2-point grouping is assigned to the center torso.*

Against the vehicle:

- *Hit location results for the Streak SRM-2 are 5 and 6; a 2-point Damage Value grouping is assigned to the front and side.*
- *Hit location results for the SRM-4 are 11 and 11; two 2-point Damage Value groupings are assigned to the turret.*
- *Hit location results for the ATM-6 are 4, 8, 9 and 12; two 5-point Damage Value groupings are assigned to the left side, the third 5-point grouping is assigned to the rear and the 3-point grouping is assigned to the turret (the hit location roll results of 8 and 12 will cause automatic rolls on the Ground Combat Vehicle Critical Hits Table).*

DAMAGE

Each attack that hits the target does damage to the target. Every weapon does a specific amount of damage, defined as Damage Value, which appears under the Damage Value column on the appropriate Weapons and Equipment tables, beginning on page 303.

Cluster Weapon: Certain weapons use the Cluster Hits Table, and can hit multiple locations. Each cluster is resolved as its own separate hit.

Underwater Units: Whenever an underwater unit takes a hit that inflicts damage, the controlling player rolls 2D6. On a result of 10 or greater, the unit's hull has been breached. The unit has lost integrity in that location, and it fills with water. Only make this roll for flooding at the moment an underwater unit takes damage, not for a damaged unit that later enters the water. If all of a location's armor is destroyed (whether this occurred before the unit entered the water hex or while it is submerged), that location is automatically breached.

Treat all of a unit's components in a breached location as nonfunctional. None of that location's actuators, weapons or other equipment works. If the breached location contains engine slots, the engine functions as if it took as many critical hits as engine critical slots in that location; if the breached location is the head, the 'Mech is considered destroyed and the MechWarrior killed. If a side torso is flooded, the corresponding arm and all of its equipment are considered non-functional as well. Even if a unit exits the water, all limbs and equipment in the flooded location remain non-functional.

These effects are not technically critical hits, and will not cause ammunition to explode. Equipment and components in the breached location can still take critical hits per standard rules, even though the component is temporarily out of commission.

RECORDING DAMAGE

Follow the step-by-step procedure outlined in *Damage Resolution* below to determine the effects of damage.

IndustrialMechs: IndustrialMechs that mount commercial armor are assigned damage like Support Vehicles, with a Barrier Armor Rating (BAR) of 5; this means IndustrialMechs using commercial armor may suffer penetrating critical hits (see *Damage* in the *Support Vehicles* section, p. 206).

ProtoMechs: Hits against ProtoMechs follow the same general procedure as hits against 'Mechs. See *ProtoMechs*, page 184.

Vehicles: Hits against vehicles follow the same general procedure as hits against 'Mechs, though vehicles cannot survive the destruction of a location and damage does not transfer. In addition, some differences exist between Combat Vehicles and Support Vehicles. See *Combat Vehicles* and *Support Vehicles*, pages 192 and 204 respectively.

Aerospace Units: Hits against aerospace units follow the same general procedure as hits against 'Mechs. See *Aerospace Units*, page 234.

Infantry and Buildings: Hits against infantry and buildings are recorded differently from hits on 'Mechs and vehicles. See *Infantry*, page 212, and *Buildings*, page 166, for details.

Torso Destruction

If a 'Mech's right or left torso has all of its internal structure destroyed, the corresponding arm (or, in the case of four-legged 'Mechs, the corresponding front leg) is blown off immediately and sustains no further damage for the rest of the game (see *'Mech Critical Hit Effects*, p. 125). The corresponding leg is not damaged. If the center torso is destroyed, the entire unit is destroyed (see *Destroying a Unit*, p. 128).

An unfortunate Word of Blake Warhammer *stands as a smoking ruin on the battlefield of Cairo.*

Leg Destruction

When a 'Mech loses one leg, either through a critical hit or the destruction of the leg's internal structure, a standing 'Mech automatically falls. The controlling player makes an immediate Piloting Skill Roll, with a +5 modifier for the destroyed leg (plus any modifiers for other damage; the +5 modifier for leg destruction replaces all pre-existing modifiers for damage to that leg), to avoid damaging the MechWarrior during the fall. Regardless of how or in what phase a 'Mech loses its leg, its movement is over for that turn.

In subsequent turns, during the Movement Phase (Ground), the 'Mech may attempt to stand on its remaining leg by making a Piloting Skill Roll with a +5 modifier, plus any modifiers for other damage. It may only make one attempt per turn. If the 'Mech manages to stand, it has a Walking MP of 1 (this overrides all MP increases) and cannot run. To take into account the missing leg, add +5 to any Piloting Skill Roll made thereafter. The 'Mech may still jump (minus the power of the jump jets on the missing leg, if any), but the pilot must make a Piloting Skill Roll each time the 'Mech lands.

For purposes of attacker movement, such an attempt to stand is considered a run.

If the 'Mech stays prone, it can still change its facing one hexside per turn; it is considered to have walked if it changes its facing.

A 'Mech that loses both of its legs cannot move. If it wasn't prone, it automatically falls and has 0 MP available. The 'Mech cannot change hexsides or attempt to stand, though it can still attempt to prop itself up to fire if it has both arms.

Four-Legged 'Mechs: The effects of loss of legs are applied to a quad 'Mech as follows:

- **One destroyed leg:** Immediately falls and loses all movement and combat bonuses gained from being four-legged: it can no longer make lateral shifts, it loses its –2 modifier to Piloting Skill Rolls, it must make a successful PSR to stand after falling, and it suffers a +2 modifier to Target Numbers for firing when prone. In addition, a –1 MP penalty replaces any penalties associated with damaged leg actuators in the destroyed leg. If the 'Mech jumps, it still must make the usual PSR required for jumping and missing a leg, with a +5 modifier.
- **Two destroyed legs:** Functions with the same restrictions described above for a biped 'Mech that has lost one leg: it immediately falls, has only 1 MP, and so on.
- **Three destroyed legs:** Functions with the same restrictions described above for a biped 'Mech that has lost both legs: it immediately falls, has only 0 MP, and so on.
- **Four destroyed legs:** Automatically falls (if not already prone) and is immobile (see p. 110).

DAMAGE RESOLUTION

To apply damage from an attack, begin with the amount of damage the attack inflicts and its hit location, and start at Step 1. Answer each question yes or no, and follow the instructions.

1. Does the location have armor?

Yes: Check off one armor circle on the Armor Diagram in the appropriate location for every point of damage taken, until all damage is applied or all armor in the location is destroyed. Go to Step 2.

No: Proceed to Step 3.

2. Is there damage remaining?

Yes: Go to Step 3 to allocate remaining damage.

No: Attack is finished.

3. Does the location have an internal structure?

Yes: Check off one internal structure circle on the Internal Structure Diagram in the appropriate location for every point of damage taken, until all damage is applied or all internal structure in the location is destroyed. Go to Step 4.

No: Proceed to Step 6.

4. At the beginning of the current phase, did the location contain any components that could sustain a critical hit?

Yes: Roll once on the Determining Critical Hits Table, p. 124. Apply the effects of any critical hits to the location. Excess critical hits that cannot be applied are not transferred. Go to Step 5.

No: Roll once on the Determining Critical Hits Table. Any critical hits are applied to the next location inward (see Damage Transfer Diagram). Go to Step 5.

5. Does any internal structure remain in the location?

Yes: Attack is finished.

No: The location and all components contained in it are destroyed; any armor remaining at that location (whether front or rear) is also destroyed. The destruction of components in this fashion does not cause ammunition or other components to explode, but otherwise all components in the location are affected as though critically hit (see *Transferring Criticals*, p. 125). Go to Step 6.

6. Is there damage remaining?

Yes: Go to Step 7 to allocate remaining damage.

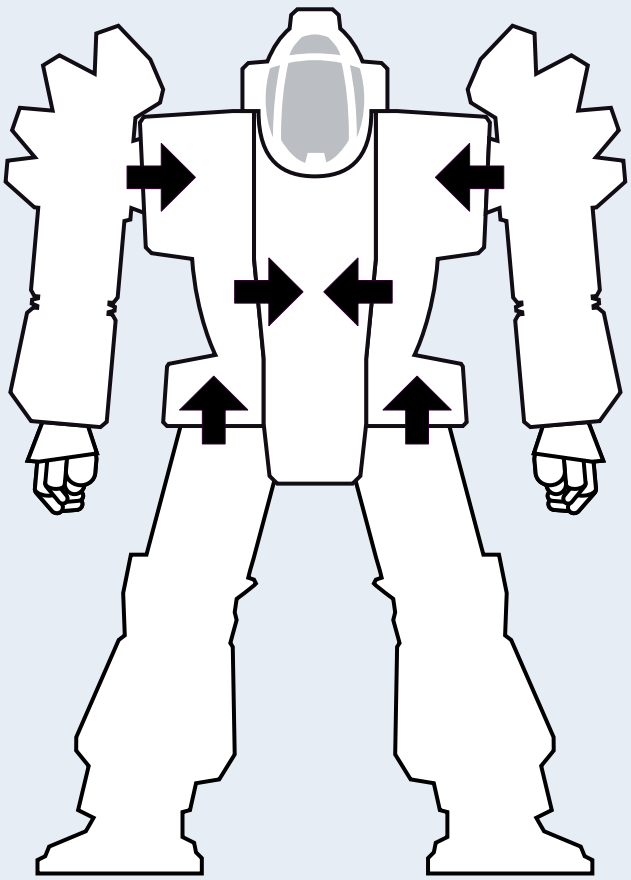
No: Attack is finished.

7. Did the damage result from an ammunition (or other internal component) explosion?

Yes: Go to Step 8.

No: Damage transfers to the armor of the next location inward (see Damage Transfer Diagram). Go to Step 1.

NJT-2 Ninja-To, *Ryuken-yon (House Kurita)*



• TRANSFER DAMAGE DIAGRAM •

8. Is the location protected by CASE?

Yes: The remaining damage is lost. The attack is finished.

No: The remaining damage transfers to the next location inward (see Damage Transfer Diagram), directly to the internal structure. Go to Step 3.

TRANSFERRING DAMAGE

BattleMechs can survive the destruction of any body section except the head or center torso. If a section is destroyed and the same location takes another hit, or excess damage remains from the shot that destroyed the location, that damage transfers to (affects) the outer armor of the next location inward. Excess ammunition explosion damage transfers directly to the internal structure of the next location inward. This principle is illustrated on the Damage Transfer Diagram.

Damage to a missing arm or leg transfers to the torso on the same side (left leg or arm damage is transferred to the left torso, right arm or leg damage to the right torso). Additional damage to a destroyed side torso location transfers to the center torso. Damage from a destroyed head or center torso does not transfer.

Damage from the rear firing arc that hits a missing limb is transferred to the appropriate rear torso location. For example, damage from the rear that hits a missing left leg is transferred to the left rear torso.

Blown-Off Arms: As soon as a torso is destroyed, the corresponding arm is blown off. This means additional damage in the same phase that would normally have struck the arm is automatically transferred to the appropriate torso (which is destroyed, so the damage ultimately transfers to the center torso).

A Grasshopper's *left arm is hit by an attack from a PPC (Damage Value 10), a large laser (Damage Value 8) and two 5-point groups of long-range missiles (Damage Value 1 per missile hit, for 5 points per Damage Value grouping). Before this turn, the BattleMech had its full Armor Value of 22 in that arm.*

The PPC hit reduces the Armor Value by 10, so the Grasshopper's *player fills in ten armor circles. The laser hit does 8 points of damage, and so the player fills in eight more circles, leaving four. The first cluster of missiles reduces the Armor Value by another 5 points, but since the* Grasshopper's *remaining Armor Value is 4, that leaves 1 point of damage that the hit location cannot absorb.*

The remaining 1 point of damage from the first cluster of missiles transfers to the 'Mech's internal structure, and so the player fills in one circle on the Internal Structure Diagram, leaving ten circles out of the original eleven. The last group of missiles reduces the internal structure by another 5 points. The player fills in five more circles on the Internal Structure Diagram, leaving five. (The attacking player would make two rolls on the Determining Critical Hits table, p. 124, because two different hits damaged the internal structure of the left arm.)

If the Grasshopper's *left arm takes a hit from a weapon that inflicts 5 or more points of damage, the arm will be destroyed.*

CRITICAL DAMAGE

Every time the internal structure of a 'Mech, ProtoMech, or aerospace unit takes damage (from a weapon attack, physical attack, falling, ammo explosions and so on), an internal component may take critical damage; vehicles determine critical damage differently (see *Critical Damage*, p. 192, in *Combat Vehicles*).

To determine whether a unit takes critical damage from a hit that damages the internal structure, the player rolls 2D6 and consults the Determining Critical Hits Table. On a result of 8 or higher, the target unit takes critical damage. The higher the result, the more serious the internal damage. If the unit takes critical damage, the target player rolls 1D6 or 2D6 depending on the location and unit, and consults the unit's Critical Hit Table to determine the precise critical damage (as described in *'Mech Critical Hits*).

Each hit that damages internal structure creates only one opportunity for the attacker to inflict a critical hit, regardless of the number of internal structure circles destroyed by a single hit or other event (see *Hit Location Critical Hits*, p. 124, for an exception). The attacking player rolls 2D6 once for each potential critical hit.

The location of the damage determines the exact nature of the critical hit. Several types of critical hits can affect each section of a unit. Furthermore, every type of 'Mech can suffer different critical hits, depending on the array of weapons and other equipment it carries. The Critical Hit Table for each type of 'Mech appears on the record sheet for that type. A partially blank Critical Hit Table that players can customize for all 'Mechs is provided on all blank 'Mech record sheets.

Multiple Locations: If a single hit damages the internal structure of multiple different locations, the attacker makes a roll to determine critical damage for each of those locations.

IndustrialMechs: When rolling on the Determining Critical Hits Table for damage inflicted on an IndustrialMech, add +2 to the dice roll result. Treat a modified result of 13 as 12. On a modified result of 14, the IndustrialMech's head or limb is blown off. If the hit struck a torso location, make four critical hit rolls.

A CattleMaster IndustrialMech is on the wrong end of a COM-5D Commando and has already sustained significant damage. The Commando hits the CattleMaster on the right arm with both missiles from its SRM-2 launcher, finally overcoming the armor there. For the first missile, the critical hit roll results are 1 and 4, giving a final result of 1 + 4 + 2 = 7. No critical hit. The second critical hit roll gives results of 4 and 3. Normally this would not generate a critical hit, but the modified result is 4 + 3 + 2 = 9. The CattleMaster suffers one critical hit in its right arm.

ProtoMechs: Though ProtoMechs have different weapons per different designs, the base Critical Hit Table found on every ProtoMech record sheet is the same for every ProtoMech. ProtoMechs have additional rules for resolving critical hit effects (see p. 185).

Vehicles and Aerospace Units: Unlike 'Mechs, which have a unique Critical Hit Table for every design, all vehicles and aerospace units use a standard set of Critical Hit tables. The Critical Hit tables for the various types of vehicles and aerospace units appear in *Combat Vehicles*, and *Aerospace Units*, pp. 192 and 234, respectively.

Infantry: Infantry units never suffer critical damage. Once any armor is removed from an infantry unit (provided the unit mounts armor), the trooper is eliminated.

Hit Location Critical Hits: Certain results on the hit location tables provide the chance for a critical hit, even if the attack did not damage internal structure (though the attack must still have dealt at least 1 point of damage). Resolve these by rolling on the Determining Critical Hits Table just as for other critical hit rolls. This chance is in addition to the normal roll for a critical hit provided by damage to the internal structure. For example, a hit location result of 2 against a 'Mech with no torso armor left requires two rolls on the Determining Critical Hits Table. If the 'Mech had armor in the location hit, the attacker would still have at least one chance for a critical hit.

If the chance for a hit location critical hit occurs in a location that has already been destroyed (for example, an attacker scores a chance for a critical hit against a 'Mech by rolling a 2 on the Left Side hit location table, but the left torso has already been destroyed), then that chance for a critical hit transfers to the next location inwards along with the damage from the attack (in the example above, to the center torso).

Destroyed Location: When a location is destroyed, rather than just damaged, no check for critical hits in that location is made unless it contains one or more explosive slots. In that case, any resulting critical hits that strike explosive slots in that location are resolved as normal (see *Ammunition*, p. 125); hits that do not are always discarded without transferring.

Advanced Weapons and Equipment: If a unit mounts any weapons and/or equipment not found on the appropriate Weapons and Equipment Tables (see p. 303) or in *Other Combat Weapons and Equipment* (see p. 129), the weapon/equipment in question still takes damage.

DETERMINING CRITICAL HITS TABLE

Die Roll (2D6)	Effect
2–7	No Critical Hit
8–9	Roll 1 Critical Hit Location
10–11	Roll 2 Critical Hit Locations
12	Head/Limb Blown Off; Roll 3 Critical Hit Locations*

*Roll 3 critical hit locations if the attack strikes the torso.

'MECH CRITICAL HITS

When an attacker inflicts a critical hit on a target, he rolls dice for each critical hit and the target player marks off the damage inflicted on the Critical Hit Table.

Head or Leg Hits: If the critical hit strikes the 'Mech's head or legs, roll 1D6, find the result on the Critical Hit Table and mark off the damaged location. If the critical location rolled cannot take a critical hit or has already been destroyed by a critical hit, roll the die again.

Torso or Arm Hits: If the critical hit strikes the ´Mech's torso or arms, the player rolls both dice. The result of the first die tells which half of the Critical Hit Table for that location is affected, and the second die result identifies the location hit. The Critical Hit Table for these locations is divided into two sets of six critical slots, labeled 1–3 and 4–6.

The first die result identifies which set of slots takes the hit. On a result of 1, 2 or 3, the shot hits a location in the first set of critical slots. On a result of 4, 5 or 6, the attack hits a location in the second set of critical slots. The result of the second die roll identifies the specific critical slot that takes the hit.

If a location has twelve slots, but a critical hit can only strike the first set (the first six), players can simply roll 1D6, instead of rolling the first die to determine the first or second set of critical slots and then another 1D6 to determine the specific critical slot that takes the hit. If a roll result on the bottom half occurs, the controlling player simply re-rolls. This can occur at any time during the game that all the specific slots in the first or second set have taken critical hits; players can then simply roll 1D6 to save time.

A Grasshopper *takes a critical hit to its left arm. The defending player rolls the first die with a result of 3. This means the critical hit affects a slot in the first half of the Critical Hit Table for the left arm (labeled 1–3). The player rolls the second die and gets a 2, inflicting a critical hit on the 'Mech's upper arm actuator.*

Each weapon and other piece of equipment fills at least one slot on the Critical Hit Table. If the player rolls damage for a slot for which no component exists; a slot that cannot take critical damage, such as endo steel, CASE or ferro-fibrous armor; or a slot that has already taken a critical hit, he rolls both dice again. (On pregenerated record sheets, the words in equipment slots that cannot take critical damage always appear more faint than the words in a critical slot filled with equipment that can take critical damage.)

Some weapons, double heat sinks and other equipment take up multiple slots on the Critical Hit Table. A single critical hit disables any weapon or equipment except the engine, gyro and sensors. (A heat sink critical hit destroys only the specific heat sink hit.) Critical hits on additional slots occupied by the weapon, double heat sink and so on have no further effect, but soak up the critical damage; the critical is assigned to the slot, but no further effects occur.

Transferring Criticals: If all the possible slots in the damaged location took critical hits in previous phases, or if no items in the location can be affected by critical hits, the critical hit transfers to the next location per the Damage Transfer Diagram (this diagram also appears on every 'Mech record sheet). Critical hits to the center torso and head do not transfer. However, if all the possible slots in the damaged location were not hit in a previous phase, any excess critical hits do not transfer and are lost.

For example, during the Weapon Attack Phase of Turn 6, an attacking unit damages the internal structure of a target 'Mech's right torso. The controlling player must immediately roll to determine critical hits before resolving any further weapons fire. The player rolls a 12, resulting in three critical hits. The right torso of that 'Mech mounts two medium lasers, one of which was destroyed during Turn 4, and so one critical hit destroys the final medium laser. The two remaining critical hits do not transfer and are lost. However, during the Physical Attack Phase of the same turn, the same controlling player damages the internal structure of the same target 'Mech's right torso. He rolls a 10 for determining critical hits, resulting in two critical hits. As all possible slots in the damaged location took critical hits in a previous phase, both critical hits transfer to the target 'Mech's center torso.

Heavily modified Thunder *fielded by Periphery pirates.*

'MECH CRITICAL HIT EFFECTS

Each type of critical hit affects a 'Mech's performance in a specific way, as described below. The critical hit locations are arranged alphabetically by item; the location of the item on the ´Mech (head, leg, torso, arm) is noted in parentheses.

Four-Legged 'Mechs: Consider all leg critical hit damage cumulative. Each hip critical hit reduces the quad's Walking MP by half. Three destroyed hips cut the quad's Walking MP to an eighth of its normal rate, and the pilot must modify the Piloting Skill Roll target number by +4 (+6 for three destroyed hips and –2 for four intact legs).

Ammunition

If a critical hit destroys a slot carrying explosive ammunition, the ammo explodes (all ammunition is explosive unless specifically noted otherwise in *Other Combat Weapons and Equipment*, starting on p. 129). The MechWarrior automatically takes 2 Damage Points as a result of the feedback received through his neurohelmet. In addition, the 'Mech takes damage to its internal structure; CASE does not prevent this damage.

Calculate the total Damage Value of all ammo currently carried in the slot and apply that total to the Internal Structure Diagram (ammunition explosion damage starts the damage resolution process at Step 3, as described on page 122). If the location is not protected by CASE, any excess damage transfers to the internal structure of the next location. For locations protected by CASE, vent any remaining damage without further harm. See *Other Combat Weapons and Equipment*, p. 129, for details.

A critical hit to an ammo slot only explodes the ammo in that slot. It explodes with a force equal to the ammo's Damage Value times the shots remaining. Missile ammo explodes with a force equal to the number of missiles remaining times their Damage Value. For example, 1 full ton of machine gun ammo explodes with a force of 400 points of damage (2 x 200), while 1 full ton of SRM-2 ammo explodes with a force of 200 points of damage (2 x 2 x 50).

If an ammunition slot has been emptied (the hash marks of weapons fire next to the slot equal the number of shots in that slot), then the slot takes the critical hit, but no further damage or effects occur.

Because an ammunition explosion damages the internal structure of the location where it explodes, a roll to determine critical hits is necessary.

Arm Blown Off (Arm)

This critical hit occurs when the player rolls a 12 on the Determining Critical Hits Table, if the location hit is an arm, and is automatic (the player rolling the critical hits cannot choose to roll the three critical hits instead). The hit blows the arm off, and the weapons and equipment mounted in that arm are no longer available to the 'Mech. The arm may be picked up and used as a club per the rules for *Club Attacks*, page 145.

Explosive Components: When an arm is blown off in this way, any explosive components in that section do not explode.

Cockpit (Head)

A critical hit to the cockpit destroys that slot, kills the MechWarrior and puts the 'Mech out of commission for the game.

Small Cockpit: A critical hit against a small cockpit has the same effects as for a standard cockpit.

Engine (Torso)

'Mech fusion engines have 3 points of shielding. Each critical hit to an engine slot destroys 1 point of shielding. As shielding is destroyed, the amount of heat escaping from the 'Mech's fusion drive increases.

The first hit increases the 'Mech's heat build-up by 5 points per turn. The second hit results in 10 (total) points of added heat build-up per turn, and the third critical hit to an engine slot shuts down the engine and puts the BattleMech out of commission for the rest of the game. Though XL and light engines take up additional slots (in the side torsos), critical hits to any three engine slots also shut down XL and light engines.

A 'Mech is considered destroyed and out of the game if it suffers three engine hits (remember to count engine slots in the side torso if the torso is destroyed).

Compact Engines: Critical hits against compact engines have the same effects as for a standard engine.

ICE: Engine critical hits on ICE-equipped 'Mechs do not generate additional heat. Instead, the 'Mech's controlling player makes a 2D6 roll to see if the engine explodes, at the end of the phase in which its ICE is hit. Apply a +3 modifier to the target number if this is the second hit, or +6 if this is the third such hit. On a result of 10 or greater, the engine explodes, destroying the unit. For purposes of game play, three or more internal-combustion engine hits destroy the 'Mech, regardless of whether or not the engine explodes. An ICE explosion destroys the 'Mech but has no effect on other units.

Fuel Cell Engines: Like ICE-equipped 'Mechs, engine hits on fuel cell engines do not generate additional heat. Instead, roll to see if the damage causes an uncontrolled combination of reactants that results in an explosion, destroying the unit. The rules for ICE explosions above apply to engine explosion rolls for fuel cell engines.

Fission Engines: In game play, fission engines function exactly like their fusion counterparts, but in addition to the normal heat effects of an engine critical hit, a damaged fission power plant also has a detrimental impact on the 'Mech's operator because of radiation leakage. The first critical hit to a fission engine causes the pilot to suffer one hit every six turns (beginning six turns *after* the turn in which the original damage was caused). A second engine hit decreases this damage interval to one pilot hit every three turns.

Foot Actuator (Leg)

This critical hit destroys the muscle (actuator) in the foot. The controlling player must make a Piloting Skill Roll at the end of the phase in which the critical hit occurred, with a +1 modifier (in addition to any other standard modifiers); see *Making Piloting/Driving Skill Rolls*, page 59.

For each foot actuator damaged, reduce the 'Mech's Walking MP by 1 and add a +1 modifier to any subsequent Piloting Skill Roll. (The player must refigure the Running MP as well; multiply the new Walking MP by 1.5, rounding up.) A Piloting Skill Roll is required whenever the 'Mech jumps; the roll is made at the end of the 'Mech's movement. For each foot actuator critical, apply a +1 to-hit modifier to all kick attacks.

These effects are cumulative with other leg and foot actuator damage.

Gyro (Torso)

The gyroscope is a 'Mech's most sensitive piece of machinery. It keeps the 'Mech upright and able to move. The gyro can survive only one critical hit; the second destroys it.

After the first critical hit to the gyro, the controlling player must make a Piloting Skill Roll at the end of the phase in which the critical hit occurred, with a +3 modifier (in addition to any other standard modifiers); see *Making Piloting/Driving Skill Rolls*, page 59. In addition, the player must make a Piloting Skill Roll every time the damaged 'Mech runs or jumps, with a +3 modifier; the roll is made at the end of the 'Mech's movement.

When a 'Mech's gyro is destroyed (after a second critical hit), the 'Mech automatically falls and cannot stand up again; the controlling player makes an immediate Piloting Skill Roll, with a +6 modifier for the destroyed gyro (plus any modifiers for other damage), to avoid damaging the MechWarrior during the automatic fall.

'Mechs with a destroyed gyro may make weapon attacks per *Firing When Down*, page 113, and may change facing by one hexside per turn provided they have at least 1 MP available. A 'Mech with a destroyed gyro is not considered immobile.

Compact Gyros: Critical hits against compact gyros have the same effects as against a standard gyro.

Heavy-Duty Gyros: Critical hits against a heavy-duty gyro are identical to those against a standard gyro, with the following exceptions: it takes three critical hits to destroy a heavy-duty gyro; on the first critical hit, a +1 modifier applies to all Piloting Skill Rolls, but no such rolls are required when the 'Mech runs or jumps; treat the second critical hit to a heavy-duty gyro as the first critical hit to a standard gyro; the third critical hit destroys the heavy-duty gyro with all the standard effects.

XL Gyros: Critical hits against XL gyros have the same effects as a standard gyro.

Hand Actuator (Arm)

A critical hit to the hand actuator destroys the muscles controlling the 'Mech's wrist and hand. Add a +1 to-hit modifier to all punches made with this arm. In addition, the 'Mech can no longer make physical weapon or clubbing attacks with this arm. This effect is cumulative with the effects of destroyed arm actuators.

Head Blown Off (Head)

A hit blows off a 'Mech's head when the player rolls a 12 on the Determining Critical Hits Table for the head hit location. This

Griffin IIC 4, *Omega Galaxy (Clan Blood Spirit)*

critical hit destroys the 'Mech's head, kills the MechWarrior and puts the 'Mech out of commission for the rest of the game.

Heat Sinks

One critical hit to a heat sink destroys the heat sink and reduces the 'Mech's ability to dissipate heat. For example, if a 'Mech is designed to dissipate 16 points of heat per turn and three of its heat sinks have been destroyed, it can now only dissipate 13 points of heat per turn.

A double heat sink takes up more than one slot on the Critical Hit Table but is destroyed by a single critical hit. Additional critical hits to a multi-slot heat sink produce no further effects. Each double heat sink destroyed reduces the 'Mech's ability to eliminate heat by 2 points.

Remember that the destruction of any heat sinks during the Weapon or Physical Attack Phases means they will not dissipate any heat during that turn's Heat Phase.

Hip (Leg)

A hip critical hit freezes the affected leg in a straight position. The controlling player must make a Piloting Skill Roll at the end of the phase in which the critical hit occurred, with a +2 modifier (in addition to any other standard modifiers); see *Making Piloting/Driving Skill Rolls*, page 59.

The 'Mech's Walking MP is cut in half (round up; apply before any leg or foot actuator damage MP reductions). Add a +2 modifier to any Piloting Skill Rolls required, and make a Piloting Skill Roll every turn that the damaged 'Mech runs or jumps; the roll is made at the end of the 'Mech's movement. The 'Mech cannot make kick attacks.

After a hip critical hit, ignore all modifiers from previous critical hits on that leg. This means it is possible for a 'Mech's performance to improve after a hip critical hit if it had suffered previous critical damage to the same leg. Since the leg becomes locked in a straight position, it serves as a sort of crutch, making movement easier in some cases than moving on a number of free-flexing damaged actuators.

A critical hit to the second hip reduces the 'Mech's MP to 0 and adds another +2 modifier to its Piloting Skill Roll target number (the 'Mech is not considered immobile, however). For four-legged 'Mechs, the fourth hip critical hit reduces the 'Mech's MP to 0 and adds another +2 modifier to all Piloting Skill Rolls.

Four-legged 'Mechs: A four-legged 'Mech with a single hip critical loses its ability to ignore the modifier for firing while prone (see p. 113).

Jump Jet (Leg/Torso)

When a jump jet exhaust port takes a critical hit, that jump jet can no longer deliver thrust. This decreases the distance the 'Mech can jump. For each exhaust port hit, reduce the 'Mech's Jumping MP by 1.

Leg Blown Off (Leg)

This critical hit occurs when the player rolls a 12 on the Determining Critical Hits Table for a leg hit location hit, and is automatic (the player rolling the critical hits cannot choose to roll the three critical hits instead). When a 'Mech's leg is blown off, the 'Mech automatically falls and takes normal falling damage, though it might be able to stand up again. See *Leg Destruction*, page 122. The leg may be picked up and used as a club per the rules for *Club Attacks*, page 145.

Explosive Components: When a leg is blown off in this way, any explosive components in that section do not explode.

Life Support (Head)

Any critical hit knocks out this system permanently and leaves the pilot vulnerable to increased heat; the other critical location can still take damage, but this has no additional effect.

The MechWarrior takes 1 point of damage at the end of every Heat Phase that the 'Mech's internal heat ranges from 15–25, and 2 points of damage for every turn that its internal heat is 26+ on the Heat Scale.

A life-support critical hit also eliminates the 'Mech's internal air supply. If the 'Mech is submerged (in Depth 2 or deeper water, or prone in Depth 1 or deeper water) in the End Phase of any turn, the pilot takes 1 point of damage.

Lower Arm Actuator (Arm)

This critical hit destroys the actuator in the 'Mech's lower arm. Add a +1 modifier to the to-hit number for weapons firing from that arm and a +2 modifier for all clubbing attacks and any punches or physical weapon attacks with this arm. Damage from punches with this arm is halved (round down).

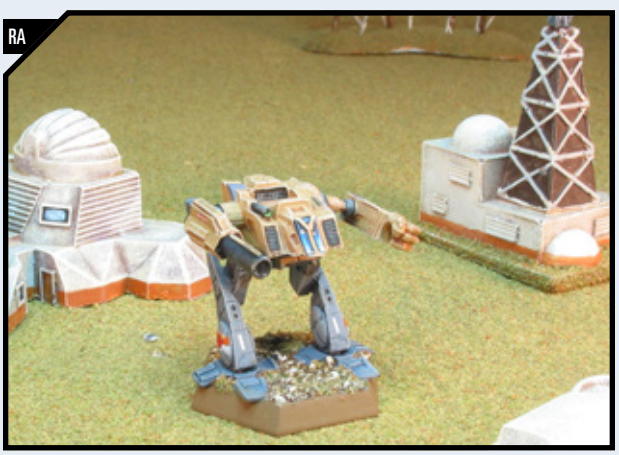
These effects are cumulative with other arm and hand actuator damage in the same arm.

Missing Actuators: Some 'Mechs are designed without one or both lower arm actuators. These 'Mechs do not suffer the weapon attack modifier for the missing actuators, though the modifiers for physical attacks still apply.

Lower Leg Actuator (Leg)

This critical hit destroys the muscle (actuator) in the lower leg. The controlling player must make a Piloting Skill Roll at the end of the phase in which the critical hit occurred with a +1 modifier (in addition to any other standard modifiers); see *Making Piloting/Driving Skill Rolls*, page 59.

For each lower leg actuator damaged, reduce the 'Mech's Walking MP by 1 and add a +1 modifier to any subsequent Piloting Skill Roll. (Refigure the Running MP as well; multiply the new Walking MP by 1.5, rounding up.) The player must make a Piloting Skill Roll whenever the 'Mech jumps; the roll is made at the end of the 'Mech's movement. For each lower leg actuator critical, apply a +2 to-hit modifier to all kick attacks and they inflict half the standard damage (round down).



Shadow Cat Prime, *Beta Galaxy (Clan Wolf)*

These effects are cumulative with all other leg and foot actuator damage.

Sensors (Head)

When a 'Mech takes a critical hit to its sensors, add a +2 modifier to the to-hit number every time the 'Mech fires its weapons. A second sensor hit makes it impossible for the 'Mech to fire its weapons. Critical hits to sensors do not affect physical attacks or other electronic equipment mounted by the unit (such as ECM suites, C^3 computers and so on).

IndustrialMechs: The sensors on an IndustrialMech are completely disabled after taking a single critical hit, rather than the two hits necessary in a BattleMech. The other critical location can still take damage, but this has no additional effect.

Shoulder (Arm)

A critical hit to this location freezes the shoulder joint. The 'Mech may not punch or make physical weapon attacks with that arm, nor may it make clubbing attacks, and a +2 modifier applies to pushing attack to-hit numbers for each damaged shoulder. Add a +4 modifier to the to-hit number for all weapon attacks made with weapons mounted on that arm. After a shoulder critical hit, ignore all other weapons fire modifiers from critical hits to that arm.

Upper Arm Actuator (Arm)

This critical hit destroys the actuator in the 'Mech's upper arm. Add a +1 modifier to the to-hit number for weapons firing from that arm and a +2 modifier for all clubbing attacks as well as any punches or physical weapon attacks with that arm. Damage from punches with the arm is halved (round down).

These effects are cumulative with other arm and hand actuator damage in the same arm.

Upper Leg Actuator (Leg)

This critical hit destroys the muscle (actuator) in the upper leg. The controlling player must make a Piloting Skill Roll at the end of the phase in which the critical hit occurred, with a +1 modifier (in addition to any other standard modifiers); see *Making Piloting/Driving Skill Rolls*, page 59.

For each upper leg actuator damaged, reduce the 'Mech's Walking MP by 1 and add a +1 modifier to any subsequent Piloting Skill Roll. (Refigure the Running MP as well; multiply the new Walking MP by 1.5, rounding up.) The player must make a Piloting Skill Roll whenever the 'Mech jumps; the roll is made at the end of the 'Mech's movement. All kick attacks have a +2 to-hit modifier and inflict half the standard damage (round down).

These effects are cumulative with all other leg and foot actuator damage.

Weapons and Equipment

Weapon systems are surprisingly delicate, and so a single critical hit disables a weapon or other internal component. Though some weapon systems occupy more than one slot on the Critical Hit Table, the first critical hit knocks out the weapon. Additional critical hits to a multi-slot weapon have no further effect, other than to make the equipment more difficult to repair. For example, a particle projector cannon fills three critical slots. However, the PPC is disabled as soon as one of its three critical slots takes a hit.

Explosive Components: Certain non-ammo components such as gauss rifles can explode when they suffer critical hits. The specific rules for the equipment state whether this is the case, and how much damage is inflicted (see *Other Combat Weapons and Equipment*, p. 129). These explosions are handled in the same way as ammunition explosions.

DESTROYING A UNIT

Under the specific conditions described below, a unit is considered destroyed. Destroyed units are removed from the map in the end of the phase in which they were destroyed, and have no further effect on game play.

Forced Withdrawal: If using these rules (see p. 258), units have additional ways of counting as being destroyed.

'MECHS

A ´Mech is considered destroyed and out of the game if its MechWarrior dies or the 'Mech suffers three engine hits (remember to count engine slots in the side torso if that torso is destroyed). The destruction of the head, cockpit or center torso has the same effects and renders a 'Mech destroyed.

MechWarrior Survival: The MechWarrior dies when the destruction/loss of the head or cockpit occurs, or if the center torso is destroyed by an ammunition explosion or area-effect weapon. If the center torso is destroyed in any other fashion, the MechWarrior does not automatically die. CASE mounted in the center torso does not protect a MechWarrior from a center torso ammo explosion.

PROTOMECHS

A ProtoMech is considered destroyed and out of the game if its pilot dies or the ProtoMech suffers three critical torso hits. The destruction of the center torso has the same effect. A ProtoMech pilot is killed when the ProtoMech is destroyed.

VEHICLES

A vehicle is considered destroyed and out of the game when all of its internal structure circles in one location (including the turret, if any) are marked off, or when its Critical Hit Effects indicates that it is destroyed. A vehicle's crew is killed when the vehicle is destroyed.

INFANTRY

Conventional infantry platoons are considered destroyed when all circles in the unit row have been marked off. Battle armor units are destroyed when all circles in each unit member's row have been marked off.

AEROSPACE UNITS

All aerospace units are considered destroyed and out of the game if their Structural Integrity (SI) is reduced to 0 or if the unit in question is destroyed through a critical hit (see *Aerospace Units*, p. 234).

If an aerospace unit is destroyed while airborne, it breaks up in the air and so does not crash to the ground, or have any other effects in game play. A pilot/crew is killed if the aerospace unit is destroyed.

Other Combat Weapons and Equipment

If a unit's *Technical Readout* or record sheet game statistics indicate that it carries one of the following equipment types, it may significantly affect game play. Players should consult the unit's game statistics and familiarize themselves with the appropriate equipment rules below before play begins.

Note that if a weapon or equipment's rules for playing the game can be covered with the stats that appear on the appropriate Weapons and Equipment Tables, then it will not appear in this section. Weapons and equipment will only appear in this section if they have additional rules for playing the game that cannot be covered on the appropriate Weapons and Equipment Tables and under *Weapons and Equipment*, page 113.

Advanced Weapons and Equipment: If a unit mounts any weapons and/or equipment not found here, or on the appropriate Weapons and Equipment tables (see p. 303), then the weapon/equipment in question is either advanced (not appropriate for standard tournament play) and is covered in *Tactical Operations*, or has no direct impact on *BattleTech* game play, only affecting construction (such weapons and/or equipment that are not considered advanced are described in *TechManual*).

Specific Units: Multiple unit types can use the following weapons and equipment. Some weapons and equipment that might appear on a given unit's record sheet (or in *Technical Readout* game statistics) may only be mounted on a specific type of unit. If a weapon or equipment does not appear here or on the appropriate Weapons and Equipment Tables (see p. 303), look in the appropriate section for that unit (*Combat Vehicles, Support Vehicles, Infantry* and *Aerospace Units*).

Terminology: Some equipment below uses the standardized abbreviations on the Weapons and Equipment tables to explain its effects (see *Weapons and Equipment*, p. 113).

ACTIVE PROBE

An active probe only affects game play if players are using the *Hidden Units* rules from the *Creating Scenarios* section (see p. 256). Otherwise, the active probe has no effect, though its slot can soak up a critical hit (such a critical hit has no effect).

Under the *Hidden Units* rules, an active probe can detect any hidden 'Mech, battle armor or vehicle (but not conventional infantry, or battle armor infantry equipped with any type of stealth armor), if at the end of a Ground Movement Phase the concealed unit lies inside the probe's range (see Weapons and Equipment tables, p. 303) and line of sight would exist between the unit carrying the probe and the hidden unit (if that unit were not concealed).

Water: If an active probe is in a location of a unit that is above the surface of a water hex, it cannot detect a unit hidden underwater. In other words, for an active probe to work underwater, it must have a clear LOS to the hidden unit that passes only through underwater hexes. The one exception are naval vessels. If an active probe is located in the "body" of a naval vessel, on the surface, the probe can be used to locate hidden units both above and below the water.

ANTI-MISSILE SYSTEM

Any time a successful to-hit attack is made with a Missile Weapon (see p. 113) against a unit carrying an AMS, and strikes in the attack direction covered by the firing arc where the AMS is mounted, the defending player can choose to engage the AMS. Each AMS cannot engage more than one missile attack per turn. The result is as follows:

- The attacking player applies a –4 to the die roll result when rolling on the Cluster Hits Table (an AMS never reduces a roll on the table below 2)
- If the missile weapon is a Streak launcher, treat the launcher as though the controlling player rolled an 11 on the appropriate column of the Cluster Hits Table, then apply the –4 modifier to determine how many missiles struck the target.
- If the missile weapon attack is only a single missile (such as a Narc Missile Beacon), roll 1D6: on a result of 1-3 the missile is destroyed, on a result of 4-6 the missile strikes the target.

The personal guards of the Coordinator of the Combine, an Otomo lance marches to face its enemies in honorable combat.

The player cannot choose for the AMS to not engage, as it is always active until it runs out of ammo or is destroyed; 1 shot of ammunition is marked off each time the AMS engages a missile weapon.

If, in a single Weapon Attack Phase, more than one missile weapon successfully strikes the target in the attack direction covered by the firing arc where an AMS is mounted, the defending player can choose which missile weapon to inflict the modifier against.

Only 1 AMS can engage 1 missile weapon in a turn, regardless of how many AMS cover the attack direction. If a unit mounts more than 1 AMS that covers the same attack direction, the defender chooses the order in which they activate and against which missile weapons they inflict their modifiers.

AMS only works against weapons that are Type M (Missile Weapons: see p. 113). Weapons that lack this Type, regardless of their name or any other factor, are unaffected.

Cluster Hit Table Modifiers: The AMS Cluster Table modifier is cumulative with other Cluster table modifiers, for instance the bonus generated by NARC or Artemis IV-equipped missiles. In that instance, the net effect on the Cluster Table would be –2.

Critical Hits: Anti-missile system ammo explodes for Damage Value 2 per shot of ammo.

Aerospace Units: AMS against missile attacks from aerospace units operates as described above, with the following exceptions: for each AMS in the appropriate attack direction from an attacking aerospace unit, roll 1D6 and subtract that number from the missile's standard-scale Attack Value before generating Damage Value groupings (see *Determining Hit Location*, p. 238, in *Aerospace Units*); AMS has no effect against Capital Missiles.

ANTI-BATTLE ARMOR PODS (B-PODS)

When a 'Mech is targeted by infantry for a leg or swarm attack, the controlling player can activate one or more B-Pods, with each activated B-Pod targeted at the same infantry unit, or against multiple units at the controlling player's discretion.

The activation of a B-Pod occurs and is resolved *before* the leg or swarm attack to-hit roll is made, which could affect the to-hit roll (for example, troopers might be eliminated). B-Pods mounted in the legs or center torso can be used against leg attacks, while those on the arms, head, or any torso location can engage swarm attacks.

Each B-Pod automatically hits and inflicts damage equivalent to a 20-point attack—split into groups of 5-point Damage Value groupings—against battle armor. Conventional infantry receive 1D6 points of damage (double if in clear terrain). Swarming infantry are forced off the 'Mech as if the 'Mech had fallen (see p. 222).

B-Pods mounted in a 'Mech's legs (or any location on a vehicle) can also be used against infantry located in the same hex; as above, multiple B-Pods can be used in the same turn in this fashion against the same target, or against multiple targets. In such a case, the damage to a battle armor unit is equivalent to a 10-point attack, split into 5-point groups of Damage Value groupings, while an attack against conventional infantry receives 1D6/2 (round down) points of damage (1D6/3, rounding down, against mechanized infantry) to a minimum of 1.

Damage from a B-Pod is only applied to a single infantry unit, never to multiple infantry units. B-Pods have no effect on any other type of unit.

Critical Hits: Unexpended B-Pods that take a critical hit explode for 2 points of damage. Expended B-Pods can still be affected by a critical hit in the same way as empty ammo bins.

One-Shot: B-Pods are single-shot weapons, meaning they can be fired once and then cannot be used for the remainder of the game.

ANTI-PERSONNEL POD (A-POD)

When infantry units make anti-'Mech attacks or point-blank shots from hiding (see rules for *Anti-'Mech Attacks*, p. 220, *and Hidden Units*, p. 259 in *Creating Scenarios*), a 'Mech with an A-pod can defend itself by detonating the pod before the infantry player makes the to-hit roll. If the defender triggers an A-pod, any conventional infantry unit (friendly or enemy) in the same hex as the 'Mech takes 1D6 – 1 (minimum 1) points of damage before resolving its own attack. A-pods do not affect battle armor.

Critical Hits: Unexpended A-pods that take a critical hit do not explode, but simply become inoperative. Critical hits can still affect expended A-pods in the same way as empty ammo bins.

One-Shot: A-Pods are single shot weapons, meaning they can be fired once and then cannot be used for the remainder of the game.

ARTEMIS IV FCS

Add +2 to the die roll when rolling on the Cluster Hits Table for attacks by standard LRM/SRM launchers, as well as MML launchers, using this system and firing Artemis-equipped missiles (see p. 140).

Special Munitions: Artemis IV cannot be used with Streak SRM or Narc missile beacon munitions. It can be used with any other kind of special munitions, but those munitions do not gain any benefits from the Artemis IV. The system may be used with one-shot (OS) missile packs.

Ammunition: If the launcher is loaded with normal ammo, it can still be used but functions as a normal launcher.

Critical Hits: If the Artemis system assigned to a specific launcher is destroyed, the missile launcher can still be fired as a normal launcher.

LRM Indirect Fire: The Artemis system has no effect on LRM missiles fired indirectly.

BACKHOE

This equipment can be used to make a physical attack; see *Physical Weapon Attacks*, p. 146. A Support Vehicle cannot use the backhoe to make any kind of attack against another unit, but it can be used to attack a building hex.

Buildings: A backhoe attack inflicts 1D6 points of damage (in addition to its standard Damage Value, see *Physical Weapon Attacks*, p. 146) to a building hex.

BRIDGE-LAYER (LIGHT, MEDIUM, HEAVY)

While a unit is carrying this one-hex-long folding bridge, any attacks that otherwise would have hit the locations where the bridge is mounted will hit the bridge instead, reducing its CF by a like amount of damage. Once the bridge's CF has fallen to 0, it is considered destroyed, and the location takes attack damage normally. Critical hits to the bridge disable the mechanism that deploys it. Additional critical hits have no effect. If the bridge has not yet been deployed, the unit cannot make attacks from any weapons mounted in its location.

The bridge-layer's controlling player may declare that the unit is deploying the bridge during any End Phase. The unit must remain stationary during the following turn. At the end of that turn, the bridge is placed in the hex directly in front of the bridge-layer, along the same facing as the unit. (The bridge cannot extend away from the bridge-layer at an angle. A bridge may be placed in any water hex, but must be adjacent to at least one land hex or another bridge).

The bridge is made of a strong, lightweight material and is supported by flotation devices when deployed on water. A bridge can support units weighing up to twice its current CF before collapsing. This limit is the total weight of all units occupying the bridge in a particular hex.

Alternatively, the bridge can be placed between two elevated hexes to cover a gap, provided no more than a one-level difference exists between the two hexes.

Support Vehicles: A Support Vehicle mounting a bridge-layer uses the rules above, except any attack that otherwise would have hit the turret location hits the bridge.

BRIDGE-LAYER TABLE

Type	Weight	Crits.	CF
Light	1	2	8
Medium	2	4	20
Heavy	6	12	45

BULLDOZERS

A bulldozer can clear a path through a rubble hex, allowing units to move through it as if traversing a clear hex. This process takes a varying amount of time, based on the type of structure the rubble represented before it was destroyed. Rubble from a light structure takes two turns to clear. Each heavier class of structure doubles the required time, so a medium structure takes four turns, a heavy structure takes eight turns, and the rubble from a hardened structure takes sixteen turns to clear.

A vehicle with a bulldozer can clear a rubble hex even if the type of vehicle the bulldozer is mounted on would normally be prohibited from entering rubble. While clearing rubble, the vehicle must remain in the hex, though it can make facing changes as usual. It can also make weapon attacks, though the vehicle is treated as if it were moving at Flank speed when calculating its attacker to-hit modifiers.

Also, a bulldozer takes half the standard damage (round down) when it charges (it takes standard damage from being charged). Each time the bulldozer takes damage to its front armor, roll 2D6. On a result of 2, the bulldozer blade is destroyed.

Buildings: Double the standard charging damage against the target when a vehicle with a bulldozer charges a building hex.

C³ COMPUTER (MASTER/SLAVE)

The C³ computer system can link up to twelve 'Mechs or vehicles together—utilizing a series of C³ Master and C³ Slaves—in a communications network that will share targeting information.

To make an attack using a C³ computer network, calculate the to-hit number using the range to the target from the networked unit nearest the target. Use the firing unit's modifiers for movement, terrain effects, minimum range and so on. A weapon attack using a C³ network must conform to standard LOS restrictions and cannot fire beyond its maximum range, though a well-placed lancemate may allow the firing unit to use his weapon's short-range to-hit number at long range.

The C³ network itself has no maximum range, but only units actually on the playing area can benefit from the network, and the C³ Master (or C³ Masters if using a company-sized network) must be on the playing area.

While a unit may mount both a C³ Master and a C³ Slave, it may not use both at once. For units so equipped, at the start of game designate which C³ system is operational. A unit may only belong to a single network.

TAG: The C³ Master (but not the C³ Slaves) exactly duplicates the function of target acquisition gear (see *TAG*, p. 142).

LOS: While units must have LOS to a target to make an attack using a C³ system, the C³ system itself need not have LOS. For example, in the C³ Diagram on page 132, if there were a Level 2 hill in hex 0409 (blocking LOS between the unit in Hex B and the target in Hex A), the units in Hexes C and D would still be able to target the 'Mech in Hex A as though they were at a Range of 2 (see *Water*, below, for the exception).

LRM Indirect Fire: A C³ network does not help when launching or spotting targets for indirect fire (see p. 111). Note that TAG (which conveys the benefits of spotting if it hits) does benefit, however.

Minimum Ranges: Minimum range is always determined from the attacking unit to the target.

Variable Damage Weapons: The range, to determine the Damage Value of a Variable Damage Weapon, is always determined from the attacking unit to the target.

Stealth Armor: Armor that inflicts range modifiers against attacking units does not confuse a C³ network. Only apply the additional range modifiers based on the range between the target and the nearest unit in the network; do not apply modifiers based on the range between the target and the attacking unit in the network. The only modifiers to consider between the attacking unit and the target are Minimum Range modifiers.

Water: If a C³ of any kind is in a location of a unit that is above the surface of a water hex, it cannot be linked to a C³ system underwater. In other words, for a C³ of any kind to be linked underwater, it must be able to draw an LOS to the other units in the C³ system that passes only through underwater hexes (note that this need not be a clear LOS, as noted above). The one exception are naval vessels. If a C³ of any kind is located in the "body" of a naval vessel, on the surface, the C³ can be linked to units both above and below the water.

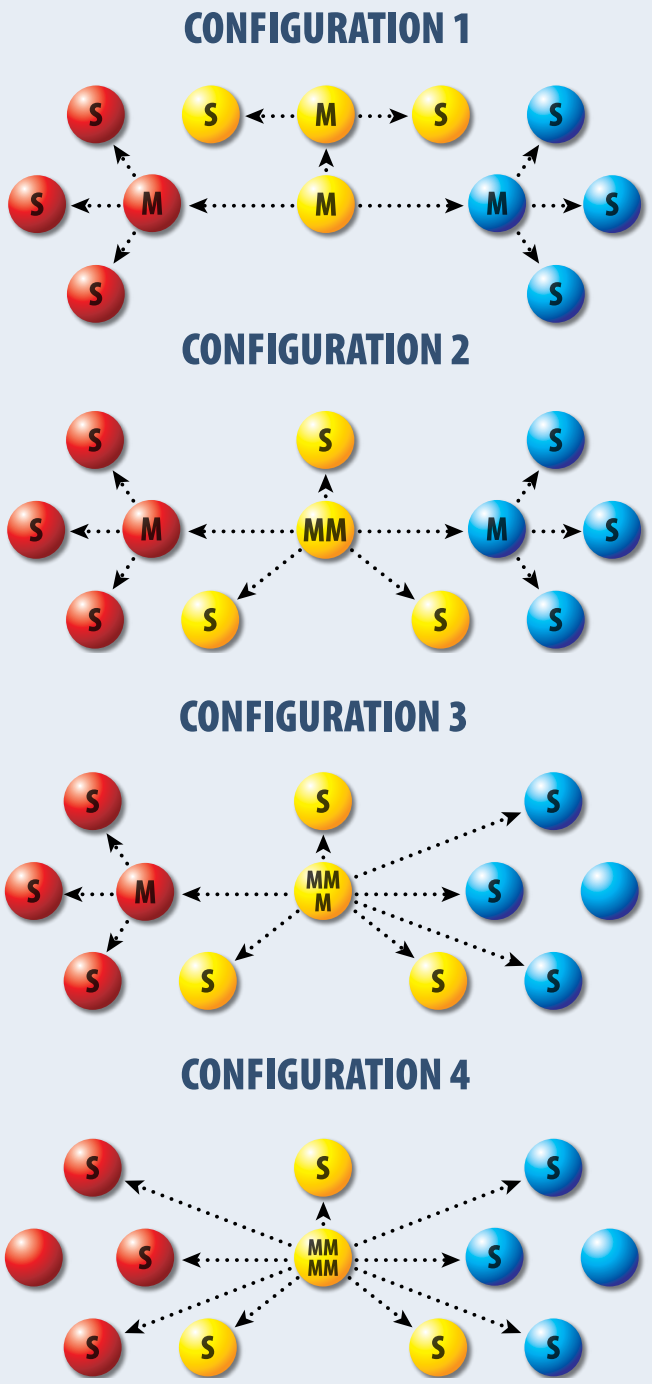
Forces from the Word of Blake's First Division surround a Steel Viper Goshawk 3.

• C³ DIAGRAM •

In the C³ Diagram, the 'Mech in Hex A is facing enemy units in Hexes B, C, D and E, which are connected to a C³ network. The VTOL in Hex B is closest to the enemy, at a Range of 2; even though it is at Elevation 10, elevations are never taken into consideration when determining range to target. The 'Mech in Hex C can attack as though it were at a Range of 2, provided the weapons it fires have a Maximum Range of 4 or more. The Combat Vehicle in Hex D can also fire as though at a Range of 2, but must add the terrain modifier for firing through the light woods in Hex F. The 'Mech in Hex E can't attack the 'Mech in Hex A because no line of sight exists between the two units. In all cases, if the 'Mechs in Hex C, D or E fired weapons with minimum ranges, those ranges must be taken into consideration, with the range determined from the attacker to the target, not the range from the VTOL in Hex B to the target.

Designating A C³ Network

Prior to the start of play, the controlling player of a C³ network must clearly designate on his unit's record sheets which C³ Masters controls which C³ Masters and/or C³ Slaves, and which C³



• C³ CONFIGURATION DIAGRAM •

Master connects three C³ Masters together to form a company-level (12 unit) C³ network; as noted above, the C³ network can never be extended beyond 12 units.

To designate a C³ network, use the following rules:

- A C³ Master can only control one to three C³ Slaves or one to three C³ Masters.
- While a C³ Master controls another C³ Master, it cannot control a C³ Slave.

The C³ Configuration diagram illustrates the only four ways (see *All C³ Master Network* below for the exception) a C³ network can be created (while there are additional ways a network can be created, for Standard Rules gameplay these are the only four). In each of the four diagrams, a circle represents either a 'Mech or vehicle; an "S" represents a C³ Slave, while an "M" represents a C³ Master. The arrows show the network links between C³ Masters and C³ Slaves, while the colors differentiate between each lance-level (4 unit) C³ network.

In Configuration 1, two of the three C³ lance-level networks are built with a single C³ Master controlling three C³ Slaves (the maximum number a C³ Master can control). In the third lance, a C³ Master is networked to two C³ Slaves, while the fourth and final unit of the lance carries the C³ Master that networks the three C³ Masters of each lance (the maximum number a C³ Master can control) into a twelve unit C³ network; the unit carrying the C³ Master that links the three lances is automatically networked into the system.

In Configuration 2, everything remains the same, but instead of a separate unit carrying the C³ Master that links the three lances, a single unit carries two C³ Masters; in the third lance, the C³ Master can control three C³ Slaves now, as opposed to the two C³ Slaves it controlled in Configuration 1, maintaining a twelve unit C³ network.

In Configuration 3, three of the C³ Masters are carried by a single unit, with a single C³ Master carried by a separate unit. As a C³ Master cannot control more than three C³ Masters or three C³ Slaves, the network is down to only eleven units.

Finally, in Configuration 4, all four of the C³ Masters are carried by a single unit. As with Configuration 3, since a C³ Master can only control three C³ Masters or three C³ Slaves, the network is down to only ten units.

All C³ Master Network: The only allowable variation on those four configurations is to replace C³ Slaves with C³ Masters. For example, in Configuration 1, if the controlling player replaced any of the C³ Slave in the red lance with a C³ Master, then all three C³ Slaves in that lance would have to be replaced with C³ Masters, as a C³ Master cannot control another C³ Master and control a C³ Slave simultaneously. Such an exchanging of C³ Slaves for C³ Masters can happen at the lance-level, without affecting the company-level. In the cited example, even if the entire red lance was composed of C³ Masters, the blue and green lances could still be composed of networks consisting of a C³ Master and three C³ Slaves.

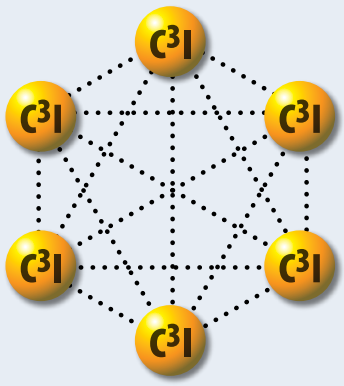
Multiple Networks: If multiple C³ networks are established at the start of the game and they are not designated as connected before play begins, they can never share targeting information during the scenario, regardless of destroyed units. For example, if a controlling player fielded Lances A and B, and each lance of four units are connected by a C³ network, but the lances were not designated at the start of play as being part of the same network (regardless of whether they *could* be connected), even if a unit in Lance A is destroyed during the game, a unit in Lance B could not join the network in Lance A.

Losing a C³ Network

The destruction of a 'Mech or vehicle carrying a C³ Master, or a critical hit to the C³ Master, eliminates the portion of the network it controlled. If the 'Mech carrying the C³ Master that connects the three C³ Masters together to form a twelve unit C³ network is destroyed (or if that designated C³ Master is destroyed due to a critical hit), than the three lance-level networks still function, but can no longer share targeting information, one lance to another.

The destruction of a unit carrying a C³ Slave has no effect on the rest of the C³ network.

For example, in the C³ Configuration 1 diagram, if the C³ Master in the red lance is destroyed (either through the destruction of the carrying unit or through a critical hit), the three C³ Slave carrying units would be severed from the C³ network completely. In the same configuration diagram, if the C³ Master in the yellow lance that links all three lances together is destroyed through a critical hit, all three lance-level C³ networks would still operate, but the lances could not share information, and the unit that carried that C³ Master would be severed completely from the network.



• C³I DIAGRAM •

IMPROVED C³ COMPUTER

The C³i computer follows the standard C³ computer rules above, with the following changes.

In place of a "master" C³i computer, every unit in an improved C³i network must mount a C³i computer. Up to six units may be linked in a single C³i network. Multiple networks cannot be linked together.

Because no master computer exists in an improved C³i network, the entire network cannot be shut down by the loss of a single unit. Only those units in the effect radius of enemy ECM or whose C³i computer is destroyed by a critical hit are isolated from the network.

Improved C³i computers are not compatible with standard C³ Masters/C³ Slaves and do not have the TAG capability of the standard C³ Master.

CARGO BAYS

If a critical slot containing cargo is hit, all cargo in that location is destroyed.

CASE (CELLULAR AMMUNITION STORAGE EQUIPMENT)

If ammo (or any other explosive component, such as a gauss rifle) in a CASE-equipped location explodes, it still damages the internal structure in that location as normal. However, any excess damage simply dissipates, rather than transferring to

an additional internal structure location. Remember that the loss of all internal structure in a side torso location also blows off the corresponding arm, though the arm is not damaged by the explosion and can still be used as a club (see p. 145).

If an ammo explosion transfers into a location protected by CASE, the internal structure in that location takes damage as normal. All excess damage is dissipated, as above. For example, if an Inner Sphere 'Mech suffered an arm ammo explosion and damage transferred to a side torso equipped with CASE, the internal structure of the side torso would suffer damage as normal, and then the excess damage would harmlessly blow out the CASE panels.

Critical Hits: Critical hits on slots occupied by CASE have no effect and should be re-rolled.

Vehicles: See *Ammunition* under *Ground Combat Vehicle Critical Hit Effects* in the *Combat Vehicles* section, page 193.

Aerospace Fighters: See *Heat*, page 161.

CHAINSAW

A chainsaw can be used to make a physical attack; see *Physical Weapon Attacks*, page 146.

A chainsaw can clear a path through wooded hexes. Instead of having to make multiple weapon attacks and track Terrain Factor (see *Clearing Woods*, p. 112), using a chain saw simply takes two turns to reduce a wooded hex from its current state to one lower; heavy woods become light woods, and light woods become rough terrain. Two units can combine to reduce this time to one turn.

While clearing woods, the unit must remain in the hex, though it can make facing changes as usual. It can also make weapon attacks, though all shots receive a +2 modifier as though the unit were moving at Running/Flank speed.

Buildings: A chainsaw attack inflicts 1D6 points of damage (in addition to its standard Damage Value, see *Physical Weapon Attacks*, p. 146) to a building hex.

Support Vehicles: Two Support Vehicles mounting chainsaws can reduce a wooded hex in one turn.

The chainsaw mounted on a Support Vehicle can also be used in a charge attack with a +1 to-hit modifier, plus applicable movement and terrain modifiers. A successful attack inflicts 5 points of damage to 'Mechs, vehicles and battle armor. Against 'Mechs, use the appropriate Kick Location Table or the appropriate full Hit Location Table if the 'Mech is prone. Against conventional infantry, the chainsaw delivers 1D6 damage; this damage is applied as though the attack came from another infantry unit (see *Attacks Against Conventional Infantry*, p. 215).

COMBINE

A combine can be used to make a physical attack; see *Physical Weapon Attacks*, page 146. A Support Vehicle cannot use a combine to make any kind of attack.

Against conventional infantry, the combine delivers 1D6 damage; this damage is applied as though the attack came from another infantry unit (see *Attacks Against Conventional Infantry*, p. 215).

DUAL SAW

A dual saw can be used to make a physical attack; see *Physical Weapon Attacks*, page 146.

Buildings: A dual saw attack inflicts 2D6 points of damage (in addition to its standard Damage Value, see *Physical Weapon Attacks*, p. 146) to a building hex.

Support Vehicles: A dual saw can clear a path through wooded hexes, using the rules for a chainsaw (see *Chainsaw*, above).

The dual saw can also be used in a modified charge attack with a +1 to-hit modifier, plus applicable movement and terrain modifiers. A successful attack inflicts 7 points of damage to all units (use the Kick Location Table for a standing 'Mech, or the appropriate full Hit Location Table against a prone 'Mech). Against conventional infantry, the dual saw delivers 1D6 damage; this damage is applied as though the attack came from another infantry unit (see *Attacks Against Conventional Infantry*, p. 215). A successful attack against a 'Mech forces a Piloting Skill Roll as though the 'Mech had been charged (see *Charge Attacks*, p. 148).

DUMPER

A unit equipped with a dumper can empty all the cargo in the dumper's location at the end of the Movement Phase, at no MP cost. Any equipment or personnel dumped take damage equivalent to a Level 1 fall (see *Falling*, p. 68, or *Unit Displacement*, p. 151, for infantry).

A unit cannot dump cargo on top of another unit in the same hex, unless transferring the cargo to a friendly unit.

ECM SUITE

An ECM suite has an effect radius of six hexes that creates a "bubble" around the carrying unit. The ECM's disruptive abilities affect all enemy units inside this bubble, as well as any line of sight traced through the bubble. It has no effect on units friendly to the unit carrying the ECM.

In the ECM diagram, the 'Mech in Hex A on the Open Terrain #1 map is equipped with an ECM suite, which has an effect radius of six hexes (shown as the shaded area). The suite affects any enemy unit in this area or any enemy LOS traced through it. The 'Mech in Hex B is affected because it falls inside the effect radius. A shot from Hex C to Hex D would also be affected because LOS passes through the radius. A shot from Hex C to Hex E would not be affected because LOS does not pass through the radius.

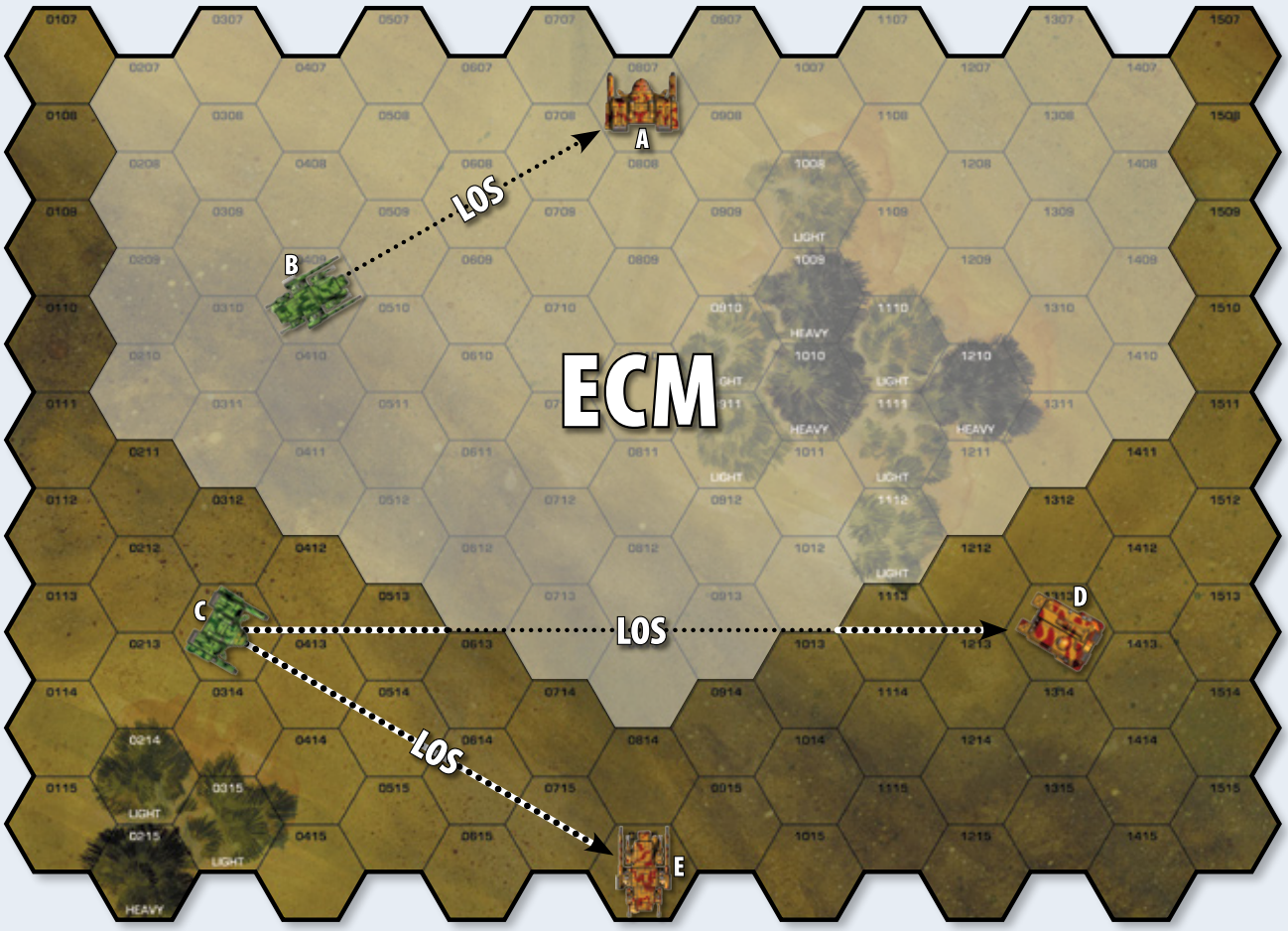
Within its effect radius, an ECM suite has the following effects on the following systems. The ECM suite does not affect other scanning and targeting devices, such as TAG and targeting computers.

Active Probe: Active probes cannot penetrate the ECM's area of effect. The probing unit would notice that it is being jammed, however.

Artemis IV FCS: ECM blocks the effects of Artemis IV fire control systems. Artemis-equipped launchers may be fired as normal missiles through the ECM, but they lose the Cluster Hits Table bonus.

Narc Missile Beacon: Missiles equipped to home in on an attached Narc pod lose the Cluster Hits Table bonus for that system if the pods themselves lie within an ECM "bubble." The Narc launcher itself (standard and iNarc) is not affected by ECM.

C^3 and C^3i Computer: ECM has the effect of "cutting off" any C^3-equipped unit from its network. If a C^3 master unit is isolated from the network because it ventures inside the ECM radius, the entire portion of the network below it is effectively shut off (all units subordinate to it on the diagram on p. 132). Only those C^3 units able to draw an LOS to the master unit that does not pass through the ECM radius can access the network. If the master unit that connects the lances of a company lies inside the ECM effect radius, the



• ECM DIAGRAM •

link between the lances is lost, though each lance's network functions normally (unless the ECM also interferes with them individually).

Water: If an ECM Suite is in a location of a unit that is above the surface of a water hex, it cannot affect units underwater. In other words, for an ECM Suite to affect units underwater, it must be in a location that is underwater. The one exception are naval vessels. If an ECM Suite is located in the "body" of a naval vessel, on the surface, the ECM Suite can affect units both above and below the water.

Using the C³ diagram on page 132, the situation becomes quite different if the BattlMech in Hex A is equipped with an ECM Suite. The units in Hexes B, C and D would be cut off from the network because they are within six hexes of the ECM unit.

ENDO STEEL

Critical hits against an endo steel critical slot have no effect and should be re-rolled.

EXTENDED FUEL TANKS/CELLS

Extended Fuel Tanks that are filled or partially filled fuel tanks explode like ammunition (such that CASE may mitigate the effects of this blast as normal) for 20 points of damage. Empty Extended Fuel Tanks are treated as empty ammunition bins (see p. 125).

FERRO-FIBROUS ARMOR

Critical hits against any type of ferro-fibrous armor (standard, light or heavy) critical slot have no effect and should be re-rolled.

GAUSS RIFLE

If a slot containing any type of gauss ammunition takes a critical hit, the ammo does not explode, but the hit destroys the ammo-feed mechanism, rendering the rest of the ammunition in that slot useless.

A critical hit on the Gauss rifle itself destroys the capacitors that power the weapon, causing a catastrophic discharge of the capacitor's stored energy with results identical to an ammunition explosion; only mark off as destroyed the critical slot that was hit. If a Gauss rifle takes a critical hit, treat the result as a 20-point ammunition explosion in the location containing the rifle. The Gauss rifle is immediately powered down and further hits to other critical slots have no effect during game play.

Heat: Excess heat does not cause a Gauss rifle or its ammunition to explode

Anti-Personnel Gauss Rifle

Treat a critical hit against an anti-personnel Gauss as a 3-point ammunition explosion in the location containing the rifle.

Light Gauss Rifle

Treat a critical hit against a light gauss rifle as a 16-point ammunition explosion in the location containing the rifle.

Heavy Gauss Rifle

The heavy Gauss rifle follows all the rules for Gauss rifles, with the following exceptions.

A 'Mech expending any MP and firing a heavy Gauss rifle in the same turn requires the attacker to make a Piloting Skill Roll at the end of the Weapon Attack Phase, with the following modifiers based on the unit's weight class: Assault –1, Heavy 0, Medium +1 and Light +2. Unlike other Piloting Skill Roll effects, this is not cumulative; if the same unit fires two heavy Gauss rifles in the same turn, two rolls would be required, but only the single modifier would apply to each roll. Other standard modifiers (such as 20+ points of damage inflicted in the Weapon Attack Phase, damage to actuators and gyros and so on) apply to the Piloting Skill Roll as usual.

Critical Hits: Treat a critical hit against a heavy Gauss rifle as a 25-point ammunition explosion in the location containing the critical slot struck. If a heavy Gauss rifle is split between the center torso and side torso, CASE located in the side torso that contains the heavy Gauss rifle stops any transfer of damage to the center torso; if the Gauss rifle is struck in the center torso, however, a 25-point ammunition explosion applies to the center torso.

Fighters and Small Craft: Fighters and Small Craft apply a +1 to-hit modifier to any attack made with a heavy Gauss rifle.

Hyper-Assault Gauss Rifle

When an HAG hits a target, roll on the appropriate column of the Cluster Hits Table, but apply a +2 modifier at short range and a –2 modifier at long range. Treat a result of less than 2 as 2, and a result of greater than 12 as 12.

Once the Damage Value has been determined from the Cluster Hits Table, damage from an HAG is divided into 5-point Damage Value groupings (any remainder damage assigned to a final grouping), with each grouping assigned to a different location using the appropriate Damage Location Table (provided the target has separate locations).

Critical Hits: Treat a critical hit against a hyper-assault Gauss rifle as an ammunition explosion in the location containing the critical slot struck: HAG 20 as a 10-point explosion; HAG 30 as a 15-point explosion; HAG 40 as a 20-point explosion.

Flak: When used against an eligible target (see p. 114), apply a –1 modifier plus the standard –2 Flak modifier to the to-hit number (for a total –3 modifier).

Targeting Computer: This weapon can use a targeting computer when making attacks, except when using the Flak weapon effect or for aimed shots (see *Targeting Computer*, p. 143).

HEAVY-DUTY PILE DRIVER

A pile-driver can be used to make a physical attack; see *Physical Weapon Attacks*, p. 146.

Buildings: A piledriver attack inflicts 1D6 points of damage (in addition to its standard Damage Value, see *Physical Weapon Attacks*, p. 146) to a building hex.

Support Vehicles: Support Vehicles can use this powerful construction equipment to make a modified charge attack with a +3 to-hit modifier, plus applicable movement and terrain modifiers. A successful attack inflicts 9 points of damage against the target (use the Kick Location Table for a 'Mech, or the full Hit Location Table for a prone 'Mech). A successful attack against a 'Mech forces a Piloting Skill Roll as though the 'Mech had been charged (see *Charge Attack*, p. 148).

LIFT HOISTS

Each lift hoist allows a unit to lift cargo equal to half its tonnage (or 200, whichever is lower). These limits can be combined—for example a 30-ton IndustrialMech mounting two lift hoists can lift cargo weighing up to 30 tons.

On Itabaiana, forces from House Kurita's Ryuken-ni attempt to challenge 'Mechs from Diamond Shark's Omega Galaxy to another Trial of Possession for Clan supplies.

Units suffer no movement penalty when carrying cargo up to half their tonnage. When carrying cargo greater than half its tonnage, reduce the unit's Walking/Cruising MP by 1. (Also refigure the Running/Flank MP, multiplying the new Walking MP by 1.5 and rounding up.)

A 'Mech mounting TSM can lift double the usual cargo (cargo equal to its full tonnage for each lift hoist mounted). However, when carrying cargo that weighs more than the 'Mech's tonnage, reduce the 'Mech's Walking MP by 2 (this also means refiguring the Running MP; multiply the new Walking MP by 1.5 and round up). While Industrial TSM is always "on" (see *Industrial TSM*, p. 143), standard TSM requires the unit to raise its heat scale to 9 or more before receiving this benefit.

In both instances above, if the recalculated Walking/Cruising MP is reduced to zero or less, then the unit is considered to have a Walking/Cruising MP of 1 and cannot run or flank; it can, however, use the *Minimum Movement* Rule (see p. 49) to enter a hex.

Carrying vs. Loading or Unloading Cargo: If a unit simply carries cargo in the lift hoists, as opposed to loading or unloading it into cargo bays, the unit can lift or set down its cargo in a single turn, though all the rules for cargo carriers still apply (see p. 261). The unit stops to lift or set down the cargo in a Movement Phase (Ground), and sets down or lifts said cargo by the End Phase of the same turn.

If a unit mounts sufficient dedicated cargo capacity (see *Cargo Bays*, p. 133), all the cargo lifted in the hoists can be transferred to the internal cargo bays in two turns, though all the rules for cargo carriers still apply for (see p. 261). The unit stops to lift the cargo into (or set it down from) its bays in a Movement Phase (Ground), and loads or unloads said cargo by the End Phase of the following turn. In this case, the carrier incurs no movement penalty.

Combat: For purposes of combat, treat cargo in a lift hoist as unprotected cargo; resolve damage per the *Cargo Carrier* rules in the *Creating Scenarios* section (see p. 261).

Units Carrying Non-Infantry Units: Lift hoists cannot be used to lift another unit of any kind during combat. However, a unit can begin the scenario transporting another non-infantry unit (infantry units are carried as normal cargo). A transported unit is inactive and so cannot perform any action. A dropped unit does not risk destruction as cargo does, but instead suffers damage as if it fell a number of levels equal to the distance between the transporting unit and the surface directly below it (minimum 1).

Area effect attacks damage both the carrying unit and its transported unit equally; any other attacks may strike either the carried unit or the transport. Roll a D6 after each such successful attack on the carrying unit: on a 1-3 the transported unit is hit instead, with the direction of attack determined as if the transported unit was facing the same direction as its carrier.

MACHINE GUN ARRAY (MGA)

The range of a given MGA is the same as for the appropriate machine gun type, grouped (light, standard or heavy).

When an MGA hits a target, roll on the appropriate column of the Cluster Hits Table (an MGA 3 rolls on the 3 column, an MGA 4 on the 4 column and so on). The result is the number of hits that struck the target, with each hit's damage equal to the Damage Value of the appropriate machine gun type, grouped (light, standard or heavy).

Once the number of hits has been determined, roll once on the appropriate Hit Location Table and apply all hits to that location as separate damage groups (such damage may result in multiple critical hit rolls when damaging a target). This means that if an MGA 4 rolls on the Cluster Hits Table, with three machine guns hitting, and then rolls the target 'Mech's head as its hit location, the weapon causes 3 points of damage to the MechWarrior and subsequently forces three Consciousness Rolls.

Shutting Off MGAs: Like heat sinks, the MGA can be turned off during the End Phase of a turn. In any subsequent turn, the grouped machine guns can be fired individually. The MGA can then be turned back on during the End Phase of any turn, after which it functions as described above.

Critical Damage: If a machine gun is destroyed (such as through a critical hit), use the next appropriate column of the Cluster Hits Table to determine damage. If the MGA critical slot is destroyed (such as through a critical hit), the machine guns revert to individually fired weapons.

ProtoMechs: A ProtoMech can only fire a MGA into the front firing arc.

Conventional Infantry: After a successful MGA attack against conventional infantry, the controlling player does not roll on the Cluster Hits Table. Instead, all machine guns grouped in the array hit the target; the controlling player rolls the appropriate number of damage dice for the type of MGA (light, standard and heavy) times the number of machine guns in the array. For example, the player rolls 2D6 x 4 for an MGA 4 to determine how much damage the infantry unit takes.

MASC (MYOMER ACCELERATOR SIGNAL CIRCUITRY)

Any 'Mech with MASC can activate the system as it declares which movement mode it will use. The player declares that he is using the MASC system and immediately rolls 2D6 (before the 'Mech moves).

On a result of 3 or higher, the 'Mech can run that turn at a speed equal to double its current Walking MP.

On a result of 2, the player automatically assigns one critical hit to each leg that has not yet been destroyed; the player does not roll on the determining critical hits table. For a biped with both functioning legs, two critical hits would be assigned, one to each leg, while a four-legged 'Mech would assign a total of four critical hits, one to each leg; this damage is applied before the 'Mech moves. Any speed reductions that occur apply immediately, with the controlling player recalculating the appropriate Walking MP and then doubling that new number to determine how many total MPs the 'Mech may expend that turn due to the MASC system activation.

The player must roll 2D6 every turn the 'Mech is using MASC to determine whether or the system delivers a critical hit to each leg. On the second consecutive turn of MASC use, a result of 4 or less inflicts a critical hit to each leg. A result of 6 or less inflicts a critical hit to each leg on the third consecutive turn, 10 or less on the fourth, and the fifth turn of MASC use, a critical hit is automatically assigned to each leg.

For each turn in which the system is not used, reduce the target number at which critical hits are assigned by one interval, but never below 3. For example, a player using MASC for three consecutive turns needs a result of 7 or higher on the third turn to avoid inflicting critical damage. After an intervening turn of not using the system, the player needs a 5 or higher to avoid inflicting critical hits on the 'Mechs legs. Two turns without using MASC reduces the threshold number to the original 3.

Piloting Skill Rolls: Any Piloting Skills that might result from the critical hits are resolved immediately, before the 'Mech moves.

Critical Hits: When a MASC slot suffers a critical hit, the equipment ceases to function for the remainder of the game. If the critical damage occurs during the Movement Phase (Ground) while the 'Mech is using MASC (for example, because of a fall), the MASC immediately stops functioning and the player must recalculate the unit's MP. If this recalculation results in the unit having already expended more MP than it has available, its movement ends.

MINING DRILL

A mining drill can be used to make a physical attack; see *Physical Weapon Attacks*, page 144.

Buildings: A mining drill attack inflicts 1D6 points of damage (in addition to its standard Damage Value, see *Physical Weapon Attacks*, p. 144) to a building hex.

Support Vehicles: A Support Vehicle can use the mining drill to make a modified charge attack with a +0 to-hit modifier, plus applicable movement and terrain modifiers. A successful attack inflicts 4 points of damage to the target (use the Kick Location Table for 'Mechs, or the full Hit Location Table for a prone 'Mech). A successful attack against a 'Mech forces a Piloting Skill Roll as though the 'Mech had been charged (see *Charge Attack*, p. 148).

MISSILE LAUNCHERS

The following rules cover missile launchers that fall outside the standard rules for such weapons.

ATM (Advanced Tactical Missile System)

Resolve an attack with an ATM system in the same way as a standard LRM attack, with the following exceptions.

The ATM includes an integral Artemis IV targeting system at no cost in space or tonnage; add +2 to the Cluster Hits Table die roll for the weapon. The integral system functions exactly like standard Artemis IV, and may be jammed by enemy ECM. In addition, ATM launchers cannot use any special missile munitions, aside from the two variants specifically designed for them.

An ATM can use two custom-made ammunition loads: extended-range (ER) and high-explosive (HE). These are unique to the ATM; other launchers cannot use them. Like other special munitions, they must be carried in full-ton lots, and the controlling player must announce the missile type to be used during weapon attack declaration.

Damage from ATM hits is divided into 5-point Damage Value groupings, regardless of missile type used. Multiply the Cluster Hits Table result by the damage per missile, then divide the total damage into 5-point groupings for hit location.

The ATM may not fire indirectly using the *LRM Indirect Fire* rules.

Multi-Missile Launcher

The multi-missile launcher can fire SRMs or LRMs, and each missile type retains its characteristic damage and ranges.

MMLs can use standard SRM or LRM ammunition, as well as all missile special munitions that can be used by either LRM or SRM launchers (see p. 140). This includes Artemis and Narc-compatible missiles.

Damage is assigned per the type of missile fired; LRMs fired from an MML are divided into 5-point Damage Value groupings, while SRMs are divided into 2-point groupings.

Missile Ammo: A unit can carry LRM and SRM ammo slots for the MML, announcing during attack declaration which ammo type will be used. A one-shot MML may have for its single shot any munition type available to MML.

Streak SRMs (Short-Range Missiles)

A player attempting to lock a Streak missile on target must make a standard to-hit roll during the Weapon Attack Phase as if he were firing a standard SRM. If successful, the player immediately fires his Streak SRM at the locked-on target. All Streak missiles automatically hit (no roll on the Cluster Hits Table is required), and the player rolls as normal to determine the hit locations. If the roll fails, the player does not achieve a lock and so does not fire the SRMs or build up any heat.

The player must roll for a targeting lock each turn, even if he achieved a lock in the previous turn. The player must make a separate to-hit roll for each individual Streak system being fired.

Torpedo Launcher

Torpedo launchers can be any size SRM or LRM launcher and are designed to function underwater; they use the same statistics as any SRM or LRM launcher, as found on the Weapons and Equipment tables (see p. 303). Torpedoes may only be fired from or into a water hex of Depth 1 or greater, and the attacker must trace LOS through water hexes of Depth 1 or greater. When using torpedo launchers, a submerged attacker may fire on a target on the surface of the water, or an attacker on the surface may fire at a submerged target, in exception to the normal rules on *Intervening Terrain* (see p. 100).

If a torpedo hits a location that is not submerged or in the water (a turret, for example), re-roll the location.

NAIL/RIVET GUN

A nail/rivet gun only inflicts damage against conventional infantry and Support Vehicles with a Barrier Armor Rating (BAR) of less than 5; a nail/rivet gun attack inflicts 1D6 points of damage. If the location struck does not contain armor (meaning the nail/rivet gun hits internal structure), apply its standard Damage Value to the struck location; ignore any damage transfer to an armored location.

Critical Hits: If a location containing nail/rivet gun "ammunition" takes a critical hit, the ammo does not explode, but the hit destroys the ammo-feed mechanism, rendering the rest of the ammunition in that slot useless.

NARC MISSILE BEACON

If a Narc missile beacon attack hits, the Narc pod is attached to the target unit; the target's player should still roll a hit location to determine exactly where the pod attaches. If that location is destroyed during any subsequent turn, the pod is also destroyed and its effects are lost during the end of the phase in which the location was destroyed.

In all following combat phases, any unit attacking with Narc-equipped missiles adds +2 to the result of the roll on the Cluster Hits Table. This modifier remains in effect for the targeted unit throughout the rest of the battle.

Other Narc pods attached to a target have no additional effect. Other Narc beacons in the target hex do not confuse Narc-guided missiles. The Narc system can be used to aid narc-equipped SRM and LRM missile attacks, but does not affect attacks made with special munitions or launchers.

Critical Hits: Exploding Narc ammo causes 2 points of damage per pod.

Buildings: Narc pods cannot be fired into or inside buildings.

ECM: Narc-guided missiles function like conventional missiles if the narc pod they are homing in on is within the "bubble" of an active enemy ECM suite; they do not receive the +2 modifier when rolling on the Cluster Hits Table (see *ECM Suite*, p. 134).

Indirect LRM Fire: Once a Narc pod is attached to a target, all Narc-equipped missiles may be fired indirectly at that target without a spotter; all other standard modifiers for Indirect LRM fire apply (see p. 111). In addition, if used in this manner, the Narc-equipped missiles lose their +2 modifier to the roll result on the Cluster Hits Table.

Infantry: A Narc missile beacon cannot be used to attack infantry.

Improved Narc Launcher

The iNarc functions just like a standard Narc missile beacon, with the following exceptions.

The improved pods launched by the iNarc are larger than standard Narc pods, and can be brushed off in the same way as swarming anti-'Mech infantry (see p. 220). A successful roll destroys one pod of the target's choice. Unlike swarming infantry, jumping movement or falling does not knock off iNarc pods.

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Because they have no arms, vehicles cannot brush off the pods, but if a vehicle does not move or fire for an entire turn and its crew is not stunned, all attached iNarc pods can be removed in that turn's End Phase (this rule has no effect on standard Narc pods, which cannot be removed during game play).

Critical Hits: If a slot containing iNarc ammo is critically hit, the resulting ammo explosion inflicts 3 points of damage per shot remaining in the bin.

PLASMA WEAPONS

If a location containing plasma weapon ammunition takes a critical hit, the ammo does not explode, but the hit destroys the ammo-feed mechanism, rendering the rest of the ammunition in that slot useless. (A critical hit against the plasma weapon does not cause the weapon to explode.)

Heat: Excess heat does not cause a plasma weapon or its ammunition to explode.

Underwater Operations: Plasma weapons cannot be fired underwater.

Woods and Buildings: Once the Damage Value of a plasma weapon has been determined for an attack, double the damage it inflicts against a woods or building hex.

Aerospace Units: Plasma weapons, while considered energy weapons, have ammunition and so cannot be used in a strafing attack, only in strike attacks (see p. 245).

Battle Armor: Battle armor units that mount fire-resistant armor are immune to damage from the heat of a plasma weapon. The armor also reduces any standard damage caused by such weapons by half, rounded down (see *Fire Resistant Armor*, p. 228). For example, a plasma rifle inflicts 10 points of damage, plus an additional 2D6 damage from heat against any unit that does not track heat; against a battle armor unit mounting fire resistance armor, the plasma rifle only inflicts a 5-point Damage Value grouping (10 / 2 = 5).

Conventional Infantry: Against infantry, the damage dealt by plasma weapons (both the base damage, if any, as well as any variable damage rolled) is not reduced due to the weapon's Type. For example, though it is a Direct Energy weapon, a Plasma Rifle hit deals its full 10+2D6 damage.

Plasma Cannon

A plasma cannon delivers no damage, aside from 2D6 points of heat, to 'Mechs, aerospace fighters and small craft during the Heat Phase (see *Outside Heat Sources*, p. 159). For any other unit type, apply 3D6 damage. After determining Damage Value by rolling 3D6, divide the damage from a plasma cannon into 5-point Damage Value groupings (assign any remaining damage to a final grouping), with each grouping assigned to a different location using the appropriate Damage Location Table (provided the target has separate locations).

Plasma Rifle

In addition to its standard Damage Value of 10, a plasma rifle delivers 1D6 points of heat to 'Mechs, aerospace fighters, and small craft during the Heat Phase (see *Outside Heat Sources*, p. 159). For any other unit type, add 2D6 extra damage. After determining the extra Damage Value by rolling 2D6, combine that damage with the standard 10-point Damage Value. Then divide that total into 5-point Damage Value groupings (assigning any remaining damage to a final grouping), with each

grouping assigned to a different location using the appropriate Damage Location Table (provided the target has separate locations; in the case of battle armor, apply each grouping as per the normal rules for attacks against battle armor: see p. 219).

RETRACTABLE BLADE

During the Movement Phase (Ground), the controlling player must designate whether the blade is extended or retracted before moving the unit on which it is mounted. When retracted, the unit can use the hand actuator on the same arm as normal. When extended, the hand actuator cannot be used to carry items or execute a punch or push attack.

The retractable blade can be used to make a physical attack; see *Physical Weapon Attacks*, page 144.

ROCK CUTTER

A rock cutter can be used to make a physical attack; see *Physical Weapon Attacks*, page 146.

Buildings: A rock cutter attack inflicts 3D6 points of damage (in addition to its standard Damage Value, see *Physical Weapon Attacks*, p. 146) to a building hex.

Support Vehicles: A Support Vehicle can make a modified charge attack with a +2 to-hit modifier, plus applicable movement and terrain modifiers. A successful attack inflicts 5 points of damage to all units (use the Kick Location Table for 'Mechs, or the full Hit Location Table against a prone 'Mech). A successful attack against a 'Mech forces a Piloting Skill Roll as though the 'Mech had been charged (see *Charge Attack*, p. 148).

ROTARY AUTOCANNON

A player wishing to clear a jammed a rotary autocannon (see *Rapid-Fire Weapons,* p. 114) during a game must declare in the End Phase of any turn that he or she will attempt to clear the weapon in the next turn. During the turn in which the player is attempting to clear the weapon, the unit that suffered the jam must stand still or expend Walking/Cruising MP (the unit may not run/flank or jump). The unit also cannot make weapon attacks (including TAG attacks or spotting for indirect LRM fire, though all other electronics, such as C^3 and Guardian ECM suites, operate normally). At the end of the Weapon Attack Phase, the player controlling the unit should make a Gunnery Skill Roll with a +3 modifier. A successful roll indicates the weapon is cleared and can be used in successive turns; a failure means the jam is not cleared (though the player may attempt to clear the weapon in a subsequent turn). Any rotary autocannon that jams may be subject to a clearing attempt, though each individual weapon may only be the subject of a single clearing attempt per turn (a separate Gunnery Skill Roll is made for each attempt).

Critical Hits: If a rotary autocannon suffers a critical hit while jammed, the hit causes an ammo explosion with a Damage Value equal to a single shot for the weapon.

SPECIAL MUNITIONS

Some weapons (standard autocannons, standard LRM and SRM launchers and NARC missile beacons) can use different submunitions. Before play begins, a player should determine what weapons his or her units mount and then, based on the information below, what submunitions (if any) those weapons may use.

Special munitions must be assigned in full-ton lots and clearly marked on the carrying unit's record sheet. For example, if an ammo slot on a record sheet reads "Ammo (LRM 5) 24", a player can review the submunitions below before play begins to find those that can be used in LRMs and then assign all 24 shots in that slot to the selected special munition (except for special munitions that assign only half the ammo per ton (round down) to each critical slot).

The player must announce the type of special munition to be used during weapon attack declaration. If the player makes no announcement, assume that he or she is firing normal munitions (provided the weapon in question has a corresponding ammo slot available).

The following list does not cover ammunition that comes standard with a given ammo-fed weapon type: autocannon, Gauss, LRM, SRM, Streak, Narc and so on. Those standard munitions are either covered in the description for a given launcher on the appropriate Weapons and Equipment tables (beginning on p. 303), under *Missile Launchers* (see p. 138) or under the specific weapon description in this section.

No launcher may combine more than one special munition or other special property (Streak, Artemis and so on) in a single shot unless specifically allowed by the rules for that item.

Infantry: Unless stated otherwise, infantry may not carry special munitions.

Armor-Piercing Ammunition

Every attack with armor-piercing ammunition that successfully damages armor provides a chance for a critical hit, even if the internal structure took no damage. After marking off the armor damage for the attack, roll once on the Determining Critical Hits Table. Apply a modifier to the die roll based on the type of autocannon used: –1 for an AC/20, –2 for an AC/10, –3 for an AC/5 or –4 for an AC/2. If the initial attack damages the internal structure, make the standard roll for possible critical hits. Armor-piercing ammunition has no additional effect for attacks that damage internal structure. Damage that transfers to a location with armor does not trigger a new critical damage check in that location.

A ton of armor-piercing ammo contains half as many shots as a ton of standard ammo (rounded down). In addition, armor-piercing rounds are harder to aim, adding a +1 modifier to the to-hit number at all ranges.

Aerospace Units: Armor-piercing ammo has no effect against aerospace units.

Vehicles: Every successful attack against a vehicle automatically causes a roll on the appropriate column of the Vehicle Critical Hits Table, corresponding to the location damaged; in the case of Support Vehicles with a BAR less than 10, apply a +2 modifier to the die roll. In both cases, the standard modifiers inflicted by armor-piercing ammunition for determining critical hits still apply when rolling on the Vehicle Critical Hits Table (see p. 192).

Weapon Type: Standard and light ACs

Technology Base: Inner Sphere

Artemis-Equipped Missiles

Artemis-equipped missiles used in conjunction with an Artemis IV FCS (see p. 130) gain a +2 modifier when rolling on the Cluster Hits Table.

Weapon Type: Standard LRMs/MMLs/SRMs

Technology Base: Clan or Inner Sphere

Cluster Ammunition

For attacks made with cluster munitions, apply a –1 modifier to the to-hit number at all ranges. Resolve successful attacks as a cluster weapon (see *LB-X Weapons*, p. 120).

When firing cluster munitions, LB-X autocannons cannot make aimed shots, and they also lose the benefits of the firing unit's targeting computer (if any); see *Targeting Computer*, on page 143.

Flak: Cluster ammo can be used to make flak attacks (see *Flak*, p. 114).

Weapon Type: LB-X ACs

Technology Base: Clan or Inner Sphere

ECM Pod

On a successful attack, treat the target as if within a hostile ECM field (see *ECM Suite*, p. 134). The ECM pod has no effect radius of its own, and thus does not affect other units—it only works on targets to which it is attached. ECM pods have no effect against infantry units.

Weapon Type: iNarc

Technology Base: Inner Sphere

Explosive Pod

On a successful attack, the target suffers 4 points of damage (6 for iNarcs); if ammunition is critically hit, the resulting ammo explosion inflicts 4 points of damage (6 for iNarcs) per shot remaining in the ammo bin slot.

Weapon Type: Narc/iNarc

Technology Base: Inner Sphere

Flechette Ammunition

Apply the standard Damage Value of the autocannon to conventional infantry as though the attack were from an infantry unit; half damage to all other units (round down). This damage is in addition to the doubling of damage against conventional infantry in a clear hex. In addition, double the standard damage against woods hexes.

Weapon Type: Standard and light ACs

Technology Base: Inner Sphere

Fragmentation Missile

Apply the standard Damage Value of the missile launcher (do not roll on the Cluster Hits table) to conventional infantry as though the attack were from an infantry unit; no damage to all other units or building hexes. This damage is in addition to the doubling of damage against conventional infantry in a clear hex. In addition, double the standard damage against woods hexes.

Weapon Type: Standard LRMs/SRMs

Technology Base: Inner Sphere

Haywire Pod

On a successful attack, the target suffers a +1 to-hit modifier to all weapon attacks (including TAG) and may not spot for indirect LRM attacks. Multiple pods are not cumulative and have no further effect. Haywire pods have no effect against infantry units.

Weapon Type: iNarc

Technology Base: Inner Sphere

Homing Pod

The homing pod has an improved ability to attract Narc-equipped missiles (see *Narc-Equipped Missile,* p. 142). In addition to the usual +2 modifier when rolling on the Cluster Hits Table, apply a –1 to-hit modifier to all Narc-capable missile attacks made against a target that has been hit with an iNarc homing pod. Homing pods have no effect against infantry units.

Weapon Type: Narc/iNarc

Technology Base: Clan or Inner Sphere

Infernos

Infernos deliver no standard Damage Value. Instead, depending on the target unit type, they deliver heat or automatic chances for critical damage, or they automatically eliminate troopers.

Building Hexes: Each missile that strikes a building hex inflicts 2 points of damage to the hex. Additionally, each missile that strikes a building hex may also affect units inside the building on the level of the building that was hit by inferno missiles. For every unit on the level of the building that was hit, roll 1D6. On a result of 1-4, the missile has no effect against that unit. On a result of 5-6, the missile also strikes the unit, with the following rules for each unit type in effect. It is possible for one missile to strike multiple units on the same level of the building hex. Note that inferno missiles are an exception to the *Attacking Units Inside Buildings* rules (see p. 171) for all unit types except infantry. If an infantry unit inside a building is struck as described above, consult the *Infantry Damage in Buildings Table* (see p. 172) to see what percentage of missiles also affect the infantry (round normally).

Woods: Every missile that strikes a woods hex inflicts 4 points of damage to the hex.

ProtoMechs: Every three missiles that strike a ProtoMech unit potentially destroy a ProtoMech location. After all inferno attacks against a ProtoMech have been resolved, add together the total number of inferno missiles that struck the target. For each three missiles, roll once on the ProtoMech Hit Location Table; note that a result of a near miss is still a near miss and so the infernos would have no effect. That location is destroyed; automatically mark off the shaded box furthest to the right in that location on the Hit Locations and Critical Hits section of the record sheet.

Infantry: After all inferno attacks against an infantry unit have been resolved for the turn, add together the total number of inferno missiles that struck the unit. In neither case is this modified by terrain or infantry type. Every missile that strikes a conventional infantry unit automatically eliminates three troopers; every three missiles that strike a battle armor unit automatically eliminate one randomly determined trooper (unless the unit mounts fire resistant armor; see *Fire Resistant Armor*, p. 228). In neither case is this further modified by terrain or infantry type.

INFERNO AMMO EXPLOSION TABLE

Heat Level	Avoid Number
10	4+
14	6+
19	8+
23	10+
28	12

For example, if two separate SRM attacks utilizing inferno missiles result in a total of five missiles striking a battle armor unit, only a single trooper would be eliminated; if those same five missiles strike a conventional infantry platoon, 15 troopers would be eliminated.

'Mechs, Aerospace Fighters, and Small Craft: For every missile that strikes the target, increase the unit's heat level by 2 points during the Heat Phase of the turn in which the infernos hit (see *Outside Heat Sources*, p. 159). The additional Heat lasts for only 1 turn.

Conventional Fighter: Every three missiles that strike a conventional fighter inflict 1 point of SI damage; after all inferno attacks against the unit have been resolved, add together the total number of inferno missiles that struck the target and then determine how much damage is inflicted against the SI.

DropShips: No effect.

Vehicles: Every missile that strikes the target automatically causes a roll on the appropriate column of the appropriate unit's Critical Hits Table, corresponding to the location hit (see *Ground Combat Vehicle Critical Hit Effects,* p. 193), with the following modifiers to the dice roll result: –2 for Combat Vehicles; no modifier for Support Vehicles (unless the Support Vehicle has the Armored chassis modification and a BAR of 10, in which case it is treated as a Combat Vehicle).

Attacks by Battle Armor: In addition to the standard rules for infernos described in this section, battle armor making use of inferno missiles that do not also mount fire resistant armor have additional rules (see *Infernos*, p. 229).

Attacks by SRM Infantry: An SRM infantry platoon that hits its target does so with a number of inferno missiles equal to its Damage Value after rolling on the Cluster Hits Table, divided by 2 (round fractions down).

Tracking Heat: 'Mechs, aerospace fighters, and small craft that carry infernos must make an additional set of Heat Scale Avoid Rolls to determine whether or not the inferno ammo explodes per the Inferno Ammo Explosion Table. The inferno Avoid Rolls at 19, 23 and 28 heat points must be made in addition to the normal Avoid Rolls required at these heat levels. If the inferno ammo explodes, it inflicts 2 heat per missile to the carrying unit, to a maximum of 30 heat, along with the standard damage from an SRM explosion.

Weapon Type: Standard SRMs
Technology Base: Clan or Inner Sphere

Narc-Equipped Missile

Narc-equipped missiles gain a +2 modifier when rolling on the Cluster Hits Table, when fired on any unit hit by a friendly Narc-Equipped beacon. Friendly iNarc beacons also apply a –1 modifier to the to-hit roll for attacks using Narc-equipped missiles.

Weapon Type: Standard LRMs/SRMs
Technology Base: Clan or Inner Sphere

Nemesis Pod

A successful attack tags the target. Units friendly to a tagged target that fire Artemis IV-capable missiles, semi-guided missiles or Narc-equipped missiles will attack the Nemesis-tagged unit instead of their enemy, if it is along the LOS between the attacker and the target, and LOS exists between the attacker and the Nemesis-tagged unit and the Nemesis-tagged unit is not underwater. Apply a +1 modifier to such unintentional attacks, starting with the closest Nemesis-tagged friendly if more than one unit meets the criteria. Nemesis pods have no effect against infantry.

Weapon Type: iNarc
Technology Base: Inner Sphere

Precision Ammunition

When firing precision ammunition, reduce the target movement modifier by 2 to a minimum of zero.

A ton of precision ammo contains half as many shots as a ton of standard ammo (rounded down).

Weapon Type: Standard and light ACs
Technology Base: Inner Sphere

Semi-Guided Missile

When firing semi-guided missiles at any target in range successfully designated by a friendly TAG (below), the attacker ignores the target movement modifier (if firing indirectly, also ignore indirect fire, terrain and spotter movement modifiers).

Once a successful to-hit roll has been made, use the rules for standard LRMs to determine the number of missiles that struck the target, hit locations and so on.

Weapon Type: Standard LRMs
Technology Base: Inner Sphere

SALVAGE ARM

A unit mounting a salvage arm cannot use it to make any kind of attack. A 'Mech that makes a punch or push attack with an arm that mounts a salvage arm should treat the attack as though the arm in question has no hand actuator.

SPOT WELDER

A spot welder can be used to make a physical attack; see *Physical Weapon Attacks*, page 146.

STEALTH ARMOR SYSTEM

A 'Mech with the stealth armor system must also mount an ECM suite. When the stealth armor system is not engaged, the ECM suite functions normally. When the stealth armor system is engaged, the ECM does not function, but the 'Mech suffers effects as if in the radius of an enemy ECM suite (see p. 134). If the ECM suite is destroyed, the stealth armor system cannot function.

A player may turn the stealth armor system on or off during the End Phase of any turn. A 'Mech may also start the game with the system engaged; this must be indicated on the unit's record sheet.

While the system is engaged, attacks against a unit equipped with stealth armor receive additional to-hit modifiers of +1 at medium range and +2 at long range. In addition, a 'Mech with its stealth armor system engaged cannot be attacked as a secondary target (see *Multiple Targets Modifier*, p. 108).

Finally, while engaged, the stealth armor system generates 10 heat points per turn.

Aerospace Units: Stealth armor has no effect on attacks by aerospace units.

Critical Hits: Critical hits against a stealth armor critical slot have no effect and should be re-rolled.

Infantry: A unit that is carrying or being swarmed by infantry of any type does not lose its stealth modifiers. Transported battle armor does not receive any benefits from a carrying unit's stealth armor.

TAG (TARGETING ACQUISITION GEAR)

Targeting acquisition gear designates (or "paints") an enemy unit to be struck by another unit's weapons. Instead of making a to-hit roll for TAG during the Weapon Attack Phase, all units needing to make TAG to-hit rolls do so after the end of the Movement Phase (Aerospace), but before the beginning of the Weapon Attack Phase (initiative is still followed, however).

To use TAG equipment for target designation, calculate the to-hit number as for a standard weapon attack. As using TAG

occurs before the Weapon Attack Phase, it does not count towards the number of targets a unit engages in the Weapon Attack Phase.

If the to-hit roll fails (meaning the TAG spotter fails to designate the target), TAG has no further effect. If the to-hit roll is successful, the system designates the target for that turn's Weapon Attack Phase; the target unit is designated for any number of attacks from any number of units using TAG-guided ammunition, such as semi-guided missiles (p. 142).

Successful TAG designation also spots the target for Indirect LRM Fire (see p. 111), but as it occurs before the Weapon Attack Phase, no spotting to-hit modifier is incurred if the unit also fires weapons in the Weapon Attack Phase. This counts as the one target a unit can spot each turn.

A TAG system cannot designate infantry, but can designate any other target, such as a building or other hex and so on (see *Target*, p. 42 of *Playing the Game*).

ProtoMechs: The five ProtoMechs of a ProtoMech Point may declare different targets for any mounted TAGs. For example, if all the ProtoMechs in a ProtoMech Point mounted a TAG, they could declare up to five different targets with TAG in the same turn.

Vehicles: TAG mounted in a vehicle's body location is considered to have a front firing arc.

TARGETING COMPUTER

To make an attack using the targeting computer, follow all standard rules for weapons of that type, but modify the to-hit number for any attacks using the unit's weapon by –1 (see *DE/DB: Direct-Fire Energy or Ballistic Weapon*, p. 113, to find which weapons can be used with a targeting computer).

The controlling player may use the targeting computer to attempt to attack a specific hit location on an active unit. To do so, an attacking unit ignores the standard –1 to-hit modifier for the targeting computer and uses the *Aimed Shots* rule (see p. 110), but applies an additional +3 to-hit modifier. The target need not be immobile when using a targeting computer to make such an aimed shot; if the target is not immobile, then the –4 to-hit modifier for an attack against an immobile target does not apply. An attacker cannot target a 'Mech's head when making an aimed shot with a targeting computer.

If using a targeting computer to make an aimed shot against an immobile target, apply an additional –1 modifier (representing the targeting computer) to the –4 immobile target modifier. All other rules for an aimed shot remain the same.

Hyper-Assault Gauss Rifles: Hyper-Assault Gauss Rifles may not use a targeting computer to make an aimed shot.

LB-X Autocannons: When firing cluster munitions, LB-X autocannons lose the benefits of the firing unit's targeting computer.

Pulse and Rapid-Fire Weapons: Pulse and rapid-fire weapons may not use a targeting computer to make an aimed shot, unless a rapid-fire weapon is firing a single shot, in which case it can make an aimed shot as described above).

TRACKS

During the Movement Phase, the controlling player of a 'Mech equipped with tracks must declare what movement mode the ´Mech will use throughout the turn—foot or tracked. These modes cannot be combined.

Tracks provide Track MP equal to the 'Mech's Walking MP, but do not provide a corresponding Running MP. Actuator critical hits do not reduce tracked movement, but a critical hit on a track—or the loss of a leg containing a track—reduces the Track MP by half for a humanoid chassis (or by a quarter for quad chassis designs). While moving in tracked mode, leg actuator and gyro critical hits do not require a Piloting Skill Roll, though Piloting Skill Rolls for suffering 20 points of damage or sustaining kick, charge or push attacks are still required and should be modified appropriately for component damage.

While using tracked movement, 'Mechs receive all the MP bonuses (including the +1 MP for paved surface movement) and terrain restrictions (including those for heavy woods and Depth 1+ water, not changing more than one level in a hex and so on) that apply to tracked vehicles. Tracked movement generates heat as normal for a walking 'Mech (as with walking, ICE-equipped 'Mechs generate no heat), but TSM movement modifiers do not apply for a 'Mech using tracked movement.

If a 'Mech is using tracked movement in the turn when its gyro is destroyed, it does not automatically fall. In addition, it can continue to use tracked movement provided it starts a Movement Phase on its feet.

'Mechs mounting tracks are more vulnerable to anti-'Mech infantry. Any leg attacks receive a –2 to-hit modifier.

TSM (TRIPLE-STRENGTH MYOMER)

Triple-strength myomer provides a benefit only when a BattleMech is running hot. If a BattleMech is equipped with triple-strength myomer, for each turn that it ends with a heat level of 9 or higher, the following effects take place the next turn; apply other modifiers that decrease movement, such as heat and damage, normally.

- Increase the 'Mech's Walking MP by 2 and recalculate its Running MP; multiply the new Walking MP by 1.5, rounding up. Triple-strength myomer does not affect Jumping MP.
- Double the 'Mech's lifting ability (see *Cargo Carriers* in the *Creating Scenarios* section, p. 261).
- Double the damage for punch, kick and club attacks, as well as some physical weapon attacks (see p. 146).

Critical Hits: Critical hits against slots containing triple-strength myomer have no effect and are re-rolled.

Industrial TSM

Industrial TSM follows the rules above, with the exceptions given below.

- Industrial TSM is always on; it operates regardless of a 'Mech's heat level.
- All physical attacks receive a +2 to-hit modifier.
- A 'Mech using industrial TSM gains no additional MPs.
- Apply a +1 modifier to all Piloting Skill Rolls.

WRECKING BALL

A wrecking ball can be used to make a physical attack; see *Physical Weapon Attacks*, page 146.

Buildings: A wrecking ball attack inflicts 4D6 points of damage (in addition to its standard Damage Value, see *Physical Weapon Attacks*, p. 146) to a building hex.

Support Vehicles: A Support Vehicle can make a physical attack with a wrecking ball against a target in the arc corresponding to the location where the wrecking ball is mounted, with a +2 to-hit modifier, plus applicable movement and terrain modifiers. A successful attack inflicts 8 points of damage to all units (use the full Hit Location Table against 'Mechs). A successful attack against a 'Mech forces a Piloting Skill Roll as though the 'Mech had been charged (see *Charge Attack*, p. 148).

PHYSICAL ATTACKS

'Mechs can make seven different types of physical attacks: punching, clubbing, pushing, kicking, charging, death from above or physical weapon attacks (this last attack requires that the 'Mech mount a specific physical attack weapon, such as a hatchet, sword and so on).

In order to make a physical attack, the unit must be adjacent to its target and the target must be within the attacking 'Mech's forward firing arc (see *Punch Attacks*, *Charge Attacks* and *Death from Above Attacks* for exceptions).

The rules for physical attacks assume that attacker and target are 'Mechs standing at the same level. Special rules regarding other types of units, different levels and prone 'Mechs appear starting on page 150.

Aerospace Units: Aerospace units cannot make physical attacks. They have their own special physical attack akin to charging, called ramming (see p. 241), but it only applies to aerospace units ramming other aerospace units. Aerospace units cannot intentionally ram a ground unit.

IndustrialMechs: During the End Phase of any turn in which an IndustrialMech is the target of a successful physical attack, roll 2D6 and consult the Determining Critical Hits Table (p. 124). To determine the location of any resulting critical hits, roll once on the Front/Rear column of the 'Mech Hit Location Table (see p. 119). The controlling player makes only one roll per turn, regardless of the number of successful physical attacks the IndustrialMech suffers.

Infantry: Infantry units cannot make physical attacks; they have their own unique attacks (see *Anti-'Mech Attack*, p. 220).

ProtoMechs: ProtoMechs cannot make physical attacks; they can, however, make a single "frenzy" attack (see p. 187).

Vehicles: The only physical attack a vehicle can make is a charge (ram).

Attacks Against Large Support Vehicles and Grounded Small Craft: As noted on p. 110, all physical attacks against Large Support Vehicles (including Airships and Fixed-Wing Support Vehicles) and grounded DropShips receive a –2 to-hit modifier.

Initiative and Displacement: If one unit's charge, push or DFA attack would displace the target of another unit's physical attack, the unit with the lower Initiative resolves its physical attack first. If both attacking units are on the same team, the controlling player may determine which attack is resolved first. If the target of an attack is subsequently displaced before the attack can be resolved, and another unit is in the hex that can become the target of the attack, apply an additional +1 modifier and resolve the attack against the new target normally. If no valid target exists, the attack automatically fails.

Multiple Physical Attacks: A 'Mech may only make a single type of physical attack in a single turn: charging, clubbing, death from above, kick, punch, push or physical weapon attack. Even if a 'Mech mounts two physical weapons (identical or otherwise), it can only make a single physical weapon attack. When making a single punch attack, a player can punch with one or two arms (see *Punch Attacks*, p. 145).

Shutdown Targets: For the purposes of determining targets for Charge, Ram, Death From Above, and similar attacks, a unit that begins the turn shutdown or unconscious should be treated as though it automatically took its movement action first.

Water

The following rules apply to physical attacks between units that occupy water hexes.

Any successful physical attack that occurs underwater inflicts half its standard damage (round down), including a ramming attack by a surface naval vessel. A physical attack against a surface vessel is only considered underwater if the attack originated underwater, so a ramming attack by a surface vessel would not be considered underwater.

Depth 1 Water: A 'Mech standing in Depth 1 water may make any physical attack, provided the unit meets the normal requirements for each type of attack. However, the physical attack cannot be made against a unit that is underwater, unless the attack begins underwater as well. For example, a 'Mech standing in Depth 1 water adjacent to a submerged submarine in Depth 1 water can only make a kick attack, since the kick attack occurs completely underwater. The 'Mech cannot make any other attack, including a charge or death from above attack, against the adjacent submarine because a portion of the attack would take place outside the water.

Depth 2+ Water: A 'Mech standing in Depth 2 (or deeper) water can make any of the following physical attacks, provided the unit meets the normal requirements for each type of attack: charging, clubbing, kicking, punching, pushing or a physical weapon attack.

PHYSICAL ATTACK MODIFIERS TABLE

Attack Type	Modifier
Charging	+0*
Clubbing	–1
Death From Above (DFA)	+0*†
Kicking	–2
Punching	+0
Pushing	–1

*Whenever one unit charges or DFAs another, compare their Piloting Skill Ratings and use the difference between the two skill ratings as a modifier to the to-hit number. If the target's skill rating is lower, add the modifier to the to-hit number. If the attacker's Piloting Skill Rating is lower, subtract the modifier from the to-hit number.

†All the normal attack modifiers apply, including the attacker's jumping movement, but the roll is not modified for terrain. For DFA attacks against infantry targets, apply an additional +3 to-hit modifier (because infantry units have no Piloting Skill, neither player needs to add a modifier for relative Piloting Skill Rating).

BASE TO-HIT NUMBER

The base to-hit number for a physical attack is equal to the attacking unit's Piloting Skill Rating (see *Skills*, p. 39).

MODIFIED TO-HIT NUMBER

The modified to-hit number equals the base to-hit number plus the modifier for the specific physical attack as noted on the Physical Attack Modifiers Table. All other standard modifiers for weapon attacks also apply, such as attacker movement modifier, target movement modifier, damage to actuators, terrain and so on, unless specifically stated otherwise by the rules for each attack type. The sole exceptions are heat and sensor modifiers, which never apply.

Physical attacks are not Piloting Skill Rolls, and as such, Piloting Skill Roll modifiers do not affect physical attacks.

'MECH PUNCH LOCATION TABLE

	Biped		
D6 Roll Result	Left Side	Front/Rear	Right Side
1	Left Torso	Left Arm	Right Torso
2	Left Torso	Left Torso	Right Torso
3	Center Torso	Center Torso	Center Torso
4	Left Arm	Right torso	Right Arm
5	Left Arm	Right Arm	Right Arm
6	Head	Head	Head

	Four-Legged		
D6 Roll Result	Left Side	Front/Rear	Right Side
1	Left Torso	Left Front Leg/ Left Rear Leg	Right Torso
2	Left Torso	Left Torso	Right Torso
3	Center Torso	Center Torso	Center Torso
4	Left Front Leg	Right Torso	Right Front Leg
5	Left Rear Leg	Right Front Leg/ Right Rear Leg	Right Rear Leg
6	Head	Head	Head

As with weapon attacks, if the modified to-hit number is greater than 12, the physical attack automatically misses. If a player determines that his unit's declared physical attack will automatically miss, he can choose not to make the attack, thereby avoiding the need to make a Piloting Skill Roll for a failed attack. If the modified to-hit number is 2 or less, the physical attack automatically hits.

PUNCH ATTACKS ('MECH ONLY)

In a single turn, a 'Mech may punch with one or both arms; a separate to-hit roll is made for each arm. It can deliver a punch using its arm or fire the weapons on that arm, but it may not do both. Weapons mounted in the torso, legs or head may be fired in the same turn as a punch attack is made without affecting the punch.

All punch attacks must be made against targets in the attacking 'Mech's forward or side firing arcs. If the target is in the right or left arc, only the right or left arm, respectively, may punch.

A 'Mech cannot make a punch attack using a shoulder that suffered critical damage. Likewise, any arm actuator damage on the punching arm makes success more difficult and reduces the damage inflicted.

See *Modified To-Hit Number*, page 144, to determine the target number for a punch attack.

A punch attack has a Damage Value of 1 for every 10 tons (or fraction of 10 tons) that the attacker weighs. Reduce the damage by half for each upper or lower arm actuator damaged or not present, with these effects being cumulative. In other words, if both arm actuators are missing or damaged, reduce the attack damage to one-quarter of its original value (round fractions down, to a minimum of 1).

Determine damage location by rolling 1D6 and consulting the appropriate column of the 'Mech Punch Location Table based on whether the 'Mech is a biped or four-legged design.

Multiple Targets: A 'Mech can make two punches at two different targets and ignores the secondary target modifier.

Missing Actuators: A 'Mech does not need hands (or hand actuators) to punch. However, 'Mechs not equipped with a hand on the punching arm must add the +1 modifier as for a hand actuator critical hit. Likewise, 'Mechs that do not come equipped with a lower arm actuator on the punching arm must add a +2 modifier to the to-hit number, and the punch inflicts only half the standard damage (round down).

A Grasshopper *with Piloting Skill Rating 5 and a damaged upper arm actuator punches a JagerMech (a biped design) standing in light woods on its right side with one fist. Because the Grasshopper has a damaged arm actuator, the player adds a +2 to-hit modifier and reduces the normal damage by half (rounding down). Neither unit moved, and so the Modified To-Hit Number is 8: 5 (Piloting Skill Rating) + 0 (punching attack modifier) + 2 (damaged upper arm actuator) +1 (light woods) = 8. The player rolls an 8 and hits the target. The* Grasshopper *weighs 70 tons, so its punch has a normal Damage Value of 7 (70 divided by 10), but the damaged actuator reduces this to 3.*

The attacking player rolls a 3 on the 'Mech Punch Location Table, which means the attack hits the target's center torso.

CLUB ATTACKS ('MECH ONLY)

To attack another unit with a club, both the 'Mech's shoulder actuators must be undamaged and it must have two undamaged hand actuators. The 'Mech can also not have fired any arm-mounted weapons in that same turn, though it may fire weapons mounted in the torso, legs and head. The target must be in the forward firing arc.

See *Modified To-Hit Number*, page 144, to determine the target number for a club attack.

A successful attack with a club does 1 point of damage for every 5 tons that the attacking 'Mech weighs. Roll normally on the 'Mech Hit Location Table.

Missing Actuators: A 'Mech must have hands (or hand actuators) to use a club. 'Mechs with damaged upper or lower arm actuators must add a +2 modifier to the to-hit number for each damaged actuator.

FINDING A CLUB

Whenever an attack blows off a 'Mech's leg or arm, the limb remains lying in the hex where the 'Mech took the damage. 'Mechs that later occupy the hex may pick up the arm or leg and use it as a giant club. A 'Mech may not fire weapons or make physical attacks during the turn that it picks up a club.

Other objects may also be used as clubs. If the 'Mech is in a wooded hex (or a hex that has been reduced to a rough hex by a chainsaw or dual saw), it may uproot a tree and use it as a club. Uprooted trees may be used for only one successful club attack.

Girders from rubbled medium, heavy or hardened buildings may also be used as clubs. To search the rubble in the hex a unit occupies for a suitable girder, the player must roll 2D6 during the Weapon Attack Phase of a turn. A result of 7 or greater is needed to find a girder in a rubbled medium building, 6 or greater for a rubbled heavy building, and 5 or greater for a hardened building. Girders may be reused again and again, regardless of the number of successful club attacks.

Beyond what is noted above, carrying a club has no affect other than to occupy both 'Mech's hands.

PHYSICAL WEAPON ATTACKS ('MECHS ONLY)

'Mechs can be equipped with a variety of external heavy equipment. Though some of this equipment is tailor-made to inflict damage—such as a hatchet or sword—most such equipment has other uses. However, the agility and strength of 'Mechs means that they can use any such equipment in a physical weapon attack against a potential target. As with all physical attacks, the base to-hit number is equal to the MechWarrior's Piloting Skill Rating (see *Base To-Hit Number*, p. 146).

A 'Mech can either deliver a physical weapon attack using its arm or fire the weapons on that arm, but it may not do both.

The Physical Weapon Attacks Table below shows all the various equipment that 'Mechs can use to make a physical weapon attack, along with relevant information such as to-hit modifiers, Damage Value, the To-Hit Location Table to be used and so on.

Critical Hits: Like weapons, a critical hit to any slot for any equipment shown on the table below destroys the equipment, rendering it useless for the rest of the game.

Grounded Spheroid Dropships: Physical attacks made against grounded spheroid DropShips are resolved as Side hits, re-rolling any Nose locations.

PHYSICAL WEAPON ATTACKS TABLE

Weapon Type	To-Hit Modifier	Damage Value	To-Hit Location Table	Firing Arc**	Affected by TSM	To-Hit/Damage Value Affected by Actuator Damage
Backhoe	+1	6	Standard	Arm	Yes	Yes/Yes
Chainsaw	+0	5†	Standard	Arm	No	Yes/No
Combine	–2	3†	Standard	Arm	No	Yes/No
Dual Saw	+0	7†	Standard	Arm	No	Yes/No
Hatchet	–1	1/per 5 tons††	Standard*	Arm	Yes	Yes/Yes
Heavy-Duty Pile Driver	+2	9	Standard	Forward	No	Yes/No
Mining Drill	–1	4	Standard	Arm	No	Yes/No
Retractable Blade	–2	1/per 10 tons‡	Standard*	Arm	Yes	Yes§§/Yes
Rock Cutter	+1	5	Standard	Arm	No	Yes/No
Spot Welder	+0	5‡‡	Punch	Arm	No	Yes/No
Sword	–2	1/per 10 tons +1‡	Standard*	Arm	Yes	Yes/Yes
Wrecking Ball	+1	8§	Standard	Forward	No	Yes/No

* Roll normally on the 'Mech Hit Location Table. Alternatively, when the controlling player announces the physical weapon attack, he may also announce that he will use the Punch or Kick Hit Location Table to resolve damage if the attack succeeds, in which case apply a +4 modifier in addition to all the standard modifiers, including the standard to-hit modifier for the weapon (this modifier does not apply when attacking on a Punch/Kick Location Table due to attacks from different levels; see p. 150)

** Forward: the target of a physical weapon attack can only be in the 'Mech's forward arc. Arm: the target of a physical weapon attack can be in the 'Mech's forward arc or in the side arc corresponding to the arm in which the equipment is mounted.

† 1D6 against conventional infantry.

†† A successful attack does 1 point of damage for every 5 tons that the attacking 'Mech weighs.

‡ A successful attack does 1 point of damage for every 10 tons that the attacking 'Mech weighs (round up); +1 to that Damage Value for a sword.

‡‡ Whenever the spot welder is used in a physical weapon attack, it generates 2 points of heat.

§ On any to-hit roll result of 2, the ball has successfully delivered a self-inflicted hit against the attacker rather than the target. Such a self-inflicted strike causes half the normal damage and is resolved using the Front Hit Location Table. Immediately after sustaining damage from a self-inflicted wrecking ball hit, the player must make a Piloting Skill Roll to avoid falling from being thrown off-balance by this critical failure.

§§ Damage to the hand actuator (or the absence of a hand actuator) in the arm mounting this equipment does not modify the to-hit number of the attack.

PUSH ATTACKS ('MECH ONLY)

A 'Mech uses both arms to make a push attack against its target, which must be another standing 'Mech. The target 'Mech cannot be performing a charge or death from above attack this turn.

A 'Mech may make no arm-mounted weapon attacks in the turn that it makes a push attack. All torso-, leg- and head-mounted weapons may be fired normally. Pushing attacks can be made against a target in the hex directly in front of the attacker (based on the orientation of its feet, not its upper body, as in the case of a torso twist).

See *Modified To-Hit Number*, page 144, to determine the target number for a push attack.

A successful push attack does not damage the target. Instead, it moves the defending 'Mech into the adjacent hex in the direction that the attacker pushes it. If the push is successful, the attacking 'Mech advances into the hex formerly occupied by its target (unlike a charge attack, this does not require additional MP expenditure). At the same time, the defender must make a successful Piloting Skill Roll or fall. See also *Unit Displacement*, page 151.

Multiple Pushes: Only one push attack may be declared against a single target per turn. If two 'Mechs are pushing each other, resolve both attempts and apply the net effect. If both attacks fail, nothing happens. If both attacks succeed, neither 'Mech moves, and both must make Piloting Skill Rolls or fall. If only one push attack succeeds, resolve it as usual.

Prohibited Terrain: If the hex to which the target unit would be displaced is prohibited terrain (except into a hex more than two levels lower than the target's current hex, which would result in an automatic fall; see *Unit Displacement*, p. 151), neither the attacker nor the target move; all other effects occur, however, including any Piloting Skill Rolls to avoid falling.

• PUSHING DIAGRAM •

Shoulder Actuators: Each damaged shoulder actuator adds +2 to the pushing 'Mech's target number.

If in the Pushing Diagram, below left, the 'Mech in Hex A on the Open Terrain #1 map is successfully pushed by the BattleMech in Hex B, it moves into Hex C. If the 'Mech in Hex A is successfully pushed by a BattleMech in Hex D, it is forced into Hex E. In both cases, the pilot of the target 'Mech must make a Piloting Skill Roll to remain standing, and its attacker advances into Hex A. The 'Mech in Hex A cannot push either of its opponents because neither of them lies directly in front of it.

KICK ATTACKS ('MECH ONLY)

No weapons mounted on a kicking leg can fire in the turn in which a 'Mech kicks. To make a kicking attack, both hips must be undamaged, and the 'Mech's target must be in one of the three forward-arc hexes, based on the facing of the attacker's feet (not the upper body, as in the case of a torso twist).

See *Modified To-Hit Number*, page 144, to determine the target number for a kick attack.

Kicks have a Damage Value of 1 point for every 5 tons of the attacking 'Mech's weight. For example, a 70-ton *Grasshopper*'s kick inflicts 14 Damage Points. Determine the damage location by rolling 1D6 and consulting the appropriate column of the 'Mech Kick Location Table, based on whether the 'Mech is a biped or four-legged design.

A kicked 'Mech (regardless of what location took the damage) must make a Piloting Skill Roll. If the attacking 'Mech misses its kick, it must make a Piloting Skill Roll.

Critical Damage: Reduce damage from kick attacks by half for each upper and lower leg actuator damaged on the kicking leg, with these effects being cumulative. For example, if two leg actuators are missing, reduce the damage to one-quarter its original value, rounding fractions down.

Four-Legged 'Mechs: A quad 'Mech can kick into its rear arc (provided the hip actuators of both legs used in the kick are undamaged), but cannot kick into the front and rear arc in the same turn. Resolve the kick exactly like a standard kick, but with an additional +1 to-hit modifier. A quad 'Mech may not make a rear-arc kick attack if it has fired rear leg-mounted weapons in the same turn.

Infantry: A 'Mech may kick or stomp an infantry unit in the hex it occupies; apply a +3 to-hit modifier for such an attack.

Vehicles: A 'Mech can kick or stomp a vehicle in the hex it occupies; randomly determine the side on which a vehicle takes damage.

MECH KICK LOCATION TABLE

D6 Roll Result	Biped Left Side	Front/Rear	Right Side
1–3	Left Leg	Right Leg	Right Leg
4–6	Left Leg	Left Leg	Right Leg

D6 Roll Result	Four-legged Left Side	Front/Rear	Right Side
1-3	Left Front Leg	Right Front Leg/Right Rear Leg	Right Front Leg
4-6	Left Rear Leg	Left Front Leg/Left Rear Leg	Right Rear Leg

CHARGE ATTACKS

Charging attacks must be declared during the Movement Phase (Ground), when the charging unit is directly in front of the target's hex, but like all other physical attacks, they are resolved during the Physical Attack Phase. This means the charging unit can only attack units that have finished their movement. It also means a charging unit cannot be the target of a charge or death from above attack, because its movement will not be finished until the end of the Physical Attack Phase.

In order for a unit to charge, it must not have jumped that turn and its target must be in the hex directly in front of the charging unit (disregarding torso twists) at the beginning of the Physical Attack Phase. The charging unit may not make any weapon attacks in the same turn.

The charging unit must spend MP to enter the target hex regardless of whether or not the charge is successful. If a unit does not have enough MP in the Movement Phase (Ground) to enter the target hex, it may not make a charging attack.

See *Modified To-Hit Number*, page 144, to determine the target number for a charge attack.

If the attacking 'Mech takes damage during the Weapon Attack Phase that forces the warrior to make a Piloting Skill Roll, the player should roll as normal. A failed roll means the attack automatically misses. Resolve the fall normally at the end of the Weapon Attack Phase. An exception occurs if the unit falls into a paved hex, in which case it is treated as a skidding 'Mech (this is resolved at the end of the Weapon Attack Phase). It will skid for a number of hexes equal to half the hexes it entered during the Movement Phase; when it skids into the hex containing the unit it was attempting to charge, it makes an unintentional charging attack (see *Skidding*, p. 62).

If the target takes damage during the Weapon Attack Phase that requires a Piloting Skill Roll and the roll fails, resulting in a fall, the charge attack cannot be made (see *Physical Attacks Against Prone 'Mechs*, p. 151).

MP Loss: A charging unit that loses MP due to damage can still make a charging attack that turn.

Multiple Attacks: A unit may only be the target of one charging or death from above attack in a given turn.

Prohibited Terrain: If the target unit occupies prohibited terrain for the attacking unit, the attacker cannot charge (meaning the player cannot declare a charge attack during the Movement Phase).

Unusual Targets: A vehicle or 'Mech may charge a building hex, or may be forced to accidentally charge a building or hill hex under certain circumstances.

Infantry: Infantry units may not charge or be the target of standard charge attacks.

ProtoMechs: ProtoMechs cannot be targets of charging attacks.

Vehicles: All vehicles except VTOLs, WiGEs, Airships and Fixed-Wing Support Vehicles may make charging attacks. Vehicles may charge other vehicles, but may not be charged by 'Mechs.

DAMAGE

If the attack succeeds, both units take damage from the collision. To determine damage to the defender, divide the charging unit's weight by 10, then multiply the result by the number of hexes moved by the attacker in the Movement Phase (the hexes moved do not count the hex containing the target). Round fractional damage up. If the attacker moved both backward and forward that phase, base the number of hexes it moved from the hex in which the 'Mech last reversed its movement. If the attacker fell in the Movement Phase, no hexes it moved before the fall apply. The charging unit takes 1 point of damage for every 10 tons the target weighs (round fractions up).

Divide the damage from charging attacks into 5-point Damage Value groupings. The attacking player rolls once on the appropriate Hit Location Table for each grouping.

If a unit charges a target in a building hex, the building hex absorbs damage as normal (see *Attacking Units Inside Buildings*, p. 171). The charging warrior also must make a Piloting/Driving Skill Roll modified by +3 in addition to the building modifier to avoid taking damage from entering the building hex (see *Moving Through Buildings*, p. 167). If the charging unit crashes through multiple building hexes, the warrior must make all appropriate Piloting/Driving Skill Rolls upon entering each building hex.

Vehicles: When a vehicle charges a standing 'Mech, allocate damage according to the 'Mech Kick Location Table. Against a 'Mech in Depth 1 water, use the Punch Location Table if the vehicle was on the surface of the water, and the Kick Location Table if the vehicle was at Depth 1. Against another vehicle or a prone 'Mech, the normal hit location rules apply.

Regardless of whether a vehicle executes a successful charge or is the target of a successful charge, in addition to any rolls that might occur due to damage, the vehicle must make an immediate roll on the Motive System Damage Table (see p. 193).

Buildings: A unit that charges a building hex automatically fails its Piloting/Driving Skill Roll required to avoid damage when entering a building hex and takes damage equal to the current CF of the building/10 (rounded up). This takes the place of the normal damage to the attacker caused by a charge.

Unusual Targets: If a charge attack is made against a target with no tonnage other than a building (such as a hill, for example, due to a skid), calculate damage to the attacker using the attacker's tonnage rather than the target's. For the purposes of charge attacks, DropShips are considered unusual targets.

> *A 65-ton* JagerMech *moves 5 hexes and declares a charging attack against another BattleMech. If the charging attack is successful, the target takes 33 points of damage (6.5 for the JagerMech's tonnage multiplied by 5 for the number of hexes it moved, rounded up).*

LOCATION AFTER ATTACK

If the charging attack succeeds, the target unit must move as if it had been pushed, and the attacker advances into the target's hex. (See *Unit Displacement*, p. 151). If the attacker misses the target, the attacking player places his unit in the hex to the right or left of the attacker's forward arc.

Prohibited Terrain: If the hex into which the target unit would be displaced is prohibited terrain (except a hex more than two levels lower than the target's current hex; see *Unit Displacement*, p. 151), neither the attacker nor the target units move; all other effects occur, however, including any Piloting Skill Rolls to avoid falling.

FALLS

After any successful charging attack, the attacking and target 'Mechs must make Piloting Skill Rolls modified by +2, plus all other applicable modifiers, or fall in the hex they currently occupy.

DEATH FROM ABOVE ATTACKS (‘MECH ONLY)

A desperate MechWarrior piloting a jump-capable ‘Mech can literally leap onto his target, bringing the full weight of his machine crashing down on the victim’s head. This type of attack, known among MechWarriors as “death from above,” is extremely difficult and always results in some damage to the attacker (‘Mech legs were not designed to take this kind of stress), and so MechWarriors rarely attempt it except as a last-ditch measure.

In order to execute a DFA, the attacker must be able to legally enter the hex the target occupies. The attacker must expend only the usual Jumping MP needed to reach that hex, but must have enough Jumping MP available to clear any height requirement (this is the level of the hex the target is in, plus two if the target ‘Mech is standing, as a standing ‘Mech is always two levels high). For example, to make a DFA attack from a Level 0 hex against a ‘Mech standing one hex away on a Level 3 hill would only cost 1 MP, but the attacking ‘Mech must have at least 5 Jumping MP available to make the attack.

DFA attacks must be declared during the Movement Phase, but like all other physical attacks, they are resolved during the Physical Attack Phase. This means the attacking unit can only attack units that have finished their movement. It also means a unit making a DFA cannot be the target of a charge or DFA, since its movement will not be finished until the end of the Physical Attack Phase.

A ‘Mech making a DFA cannot be the target of physical attacks, but may be the target of weapon attacks.

Multiple Attacks: A unit may only be the target of one charging or DFA attack in a given turn.

Submerged Naval Vessels and Aerospace Units: These units cannot be the target of a death from above attack.

Stacking: A ‘Mech does not count as stacked in a hex while executing a death from above attack until it completes the attack. As soon as it lands, normal stacking limits apply (see *Stacking*, p. 57).

WEAPON ATTACK PHASE

The attacking unit cannot make any weapon attacks during a turn in which it is executing a DFA.

• DEATH FROM ABOVE DIAGRAM •

During the Weapon Attack Phase, the attacking unit is considered adjacent to the target hex along the path that the attacking unit will travel during the jump, and facing the target hex. If the path of the jump passes exactly between two hexes adjacent to the target, the attacker must choose which one he will occupy. For purposes of determining LOS, the attacking unit is considered to be in the air above the hex, standing two levels higher than either the target hex or the level of the hex the attacker occupies, whichever is higher.

See *Modified To-Hit Number*, page 144, to determine the target number for a death from above attack.

If the attack is successful, both BattleMechs take damage as determined below. If the attack fails, the jumping ‘Mech crashes to the ground and takes damage (see *Falls*, below).

Falls: If the attacking ‘Mech takes damage during the Weapon Attack Phase that forces the pilot to make a Piloting Skill Roll, the player should roll as normal. A failed roll (or automatic fall) means the attack automatically misses. Resolve the attacker’s fall and ending location per the rules below.

In the DFA Diagram at left, the Jenner *is making a death from above attack from Hex A against an* Atlas *on the Woodland map. The* Jenner*’s path during the jump is shown in the illustration. During the Weapon Attack Phase, the* Jenner *is considered to be in Hex C, as though it were standing on a Level 3 hill (the target hex’s level +2). The* Atlas *may fire against the* Jenner*’s front side with any weapons it can bring to bear at a range of 1. Other units on the map can check for LOS and fire as though the* Jenner *were in Hex C with an LOS height of Level 5.*

Busosenshi *Seyla Teresa Martinez from House Kurita’s Sorenson’s Sabres initiates a Death From Above.*

DAMAGE TO TARGET

To determine damage to the target inflicted by a death from above attack, divide the weight of the attacking 'Mech by 10 and multiply the result by 3, rounding fractions up. For example, a *Jenner* weighing 35 tons inflicts 11 points of damage.

Divide the damage into 5-point Damage Value groupings. Determine attack direction as though the attack had come from the attacking 'Mech's starting hex, then determine the hit location of each damage grouping by rolling 1D6 and consulting the 'Mech Punch Location Table, page 145.

Vehicles: Resolve successful death from above attacks against a vehicle on the Front column of that vehicle's Hit Location Table.

Prone 'Mech: Resolve successful death from above attacks against a prone 'Mech on the rear column of the 'Mech Hit Location Table (see p. 151).

DAMAGE TO ATTACKER

The attacker takes damage as if from a successful attack on its legs. To determine the amount of damage, divide the attacker's weight by 5. Then divide the result into 5-point Damage Value groupings. Roll 1D6 for each damage grouping and consult the Front column of the 'Mech Kick Location Table to find the hit location.

LOCATION AFTER ATTACK

At the end of a death from above attack, the attacker lands in the target's hex. If the DFA is successful, the target is pushed one hex in the direction opposite the attack. If the attack fails, the target chooses an adjacent hex and moves to it, even if immobile or prone. This motion might result in an accidental fall from above or a domino effect or even a Piloting Skill Roll for entering a building hex; see *Unit Displacement*, page 151.

If the target unit cannot be displaced into the appropriate hex (for example, if the terrain is prohibited), the hex chosen must be as close as possible to the original hexside through which the target unit would have moved. For example, if the direction of the attack would have pushed the 'Mech through Hexside A, the controlling player then looks at hexsides B or F to see if those hexes are passable, then at hexsides C or E, then finally at hexside D. If two equally distant hexes, such as B or F, are open, the appropriate player may choose either one, as described above.

If all the surrounding hexes contain impassable terrain, the target unit cannot be displaced. For example, the target 'Mech may be on Level 0 terrain surrounded by Level 3 or higher hills. In this case, if the attack succeeds, the target is destroyed. If the attack fails, the attacker is destroyed.

FALLS

A successful death from above attack may cause both 'Mechs to fall. Both MechWarriors must make Piloting Skill Rolls, the target adding a +2 modifier and the attacker adding a +4 modifier. If either unit fails this roll, the unit takes damage as from a 0-level fall.

On an unsuccessful attack the attacker automatically falls, taking damage as though it had fallen 2 levels. Roll on the Facing After Fall Table to determine facing (see p. 68), but the Hit Location for this damage is always the rear.

DIFFERENT LEVELS

The rules for punching, clubbing, physical weapon, kicking and charging attacks assume that the opposing 'Mechs are at the same level. Most physical attacks against vehicles occur only if the vehicle is attacked by a unit at the same level. See *Physical Attacks Against VTOLs*, page 198, for exceptions.

A 'Mech may make a physical attack against another 'Mech only if the level of the underlying hexes of both 'Mechs are within one level of each other. The Different Levels Table shows which types of physical attacks can be made in various situations. Players must use different Hit Location tables to determine the location of damage from punching, clubbing, physical weapon or kicking attacks against an opponent on various levels.

'Mechs cannot make punch attacks against ground vehicles or infantry unless the 'Mech is one level lower than normal because it is prone, on lower terrain or standing in Depth 1 water.

Captain Ian McKinnon prepares to hatchet a Thunder Hawk *from the Thirty-second Lyran Guard.*

DIFFERENT LEVELS TABLE

Target is:	Allowed Physical Attack
Standing 'Mech 1 level higher	Charge, Punch (Kick Table), Club (Kick Table), Physical Weapon (Kick Table)
Standing 'Mech 1 level lower	Charge, Kick (Punch Table), Club (Punch Table), Physical Weapon (Punch Table)
Prone 'Mech, ProtoMech, Vehicle or infantry 1 level higher	Punch, Club, Physical Weapon
Prone 'Mech, ProtoMech, Vehicle or infantry 1 level lower	None

Note: A 'Mech can always make a death from above attack if it has the necessary Jumping MP, provided the target is valid.

PHYSICAL ATTACKS BY PRONE 'MECHS

Prone 'Mechs can make only two types of physical attacks; punches against ground vehicles in the same hex and thrashing attacks against infantry.

Punching While Prone

In order to punch while prone, a 'Mech may not have a destroyed arm. As with *Firing When Down* (see p. 113), the 'Mech props itself up on one arm and may punch once with the other arm. Vehicles take punch damage from attacks by prone ´Mechs against a randomly determined side.

Thrashing Attack

When a prone 'Mech and an infantry unit occupy the same hex, the 'Mech may make a thrashing attack by wildly waving its arms and legs in hopes of striking the infantry. The ´Mech can only make this attack in a clear or paved hex, and it automatically succeeds. This attack inflicts damage on the infantry equal to the 'Mech's tonnage divided by 3 (round up at .5 or greater). Against battle armor, divide this damage into 5-point Damage Value groupings and determine hit location for each grouping (see *Attacks Against Battle Armor*, p. 219). If a 'Mech makes a thrashing attack, it cannot make any other attack in that turn, and the MechWarrior must make a Piloting Skill Roll to prevent damage to his 'Mech. If the pilot fails this roll, the 'Mech suffers normal falling damage as though it had failed an attempt to stand.

Anti-'Mech Infantry: Thrashing attacks cannot be made against an infantry successfully executing a swarming attack. Swarming infantry must be dislodged according to the *Anti-'Mech Attacks* rules on page 220.

A Sabres' Mongoose *finds itself entangled in a physical melee with Word of Blake troops.*

PHYSICAL ATTACKS AGAINST PRONE 'MECHS

The only physical attacks that can be made against a prone 'Mech are kicks and death from above, plus charge attacks made by vehicles. 'Mechs cannot charge prone 'Mechs. Prone 'Mechs are always treated as adjacent to their attacker for these purposes.

Determine the location of successful attacks using the appropriate column of the 'Mech Hit Location Table, page 119. Determine damage inflicted by death from above attacks against prone 'Mechs using the Rear column of the table, regardless of the attack direction. Prone 'Mechs ignore Piloting Skill checks required to avoid falls.

Different Levels: A prone 'Mech one level higher than the attacking 'Mech can also be hit by punch, club and physical weapon attacks. These attacks also use the 'Mech Hit Location Table (unless noted otherwise for physical weapon attacks).

UNIT DISPLACEMENT

Units moved from their hexes as a result of their opponent's actions are displaced. Displacement can result from charging, pushing and death from above attacks. It can also result from a so-called domino effect that displaces a string of units.

Displacement (including any resulting Piloting Skill Rolls and damage) is resolved immediately after the action that caused it, regardless of what phase it is. If any damage was inflicted by that action, apply it before resolving the displacement, even though the phase has not yet ended.

A unit cannot be displaced into a hex it is prohibited from entering (see Movement Cost Table, p. 52). This includes hexes at higher levels than the displaced unit can move upward in a single hex. Units can be displaced downward any number of levels, though this results in an accidental fall (see p. 152).

If the rules call for a unit to be displaced into an illegal hex, the displacement cannot occur. Unless the specific rules of the attack or action state otherwise, in these cases neither the target nor the attacking unit moves. All other effects of the displacing action occur, including damage and any required Piloting Skill Rolls.

Buildings: If a unit is displaced into a building hex, the building and the unit are damaged as if the displaced unit had voluntarily moved into it and failed its Piloting/Driving Skill Roll (see *Moving Through Buildings*, p. 167).

INFANTRY FALLING DAMAGE TABLE

Infantry Type	Damage Per Every 2 Levels*
Foot Platoon	3D6
Motorized Platoon	2D6
Mechanized/Jump Platoon	1D6
Battle Armor	1 point per trooper

*Every 2 Levels or fractions thereof.

A Clan Ghost Bear Arcas *crashes down into a Marik Militia* BattleMaster.

Infantry: If an infantry unit is displaced into a hex at a level two or more lower than the hex from which it was displaced, the unit takes falling damage as shown on the Infantry Falling Damage Table.

Vehicles: A vehicle can be displaced into water. If the water is impassable for the vehicle type, the vehicle is destroyed. A vehicle displaced into a hex 2 levels or more lower than its previous hex takes 1 point of falling damage for every 10 tons that it weighs (rounding up), times the number of levels plus 1 that it fell. Divide the damage into 5-point Damage Value groupings and determine a hit location for each grouping using the Facing After Fall Table, page 68.

ACCIDENTAL FALLS FROM ABOVE

An accidental fall from above results when a unit is displaced by a charge, push or death from above attack, or as a result of another accidental fall from above or the domino effect into a hex containing another unit, and the hex it is entering is two levels or more lower than the hex from which it was displaced. If the difference in hex levels is 1 or 0, a domino effect occurs instead.

When a 'Mech accidentally falls two levels or more into a hex occupied by another unit, make a to-hit roll with a Base To-Hit Number of 7, modified by target movement and terrain.

A unit may not intentionally fall from above.

Airborne Units: If an airborne unit occupies the hex where an accidental fall occurs and the airborne unit is at or below the elevation equal to the level of the hex where the unit began its accidental fall, the falling unit may strike the airborne unit. In such a situation, apply a +3 to-hit modifier.

Infantry: While infantry can be displaced so they fall more than two levels, the *Accidental Falls From Above* rules do not apply, and accidental falls by non-infantry units automatically miss infantry.

Large Vehicles: Apply a –3 to-hit modifier if the hex of the accidental fall is occupied by a Large Vehicle.

ProtoMechs: Treat ProtoMechs as 'Mechs (see *Special Circumstances*, p. 185 in the *ProtoMechs* section).

Falling Unit Hits Target

If the to-hit roll is successful, treat the accidental fall as a successful death from above attack with the following exceptions:

If the "target" unit is a 'Mech, the falling 'Mech assigns damage per the Punch Hit Location Table.

If more than one unit is in the target hex (friend or foe), determine randomly which one is the target unit.

To determine the amount of damage inflicted on the target unit, divide the weight of the falling 'Mech by 10, multiplied by the number of levels fallen at the point of impact. Divide the damage into 5-point Damage Value groupings, then roll 1D6 for each damage grouping and consult the 'Mech Punch Location Table (or a randomly determined Hit Location Table for other unit types).

Determine damage to the falling 'Mech as normal for a fall, with the 'Mech landing on its back.

Airborne Units: If the to-hit roll is successful striking airborne unit, and another airborne unit occupies the same hex at a lower elevation, or if a ground unit also occupies the hex, the controlling player of the falling unit must still make the standard to-hit roll, potentially causing further damage to those additional targets and itself.

If airborne units occupy the same hex below the elevation of the struck airborne unit, or ground units occupy the same hex, the controlling player of that airborne unit must make the standard to-hit roll(s) using the *Accidental Falls From Above* rules to resolve the fall.

If any airborne units are struck by an accidentally falling unit and they crash, resolve the accidental fall (and any displacement that might occur), before resolving any other crashes. If multiple airborne units crash during a single accidental fall of a ground unit, completely resolve the crash and potential accidental falls of the unit at the highest altitude unit, and then proceed to any lower units.

Falling Unit Misses Target

If the to-hit roll fails (or rolls, for multiple targets), the falling unit lands in an adjacent hex as close as possible to the hex from which it fell, and takes the standard damage from falling. No other units take damage. If multiple adjacent hexes lie equally close to the hex from which the unit fell, randomly determine which hex it enters.

Airborne Units: If the to-hit roll is unsuccessful for an airborne unit, and another airborne unit occupies the same hex at a lower elevation, or if a ground unit occupies the hex, the controlling player of the accidentally falling unit must still make the standard to-hit roll, potentially causing damage to those additional targets and itself.

DOMINO EFFECT

A domino effect only results if a new unit entering the hex would exceed the stacking limit (see *Stacking*, p. 57).

A domino effect usually results when a unit is displaced into a hex containing another unit by a charge, push or death from above attack, or as a result of another domino effect or accidental fall from above, and the hex it is entering is 1 or 0 levels lower or higher than the hex from which it was displaced. A domino effect might also occur if a building hex collapses with units on Level 0 and Level 1, or when a 'Mech dislodges a swarming infantry unit.

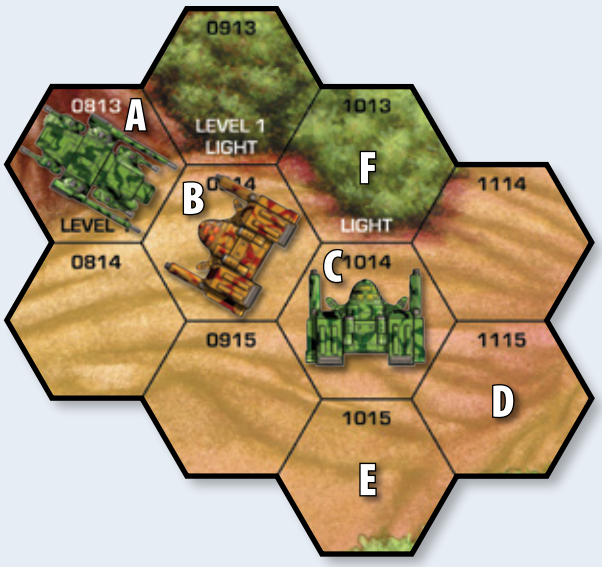
If a unit accidentally falls one level or less or is forced into a hex occupied by another unit that violates the stacking rules (such as a 'Mech entering a hex that contains another 'Mech, or friendly vehicles and so on), a unit already in the hex is forced out of it in the direction opposite the hexside of where the accidentally falling unit entered the hex. If either unit is a 'Mech, both players must immediately make Piloting Skill Rolls to avoid falling once all displacement is resolved.

When the domino effect originates from one of a unit's four side hexes, however, the unit can choose to avoid the domino effect by moving one hex directly forward or backward, assuming it has sufficient Ground MP remaining from the Movement Phase (meaning it cannot have jumped), and it is mobile (standing, if a 'Mech). For a vehicle, the player must make a successful Driving Skill Roll for the dodging unit; if the dodging unit is a 'Mech, the player need only have passed the Piloting Skill Roll given above. The unit attempting to dodge cannot move backward, however, if its player declared running/flanking movement for the turn. If the Piloting/Driving Skill Roll was not successful, the unit does not move out of the way.

The domino effect continues as long as relevant units remain in hexes adjacent to one another in the direction of the effect, and none of them manages to move out of the way.

If more than one unit occupies a hex where a domino effect will occur, the entering unit dislodges the same type of unit first; randomly determine what units are dislodged if they are not the same type.

For example, a 'Mech carrying mechanized battle armor falls into a hex containing a friendly vehicle and infantry unit that have already moved (and the 'Mech has no remaining MP to attempt to stand and continue moving). The hex now contains two more units than are allowed (the mechanized battle armor troops are knocked off when the 'Mech falls). The battle armor unit automatically displaces the infantry unit, while the 'Mech displaces the vehicle, as it is the only unit left to displace. Because both of these units had moved before the displacement occurred, neither can attempt to move out of the way.



• UNIT DISPLACEMENT DIAGRAM •

In the Unit Displacement Diagram above, the 'Mech in Hex A on the Woodland map has fallen 1 level into Hex B. The BattleMech standing in Hex B will be forced into Hex C and must make a Piloting Skill Roll to avoid falling. The BattleMech in Hex C can try to avoid the domino effect by moving. First, the player must make a Piloting Skill Roll. If the roll fails, the 'Mech is forced into Hex D and falls there. If another 'Mech occupied that hex, the domino effect continues. If the roll is successful and the 'Mech has at least 1 MP left from the previous Movement Phase, it may move one hex directly backward, into Hex E, ending the domino effect. If the BattleMech had 2 or more MP left, it could move forward into the light woods in Hex F.

A Blakist Viking *and* Scarabrus *are about to discover the devastating affects of a fall from above and forced displacement.*

Mutual Advantage

Steven Mohan, Jr.

IN THE SHADOW OF FEUERBERG
BROKEN LANDS, SÜDLAND, RIGA
HANSEATIC LEAGUE, DEEP PERIPHERY
4 APRIL 3067

Waves of emerald static washed over Merchant saFactor Mark Sennet's thermal display, one more unwanted gift from the vengeful God who had made the Broken Lands: Feuerberg.

Fire Mountain.

The cinder cone rose out of a fractured landscape the color of night. None could doubt that it ruled here. The volcano filled the air with the stink of sulfur, lent the land the heat that pulsed in its angry heart.

Mark had never fought in a worse place.

Aside from clouding his sensors, the heat sapped agility from his 'Mech. The brittle landscape made it nearly impossible to maneuver beyond the single ferrocrete road that curled through this accursed place.

He pounded the useless display. Where were the *stravags* hiding? He could abandon passive sensors, initiate a radar sweep. But that would reveal his own position.

Neg.

He was a Diamond Shark, a predator of the dark seas of Strana Mechty. He would strike without warning.

He selected a VHF channel to ensure he had line-of-sight comms, then turned back to the *Dire Wolf* that shadowed him. "Stay here." No reason for both of them to risk a crippling fall.

"*Aff*, saFactor," Star Captain Anna Borghev answered crisply.

Mark took a careful step off the road and onto the shattered landscape. He felt the jagged outcroppings of basalt lava crack and give under the sixty-five ton weight of his borrowed *Ha Otoko*.

This was a dangerous course. Step wrong and he would crash through the brittle surface to one of the hollow lava tubes that riddled the Broken Lands. But he would never find Watanabe's lance if he kept to the safety of the road.

Sometimes the most lucrative trades required the most risk.

He made his way toward a ridge, labored up its side.

And saw a lone *Hunchback*.

It stood four hundred meters out, painted dark blue with gold and red trim. The colors of RDF 4.

Mark pulled his reticle down over the *Hunchback's* left knee. The icon flashed gold and he let go with a flight of Short Bow LRMs.

Realizing he was being hunted, the *Hunchback's* pilot turned as the missiles hit. Multiple explosions wrenched the knee joint just as the pilot put his weight on it. The *Hunchback* toppled over.

Mark drew back.

He could have chosen to use exercise rounds for this demonstration, but he wanted to bloody the Hansa, prove the worth of the *Ha Otoko*.

One down, three to go.

He crossed the road and headed east, Star Captain Borghev trailing behind him. She held back far enough to keep her radar signature distinct from his. She was not to take part in the live fire exercise. Four to one, those were the odds Mark had agreed to with Major Hohiro Watanabe.

He stumbled as the ground shook. A harmonic tremor, a sign of the coming eruption. A careful study of the seismic traces would give an approximate idea of when it was coming. Mark hoped it wouldn't come soon.

He pointed his 'Mech's right arm at a distant hill. "That will give me a commanding view of the landscape." He started forward, Anna behind him. Brittle rock crunched under their feet.

The land itself was a mixture of volcanic forms: meter-wide blisters where lava had hardened around upwellings of gas, tree molds where molten rock had taken on the twisted shape of the trees it had killed, fumaroles where the earth belched poisonous hydrogen sulfide.

None dared live in the shadow of this great beast. The closest village—Kepten, a hamlet so small it did not even appear on local maps—lay a good twenty klicks away. Mark glanced up. A plume of black ash marked Riga's gunmetal sky. He wondered if twenty klicks was far enough.

"I see nothing on my scanners, saFactor," Anna reported. "A Hansa trick, *quiaff*."

"*Neg*," answered Mark, "A Hansa *negotiation tactic*. It is important to know the difference."

Anna was a fine warrior, which was why Mark had chosen her to escort him on this venture, but she had much to learn about the art of trading. She made a small hmm sound that was neither challenge nor agreement, inviting him to read into it whatever he wished.

Mark smiled. Perhaps she had potential after all.

"We are here to show them the value of the *Ha Otoko*," he said. "This is why I agreed to four to one odds. When my single machine defeats Watanabe's lance, the Hansa will be forced to acknowledge the 'Mech's value. But our 'Bladed Man' is a missile carrier. If it cannot see, it cannot fight. The Hansa force us to battle in this wasteland, thinking to gain an advantage and therefore a lower price."

"Perhaps, saFactor. But I do not trust the Hansa."

"And I do? Why do you think you are here, Star Captain?"

"How do we know they will not just take what they want?"

"All trade relationships are built on trust."

"Meaning . . . ?"

Mark laughed. "Meaning that the other side understands the cost of cheating you well enough that they would never try it."

"I still would feel better if *Razor Tooth* were here."

After much pressing the Hansa had finally allowed Mark's DropShip to inspect the inner belt processing plant that was to supply the germanium quota the Hansa were offering in trade. The *Razor Tooth* had left just before commencement of the live fire exercise.

"It is not important that *Razor Tooth* is nine days out. It is important that the Hansa know she will be back."

"We have battled them often, *quiaff*?"

"*Aff*. But that is why this contact is so valuable. If the Hansa acknowledge the value of our trade goods, their resistance to our merchant caste will wither away and we can deploy our WarShips and Galaxies to more profitable markets."

"It sounds like a flanking movement." Mark could hear the sudden understanding in her voice.

"Trade is war by another name," he said.

"Still, it is risky."

"All things of value are."

In truth, this venture was risky for another reason. Many within Clan Diamond Shark opposed trading military technology with Periphery states. Mark meant to change that view. And why not start with the *Ha Otoko*? It was a solid second-line design, one that any Periphery military would be happy to have.

The name *Ha Otoko* meant "bladed man," and the 'Mech did have sharp lines. It looked very much like a Japanese samurai complete with helmet and armor, a design specifically intended to entice the followers of *bushido*. No surprise the Combine had purchased the 'Mech. Nor that a second Spheroid power, the Lyran Alliance, had followed the first.

In the end, who could argue against also selling them to the Hanseatic League?

He set his sensors on passive and stalked his 'Mech partway up the hill, proceeding just far enough for his cockpit to peek above the crest. No reason to make this easy for Watanabe.

What he saw chilled his blood.

He had found the Hansa, all right. They were half a klick east, but not the rest of Watanabe's lance.

A company.

Some kind of scout company, a collection of light, swift 'Mechs. Which meant Watanabe's lance of heavies was elsewhere. That meant sixteen to two, deadly odds even for Bloodnamed Clan warriors fighting Periphery barbarians. Worse if Watanabe had also managed to pry infantry or armor out of his RDF commander.

It also meant they had been betrayed.

Mark ducked down and turned toward Anna's *Dire Wolf*. "I ask for *surkairede*, Star Captain."

Anna understood his meaning at once. "They lied," she said grimly.

"*Aff*. I saw a company beyond the hill."

"Very well, saFactor. What do we do now?"

Mark's mind raced with possibilities. He did not believe the Hansa had the courage to destroy a Clan DropShip, not when it would only earn them a visit from a WarShip. It followed that whatever Watanabe was planning had to look like an accident.

Which meant witnesses would pose a problem.

"We head for the village."

"You expect help from the villagers, *quineg*?"

"*Neg*. But Watanabe cannot very well cover up a firefight within a population center."

"And knowing this, he may choose not to have one at all," Anna said. "Very well, saFactor. To the village, but not by the road."

"Agreed," Mark said. He glanced at a map. "If we head off at zero seven eight, we can thread our way between the Hansa forces."

The two 'Mechs set out across the fractured landscape, making as much speed as they dared. It was a nerve-wracking transit, knowing that any wrong step could hobble them. After fifteen minutes Mark was drenched with sweat, and not just because of the high ambient temperature.

"We are fortunate," Anna said. "We have managed to avoid the Hansa."

Mark's lips tightened.

His skill as a trader had earned him the new rank of saFactor, but before joining the merchant caste he had been a Bloodnamed warrior—and those instincts never went away. Something did not feel right. "Hardly fortunate, I think. This is a Hansa world, Anna. And the Hansa have more wealth than most Periphery states. Do you really believe Watanabe would not have taken the precaution of placing satellites in orbit to track us?"

"Perhaps there is not one due for an overhead."

Mark offered her a humorless laugh. "Watanabe has planned everything else."

She kept silent for a long moment. "A trap, then."

"*Aff*."

"What do we do?"

"What can we do? Keep your eyes open."

After another twenty minutes they saw Kepten on the horizon. A jumble of concrete boxes, nothing taller than two stories. As close to a refuge as Mark could imagine.

He guessed they would be ambushed before they reached it.

Minutes ticked by, but the ambush did not materialize. Could they be that lucky?

They rejoined the road as it passed through Kepten. No traffic moved in or out of the hamlet. They saw no one on the streets, as if the village knew they were coming. An ugly feeling crept through Mark's gut. "Do you see anyone moving?"

"I see people inside some of the buildings," Anna answered.

"But are they *moving*?"

A long pause. "*Neg*. And my thermal scan says none of them are warmer than ambient."

Mark tried to swallow in a dry mouth. He stopped next to a bar, enhanced the image of a shape behind a window. It was a man, a scorpion tattoo on his bulging left bicep. Lady Death's symbol. His head lolled forward, but he sat upright. As if he had been tied to the chair.

"Watanabe's Regional Defense Force," Mark said slowly. "They hunt pirates, *quiaff*?"

"*Aff*."

Mark screwed his eyes shut against the horror of this place. "We are in very big trouble."

"I do not—"

"Ask yourself: how could the Hansa keep our 'Mechs in such a way that the theft would not invite retaliation? What if they could convince *Razor Tooth* that we had been destroyed, swallowed by the earth itself?"

Her *Dire Wolf* turned, seemed to consider the monstrous shape of Feuerberg. "Our warriors would never believe it."

"They will if they see an entire Hansa town destroyed by the volcano. Think, Anna. This town does not exist on Hansa maps. I would wager quite a bit that this town is populated by pirate corpses, but once it is flooded with lava none of that will be obvious. It will look like a tragedy."

"But we are Clan. Surely the Hansa know we will fight to the death, that we will not allow them to take our 'Mechs."

Mark frowned. She was right about that. Had Watanabe made one fatal mistake? "I do not—"

The angry warble of an alarm interrupted him.

He ducked left as a beam of green light flashed by him. Anna stepped forward and answered with her Ultra-5 autocannon, ripping into the lead *Jenner* that raced toward them. The scout company was upon them, the fastest 'Mechs only half a klick out.

"Up ahead," Anna shouted. "An unpaved spur vees off the main road. It runs through a defile. It will slow them down, force them to come at us one at a time."

Mark did not like it, but they were out of options. "Very well. Keep behind me. I will hit them as long as they are in range."

He fought his 'Mech through a clumsy pivot. *Damn the heat*. Mark dropped his reticle over the fleet Jenner and pulled into his triggers as the icon burned gold. A flight of LRMs smashed into the *Jenner's* delicate chicken leg. Then he hit it again.

And again.

The leg snapped under the furious assault of three flights of LRM-20s. The *Jenner* smashed to the ground, partially blocking the road. The Hansa's light 'Mechs would have to pick their way around the *Jenner*, costing them precious seconds.

The heat alarm screamed for attention. He slapped the override and wiped sweat from his face with the back of his arm. What he would not give for an autocannon right now.

A *Spider* came upon the *Jenner*. Mark hit it with a flight of missiles. He gasped at the sudden bloom of heat that washed through his cockpit, flash-drying the sweat on his skin. He could not sustain this rate of fire much longer.

The *Spider* trembled under the assault. But it did not fall, until Anna tore into it with her large laser. "SaFactor, we must make it to the defile."

"*Aff*," Mark rasped. He put his 'Mech into a slow backward walk, he and Anna firing as their sinks dissipated the terrible heat.

A Hansa *Panther* fell. And then they were off the main road.

"You go first," Anna said. "I will back in to protect our rear."

It made sense. The *Dire Wolf* was far more effective in close-quarters combat. "*Aff*."

Mark turned and lumbered toward the defile's entrance. The maddening screech of his heat alarm cut out. Finally. He started down the defile, hemmed in on both sides by walls of black volcanic basalt. Forward and down he went—eighty, ninety meters downward for every 150 meters forward.

He gasped in the superheated air of his cockpit. The shrill bleat of the heat alarm sounded again. It was getting hotter, if such a thing were possible. He glanced at the ambient temperature display. It read 38°C. Not much higher than before. He panted for breath. It felt hotter, no matter what the sensor said.

Stravag. The heat had damaged his electronics.

Suddenly, Mark understood everything. He stopped.

"What are you doing?" Anna shouted. "*Keep going*. *Keep going*."

"It is a trap. *Stay here*."

"But—"

"For the love of your Clan, stay here."

Without another word, he stalked forward, moving as fast as he dared.

Moving *down*.

He turned a corner and came to a quick halt, then backed up a step. The defile opened up onto a small valley, a lake of bubbling, glowing lava at its center.

Across the little circle of molten rock was another opening. Mark could not see into it, but he did not doubt what lay hidden behind that black wall.

The rest of Watanabe's heavies.

Mark turned his 'Mech and lumbered back the way he had come. A few more steps and his *Ha Otoko* would have locked up. He would have been trapped like a fly in amber.

"We must withdraw, saFactor," Anna called to him. "I cannot hold much longer."

"Anna. They maneuvered us into this place so our 'Mechs would lock up from the heat. So we could be captured. We cannot go down the defile."

"But there are two lances of light 'Mechs out there. We cannot hope to stand against so many."

The land suddenly shook under their feet. Rocks cascaded down from the defile's walls. Mark staggered and braced himself against the black stone to keep from falling. Then, just as quickly as it had come, the earthquake passed.

"Harmonic tremor. I would guess the Hansa have been watching the seismic activity closely. Watanabe needs a volcanic eruption to hide his crimes, and he is about to get one."

"What does that mean?"

"It means we have some leverage."

Mark stalked his 'Mech forward, twisted past Anna's *Dire Wolf*.

"What are you doing?" Anna hissed.

"This battle will not be won by weapons." Thinking of Watanabe, he selected a VHF circuit so as not to be overheard.

"This is saFactor Mark Sennet for the scout company commander. We have not fallen into your trap. We will not yield."

He marched up to the mouth of the defile. For a moment the 'Mechs clustered outside did not fire.

A *Javelin* stalked toward him. He heard the hiss of static, and then a woman's voice said, "I am Commander Hanna Pence. If you will not yield, we'll destroy you."

"Then destroy us. We are Clan warriors. We do not fear death. But we will kill many of you, and you will lose your prize."

She had no answer to that.

"And," Mark said, "our brothers and sisters will not be fooled."

"They *will*," she answered quickly. Mark heard the thread of desperation through the steel in her voice.

"Perhaps, but that is a slender assurance on which to rest the future of a world."

"What do you propose?"

"This is not your plan, Hanna Pence. And I would guess your superiors do not sanction such recklessness. So withdraw. Report Watanabe's actions to the Hansa and let the consequences of his betrayal fall on him alone, rather than on your whole nation."

"I cannot withdraw," she said softly.

"Already the lava below rises out of its prison. Soon Watanabe's lance will be cut off. Who could blame you for retreating before the fury of a volcano?"

For a long moment the *Javelin* faced him. Then it made a little bow. One by one, the remnants of the scout company began to retreat.

Anna's *Dire Wolf* made its way up the defile. "You really believe the Hansa did not know of Watanabe's actions, *quiaff*?" she asked over an encrypted channel.

"*Neg*," answered Mark. "But they will say so. The lie will help them out of this mess and also save our lives."

"Incredible," Anna whispered.

"Not at all, Star Captain. Trade is a contest where the contestants find victory by working together. In the end, the wise merchant can always find mutual advantage."

Even as the colossal machines of Clan Diamond Shark and House Kurita collide, they have to be weary of nature's fury and the excessive heat of a coastal lava flow.

One of the most severe problems facing any 'Mech in combat is internal heat build-up. Though every 'Mech can dissipate heat through its heat sinks (devices designed to pump heat away from heat-generating systems) or by standing in water, the 'Mech builds up heat whenever it moves or fires its weapons.

Even when using both of those methods to cool its systems, a high rate of activity commonly produces more heat than a 'Mech can dissipate. An overheated 'Mech can continue to function, but a warrior who pushes his 'Mech past its limits eventually must pay the price. As a 'Mech's internal heat increases, it moves more slowly and its weapons fire becomes less accurate. If its internal heat reaches a certain level, the ammunition it carries may explode. The 'Mech's fusion reactor may even shut down, making the 'Mech inactive and immobile until the heat drops below a certain point.

Aerospace Units: Aerospace units (except conventional fighters), which don't track heat treat heat somewhat differently than 'Mechs. See *Heat Effects* under *Aerospace Units*, page 160 of this section.

ProtoMechs and Infantry: ProtoMechs never build up heat. They are specifically designed to dissipate all the energy-weapon heat they can build up, and do not generate heat for movement or for firing non-energy weapons. Likewise, infantry never builds up heat or tracks heat from movement, weapons fire and so on.

Vehicles and Conventional Fighters: Vehicles (including Airship and Fixed-Wing Support Vehicles) and conventional fighters do not generate heat in the same manner as 'Mechs. Such units must be designed with enough heat sinks to fire all of their energy weapons at once. Also, because of their more open (and flimsier) structure, vehicles and conventional fighters automatically shed all heat built up from movement and from firing non-energy weapons.

HEAT POINTS

Players track a 'Mech's internal heat by the number of heat points it builds up. The greater the number of heat points, the greater the 'Mech's internal heat. The player keeps track of his 'Mech's heat points using the column of boxes on the 'Mech record sheet labeled Heat Scale. The Heat Scale records heat levels from 0 to 30 heat points. The Heat Overflow box is used to track heat levels above 30. As the 'Mech's internal heat reaches various levels on the Heat Scale, the 'Mech suffers the adverse effects listed for those levels.

BUILDING UP HEAT

Different activities build up heat at different rates. A good MechWarrior balances the tactical value of an action against the heat it will add to his 'Mech. The Heat Point Table indicates the number of heat points generated by various actions and damage. It also shows the number of heat points a 'Mech can dissipate through its heat sinks and by standing in a water hex.

Heat Sink Types: Heat sinks may be standard or double, though not all unit types can mount double heat sinks. Standard heat sinks dissipate 1 point of heat per turn, and double heat sinks dissipate 2 points of heat per turn.

Fuel Cell and ICE-Powered IndustrialMechs: These units generate no heat from walking or running, a side effect of their engine and structural designs.

Jumping: Jumping generates more heat than walking or running. Jump jets generate 1 heat point per Jumping MP expended, with a minimum of 3 heat points. For example, when a 'Mech jumps 1, 2 or 3 hexes, it generates 3 heat points. If it jumps 4 hexes, it generates 4 heat points; if it jumps 6 hexes, it generates 6 heat points; and so on.

Water: Heat sinks dissipate twice as much heat when underwater during the Heat Phase. When a 'Mech is standing in Depth 1 water, only heat sinks mounted in the legs are underwater. A 'Mech standing in Depth 2 or deeper water or prone in Depth 1 or deeper water is completely submerged, so all of its heat sinks are considered underwater. Regardless of how many heat sinks are underwater, however, the 'Mech can shed no more than an additional 6 points of heat per turn.

Shutting Off Heat Sinks: A MechWarrior may actually wish to build up heat in some situations, particularly if his 'Mech is equipped with triple-strength myomer (see p. 143). Building up heat is most easily accomplished by shutting off as many heat sinks as desired during the End Phase of any turn. Shut-off heat sinks dissipate no heat in the following Heat Phase, and may only be switched back on during a subsequent End Phase.

Outside Heat Sources

Outside factors can also build up a unit's heat. Different heat-causing weapons (see *Weapons and Equipment*, p. 113), as well as environmental conditions (hostile environments and fire, both of which are covered in *Tactical Operations*), add heat to whatever a unit builds up with its own activities.

All such outside heat sources—meaning any heat that does not come from a unit's own movement and weapons fire—are tracked somewhat differently before being added to a unit's own heat. These heat sources are cumulative, to a maximum of 15 heat points.

For example, during a Weapon Attack Phase, 'Mech A is struck with an Inner Sphere Plasma Rifle (see Weapons and Equipment Table, p. 303), as well as an SRM-6 loaded with inferno submunitions (see Infernos, p. 141). After rolling the heat generation for the Plasma Rifle (6 heat points) and rolling on the Cluster Hits Table for the amount of infernos that struck the target (a 9, resulting in 5 missiles hitting the target), 'Mech A's controlling player tallies the heat generated: 6 for the Plasma Rifle +10 for the infernos (2 heat points per missile x 5) = 16. However, such outside heat sources can only inflict a total of 15 heat points in a turn, and so 1 point is wasted. After the controlling player determines the heat for 'Mech A's movement and weapons fire, he adds the two numbers together.

HEAT POINT TABLE

Activity	Heat Points
Walking	+1 per turn
Running	+2 per turn
Jumping	+1 per hex (min. of 3 per turn)
Attempting to stand	+1 per attempt
Weapons fire	Per Weapons and Equipment Tables, p. 303
Heat-Causing Weapons	Per Weapons and Equipment Tables, p. 303, or *Other Combat Weapons and Equipment*, p. 129
Heat sink	–1 per operational heat sink –2 per operational double heat sink –1 additional per operational single heat sink under water (maximum 6 points) –2 additional per operational double heat sink underwater (maximum 6 points)
First engine hit	+5 per turn
Second engine hit	+10 (total) per turn

RECORDING HEAT BUILD-UP

During the Heat Phase of every turn, each player adds up the heat points built up by his 'Mech, as well as any heat from outside sources (see *Outside Heat Sources* above). He then subtracts the heat dissipated by heat sinks and any additional dissipation if his 'Mech occupies a water hex. The result may be positive or negative. Add this number to the current level of heat shown on the Heat Scale. If the result is negative, adjust the Heat Scale downward; if the result is positive, adjust it upward. The Heat Scale cannot drop below 0. We suggest that players mark the Heat Scale with a pencil, because the heat level will rise and fall many times during the game.

Extremely High Heat: Heat higher than 30 causes a 'Mech's power plant to shut down, but has no additional effect. Restarting the 'Mech takes longer, however, because the heat level must drop below 30 before the 'Mech's reactor can function. Mark any heat generated beyond 30 in the Heat Overflow box on the record sheet. If the record sheet has no Heat Overflow box, write the extra heat points at the top of the Heat Scale. When dissipating heat, the heat overflow must be dissipated before a player can reduce the Heat Scale below 30.

EFFECTS OF HEAT

Excessive heat causes a 'Mech to function less efficiently. It moves more slowly, fires less accurately and may shut down or even explode. Some of these effects are permanent; others disappear when the 'Mech cools.

The 'Mech suffers the effects listed below after players have adjusted the heat level for the turn as described in *Recording Heat Build-up*.

MOVEMENT

At 5, 10, 15, 20 and 25 heat points, subtract the number indicated from the 'Mech's Walking MP. For example, at anywhere from 5 to 9 heat points, subtract 1 from the 'Mech's Walking MP. Remember that Running MP is 1.5 times the current Walking MP; if the Walking MP is reduced, the player must also recalculate his 'Mech's Running MP, rounding fractions up.

This effect is not cumulative with any previous heat-caused loss of movement points. When a 'Mech's heat build-up reaches 5 on the Heat Scale, its Walking MP is only reduced by 1. When the build-up reaches 10 on the Heat Scale, reduce Walking MP by 2 total, not by 2 more movement points.

When heat build-up drops below the point at which these effects occur, the 'Mech regains 1 Walking MP, though previous applicable losses remain in force. For example, if the heat falls below 10 on the Heat Scale but remains at or above 5, the 'Mech continues to suffer –1 MP until the heat drops below 5.

Jumping: Reductions in Walking MP from heat build-up do not affect a 'Mech's Jumping MP.

WEAPON ATTACKS

At 8, 13, 17 and 24 heat points, add the number indicated to the 'Mech's base to-hit number for weapon attacks. For example, at 8 heat points, add 1 to all base to-hit numbers for as long as the heat remains at or above 8. As with movement, these effects are not cumulative, and disappear when heat build-up is reduced.

SHUTDOWN

At 14, 18, 22, 26 and 30 heat points, a 'Mech attempts to shut down its power plant automatically as a safety procedure. Until the MechWarrior restarts the reactor, the 'Mech is shut down.

When a 'Mech shuts down, it is considered immobile, and its equipment ceases to function except for heat sinks and life support. (See also Piloting/Driving Skill Table, p. 60.) It cannot make attacks or move, and cannot build up more heat by its own actions. Even engine critical hits will not generate extra heat while the 'Mech is shut down. Outside influences, such as weapons hits that generate heat, can create heat build-up, however.

A shutdown 'Mech's heat sinks continue to dissipate excess heat. For every turn that the 'Mech is shut down, the heat sinks dissipate as normal, and the player may attempt to restart the power plant during each Heat Phase. To do this, the player rolls 2D6. If the result is equal to or greater than the highest current Avoid number, the player can restart the power plant. A 'Mech may move and fire in the turn following the turn in which the power plant is restarted. When the heat drops below 14 on the Heat Scale, the power plant restarts automatically, even if the pilot is out of action.

A conscious MechWarrior can override the power plant's safety shutdown procedure, as indicated by the Avoid number listed with the effect, though shutdown cannot be avoided at 30 or more heat points. If his ´Mech's heat is at or above 14, the player rolls 2D6 once during the Heat Phase. If the roll result is equal to or greater than the highest Avoid number corresponding to the 'Mech's heat level, the pilot avoids shutdown for that turn. If heat accumulation reaches two or more trigger levels in one turn, roll 2D6 only once, against the highest Avoid number.

Aimed Shots: Other players can target a shutdown ´Mech with aimed shots (see p. 110).

A Hatamoto-Chi *begins a turn with a Heat Scale reading of 4. During the turn, it fires both its PPCs and walks (generating 21 heat points). The BattleMech only has sixteen standard heat sinks working. They dissipate 16 heat points, leaving 5 to build up. During the Heat Phase, these 5 points are added to the 4 already on the Heat Scale, bringing the total to 9. In the next turn, the 'Mech must reduce its Walking MP by 1 (giving it a Walking MP of 3 and a Running MP of 5) and add +1 to its to-hit number for weapon attacks.*

If the BattleMech repeats these actions in the next turn, the player must add 5 more heat points to the Heat Scale, bringing the total to 14. Now the player must make a 2D6 roll of 4 or higher to avoid shutdown. Even if he manages this, he must reduce the Hatamoto-Chi's *Walking MP by 1 more, to 2, until its heat falls below 10 on the Heat Scale. At the same time, the 'Mech fires its weapons with a +2 to-hit modifier.*

Voluntary Shutdown: Players may elect to voluntarily shut down a unit during any End Phase. They may then restart the power plant in any subsequent End Phase, provided they first pass any Shutdown Avoid checks due to heat (if needed), and provided there is no damage (such as three or more Engine Shielding criticals) that prevents a restart.

AMMUNITION

If the heat level reaches or exceeds an Ammo Explosion threshold of 19, 23, or 28 heat points, the ammunition a 'Mech carries may explode. The explosion can be avoided by pure luck, as indicated by the Avoid number. If the ´Mech's heat is at or above 19, the player rolls 2D6 once during the Heat Phase. If the roll result is equal to or greater than the highest Avoid number corresponding to his 'Mech's heat level, the pilot avoids an ammunition explosion for that turn. If heat accumulation reaches two or more trigger levels in one turn, roll 2D6 only once, against the highest Avoid number.

When an overheated 'Mech's ammo explodes, the ammunition critical slot with the most destructive ammo per shot explodes first. Ammo per shot is defined as the Damage Value done by one turn's worth of shots. For example, the ammo per shot of a machine gun slot has a Damage Value of 2, an AC/10's Damage Value is 10, an LRM-15 has a Damage Value of 15, and an SRM-6 has a Damage Value of 12. When the 'Mech carries two ammo slots with equivalent per-shot Damage Values, the 'Mech's controlling player chooses which ammo explodes. All of the appropriate ammo type in a single critical slot explodes. If more than one critical hit slot holds the appropriate ammo type, the one with the most shots remaining explodes. If two or more locations have an equal number of shots remaining, randomly determine which one explodes. Resolve the explosion following the rules in *'Mech Critical Hit Effects*, p. 125.

An ammunition explosion has no effect on any unit other than the one that suffered it

Exploding Weapons and Single-Shot Weapons: Exploding weapons and their ammunition (such as Gauss rifles), as well as all single-shot weapons, do not explode from overheating.

MechWarrior Damage: Ammunition explosions automatically injure the MechWarrior, inflicting 2 points of damage and requiring a Consciousness Roll (see p. 41).

ICE-POWERED 'MECHS

In addition to possible ammunition explosions avoid rolls, ICE-powered 'Mechs must make Fuel Explosion checks when their heat levels reach 19, 23, and 28 points. The target number to avoid these explosions is the same as that required to avoid ammunition explosions at those heat levels. Failure results in an engine explosion, destroying the 'Mech.

DAMAGE TO MECHWARRIORS

If life-support systems take a critical hit, the MechWarrior suffers 1 point of damage for every turn that the 'Mech's internal heat reaches 15 or more. For every turn that the heat rises to or remains higher than 25, the MechWarrior suffers 2 points of damage.

AEROSPACE UNITS

Game mechanics for heat generation and dissipation in small craft and aerospace fighters are based on those for 'Mechs, with the following exceptions. Large Craft use a more abstract system to track heat; see *Large Craft*, page 161.

Aerospace fighters and small craft generate heat points only through weapons fire, taking damage from heat-causing weapons, or taking critical engine damage, as shown in the Heat Point Table. They build up no heat through movement.

HEAT EFFECTS

Aerospace fighters and small craft follow the same basic rules as 'Mechs for heat effects on weapon attacks, shutdown,

AEROSPACE FIGHTER/SMALL CRAFT HEAT POINT TABLE

Activity	Heat Points
Weapons fire	Per Weapons and Equipment Tables, p. 303
Heat-causing weapons	Per Weapons and Equipment Tables, p. 303, or *Other Combat Weapons and Equipment*, p. 129
Heat sink	–1 per operational heat sink –2 per operational double heat sink
Engine damage	+2 per hit

ammunition and pilots, using target numbers and Avoid rolls based on the Heat Scales found on the Aerospace Fighter and Small Craft record sheets. The following effects and expansions on existing rules also apply.

Random Movement

At 5, 10, 15, 20 and 25 heat points, the unit's navigation and piloting systems may malfunction. A malfunction means the aerospace fighter or small craft cannot voluntarily spend Thrust Points in the following turn. The unit is treated as out-of-control and suffers random movement (see p. 93).

A pilot can avoid this effect if he can keep the navigation and piloting systems on-line, as indicated by the Avoid number listed with the corresponding effect. If the unit's heat is 5 or greater, the controlling player rolls 2D6 once during the Heat Phase. If the roll result is equal to or greater than the highest Avoid number corresponding to the unit's heat level, the pilot avoids random movement for the following turn. If heat build-up reaches two or more trigger levels in one turn, roll 2D6 only once, against the highest Avoid number.

If the roll fails, the unit undergoes random movement in the subsequent turn. To bring the unit back under control, the player must make a successful Control Roll during the End Phase of the subsequent turn. The unit remains subject to the trigger event and the player must make a successful random movement Avoid roll in each subsequent End Phase until the Control Roll succeeds or the heat drops below the lowest trigger (5 heat points).

Shutdown

If a unit shuts down in space, it drifts at its current velocity and heading until the pilot can restart the power plant by making a successful shutdown Avoid roll in a subsequent turn. The power plant automatically restarts when the heat drops to 13 or less. The unit is considered out-of-control for purposes of determining collisions, but it does not suffer random movement.

In atmosphere, a shutdown unit likewise continues in a straight line, but runs the risk of stalling and losing altitude (see *Atmospheric Movement*, p. 78). A shutdown unit that moves from a space hex to the space/atmosphere interface is automatically destroyed.

Ammunition Explosions

High heat levels can cause ammunition to explode, inflicting immense damage to the unit. Avoid rolls are required at 19, 23, and 28 heat. If the Avoid Roll fails, the ammunition with the most destructive ammo per shot explodes first. A machine gun inflicts 2 points of damage, an SRM 2 inflicts 4 points, an AC/10 inflicts 10, and so on. This means that a fighter with machine gun and AC/10 ammo would suffer an AC/10 ammo explosion. Gauss rifle ammunition, as well as the Gauss rifle itself, are not subject to explosion caused by heat.

If an explosion takes place, multiply the damage caused by a single shot of the weapon by the number of rounds remaining, divided by ten (rounding down, to a minimum of 1). Apply this damage to the unit's SI. If a fighter equipped with CASE suffers an ammo explosion, divide the total damage by 20 (rounding down, to a minimum of 1) The rest of that weapon's ammo is destroyed, but inflicts no additional damage.

For example, a *Slayer* aerospace fighter has a full ton of AC/10 ammunition that explodes. This inflicts 100 points of damage, divided by 10 for a total of 10 points assigned to the SI—10 points per shot x 10 shots per ton / 10—which destroys the unit, as its SI is only 8. Had the fighter been equipped with CASE it would have sustained only 5 points of damage, allowing it to survive.

Ammunition explosions automatically injure the unit's pilot, inflicting 1 point of damage and requiring a Consciousness Roll (see p. 41).

Damage to Warriors

High heat levels can injure a warrior; Avoid Rolls must be made at 21 and 27 heat. When a heat damage Avoid Roll fails, the warrior suffers 1 point of damage and a fighter pilot must make a Consciousness Roll (see p. 41).

LARGE CRAFT

Large Craft work on a zero-net-heat principle that prevents them from generating heat in excess of their ability to dissipate it. This simplifies heat management for units that can have dozens of weapons and thousands of heat sinks, and also reflects the fact that "heat" for such units represents more than excess temperature. It includes the resources required to power weapon and targeting systems and the superstructure to support crew to operate those systems.

Large Craft generate heat points per firing arc, rather than per weapon or bay. Players should calculate the total heat for all weapons in each firing arc and write down that information on the appropriate record sheet. Firing all or some of the weapons in that arc is considered to generate the full heat of all weapons in the arc.

A Large Craft that lacks sufficient heat sinks to fire the weapons in an arc may still fire all the weapons in that arc. This is the only weapons fire the unit may make in that turn, and the player must make an immediate Control Roll, applying a +1 penalty for every 100 heat (or part thereof) in excess of what the unit can dissipate. The unit may not fire weapons from other arcs.

> *A* Lion*-class (Clan) DropShip generates 76 heat points in its nose arc, 76 in each of the front left and front right arcs, 48 in the aft left and aft right arcs and 44 in the aft arc—a total of 368 heat points. It can only dissipate 110 heat points. The DropShip cannot generate more than 110 points in a single turn, and so the controlling player cannot fire all the weapons at once. In a given turn, the controlling player can only fire a combination of arcs that does not exceed 110 heat points.*

Just Another Day at the Office

David L. McCulloch

BASINGSTOKE
CITY
PRESTON
FREE WORLDS LEAGUE
21 JUNE 3068

Emile Aiello's teeth rattled as another tremor shook the dilapidated office building. Fine dust drifted down, adding a light frosting to the mottled grays of the Marik urban camouflage field uniform that clad his squat and muscular frame. The dust obscuring his corporal's stripes puffed upward into the air as he absently brushed the grit from the cold metal-and-plastic AX-22 assault rifle cradled in his left arm. Hard, dark eyes set in a scarred face stared into the grey dawn light. In the gloom around him, tense figures crouched unmoving at the third floor windows as another tremor rippled through the building. Chunks of yellowing plaster clattered onto the piles of tired furniture stacked against walls covered in peeling wallpaper. The wallpaper had long since abandoned its pristine whiteness for the faded color of old bones.

Somewhere out in the city, BattleMechs were on the move.

The nice recruitment officer in his spotless uniform with the chest full of medals had missed some important details, Aiello mused sourly as he checked his spare magazines for the tenth time that morning. Little incidentals—like being expected to place one's soft and fragile body in the path of towering metal avatars of war. The sort of thing that probably would have dissuaded even gullible farm boys like sixteen-year-old Emile from joining the army. Even ten years ago, he'd had at least that much sense.

Another tremor shook the heavy building. Whatever caused them was getting closer.

"Get ready! Stay calm!" Behind Aiello, Lieutenant (Junior Grade) Santorini was pacing up and down the platoon's position, with Sergeant Isaacs at his shoulder. In the dusty twilight the lieutenant's olive skin had a marked greenish cast to it. "You all know the plan!"

Yes, Aiello thought as he continued to scan the roofline across the street. They did. More important, so did Santorini—after Isaacs had spent the better part of the previous evening telling the lieutenant

just what the plan was going to be. The iron-haired sergeant might not afford junior officers the level of respect considered appropriate from a noncom in FWLM service, but she was a real wizard when it came to small unit tactics—the reason she was still *in* the service. Few officers lasted long in Third Platoon, Delta Company, Second Battalion of the 97th Marik Infantry Regiment. Some of the more skilled (or lucky) ones got promoted rapidly and went on to greater things. Others had been killed or wounded in gruesome ways that FWLM recruitment literature never talked about. Two had been cashiered. One had simply disappeared. The task of breaking in the replacements fell to Isaacs—which probably went a long way toward explaining her attitude.

The unmistakable tearing sound of a heavy autocannon cut into the ponderous silence between titanic footfalls.

Aiello pondered just how long Santorini would last. He was not alone; in whispers, PFCs Ferrier and Hendman were running a book with the rest of his squad. "Hendman! Ferrier! Shut it!" he hissed as Santorini came back up the line. Aiello wished Isaacs could make the lieutenant just stand still for a moment and shut up.

"Now remember, our orders are to maintain the foothold on this side of the river. The Nineteenth Megrez Home Guard is on our flank, so don't go ruining their day with stray rounds!" Santorini delivered his typical pre-battle pep talk, while Isaacs kept busy whispering into the lieutenant's ear.

"Those pukes from Megrez couldn't maintain a foothold on a pile of Branth droppings!" Hendman grunted as Santorini passed out of earshot. For the tenth time in as many minutes, he checked the missile loaded into the SRM launcher braced on Ferrier's shoulder.

"None of that, now! We're all one big happy Free Worlds League!" Ferrier delivered this last in a fair imitation of Lieutenant Santorini without taking his eye from the sights of Second Squad's one and only support weapon. Aiello's squad mates fought to stifle their laughter. Then the building trembled again, bombarding them with more misshapen chunks of discolored plaster. Mirth evaporated as hands tightened on weapons.

Aiello spotted movement on the Irian Media Interstellar building across the abandoned street. Snapping the lens protectors open, he pressed the rubber eyepieces of his binoculars to his face and trained them on the high roof. PFC Valdez came into focus. Aiello waved to signal that she had his attention. Valdez raised her right hand in a fist, then raised four fingers. A pause, then she held up six fingers, and then five. Finally she signed two fingers walking, then made a sharp gesture across the throat.

"Sarge!" Aiello called back over his dust-encrusted shoulder. "Valdez says we've got BattleMechs coming! Four bandits! Sixty-five tons plus!"

His shout brought Isaacs striding up, a surprised Lieutenant Santorini scurrying in her wake. "What about support?" Isaacs' drawl sounded calm, almost bored.

"She says no support."

If correct, that was good—very good. If the Lyrans were coming in without infantry support, Third Platoon might survive the next half hour. Some of them, at least.

Isaacs pondered this information. "Just a probe, then. Better tell our lookouts to come on in."

Aiello nodded in agreement. If the Elsies were serious they'd be sending in the big stuff. Considering that the Lyrans, either through luck or design, were about to hit the Marik line at its weakest point—the junction between Second Battalion and the displaced Megrez Home Guard—the sergeant had sounded almost cheerful.

The savage rip of an autocannon echoed again as Aiello signaled to Valdez and O'Flagherty to abandon their exposed lookout position. This time the roar of weapons fire was accompanied by the sound of breaking glass and falling masonry. As far as Aiello knew, there were no troops forward of their position. Perhaps the approaching Lyran was shooting at shadows. Aiello took a sip of tepid water from his canteen to wash away the chalky taste of dust and spat on the cracked tile floor. Better at shadows than at him.

With a tornado's roar, BattleMech jump jets rattled the grimy windows and broken light tubes as the distinctive hunched form of a Skye Jaegers' *Axman*, its five-ton club held menacingly aloft, rose into view. It alighted on the IMI building's flat roof with a teeth-rattling impact. Now more than dust was making Aiello's mouth so dry. Third Platoon would be lucky to scratch the paintwork on that BattleMech, let alone penetrate the ten tons of ferro-fibrous armor protecting it.

Sergeant Isaacs, though, had avoided the IMI building as the best place for Third Platoon to dig in for good reason. Even though its height afforded an excellent view of the surrounding streets, all of its structural strength was concentrated in its core. The outer sheathing of emerald glass would become a whirlwind of glass shards just as deadly to lurking infantry as any autocannon or missile. It was also the tallest building in the neighborhood, attracting jump-capable BattleMechs like Andurien moths to flame. Indeed, Third Platoon was counting on it.

Aiello didn't have to wait for the order Isaacs barked a moment later. "Semis! Target the fourth floor! Fire!" First and Fourth squads' semi-portable autocannons roared into life, belching meter-long tongues of malevolent yellow flame. The air filled with the acrid taste of propellant as the crews raked the frontage across the street. The rest of Third Platoon added to the weight of fire with their AX-22s, blowing ten-meter tall sheets of glass into ruin. In seconds the street was littered with cruel emerald blades as Third Platoon's assault ripped open gaping black scars to expose the building's interior.

"Missiles! Fire! Hit the dirt!" Aiello screamed above the pandemonium of the semis' roar.

"Fire in the hole!" Ferrier's call was echoed by Morris in Fourth Squad. As Aiello joined his squad on the floor, he caught sight of Isaacs pulling Lieutenant Santorini out of harm's way. In this confined space the launchers were deafening. As their brace of HE missiles streaked across the street like miniature comets, Ferrier and Morris joined their comrades and became one with the ancient tiles.

The warheads found their mark with deadly accuracy. The detonation blew out the few windows that had survived their first murderous attack on the IMI building. Spectacular as the blast appeared, it was the damage wrought *inside* that counted. Normally even that damage would have been little more than cosmetic...until some overly confident MechWarrior parked sixty-five tons of BattleMech on the roof.

Aiello heard the shriek of metal stressed beyond endurance, punctuated by the staccato snapping of cross-supports as they gave way under a strain the building's architects had never factored into their design. With appalling suddenness, the building collapsed onto itself, as if in slow motion. The fifth floor went first, the damaged structure on the floor below unable to support the weight above it. Structural failure rippled up through the sixth, seventh and eighth floors. Then the whole disintegrating mass hammered into the lower floors like a titanic pile driver.

The sound was indescribable. Vast clouds of dust billowed outward from the seat of destruction, enveloping Third Platoon's refuge like a tsunami, blasting in through the glassless windows and coating everything in gray.

Coughing, Aiello pulled himself up to peer at the destruction. Smoke and dust filled the air, choking breath and making eyes tear. He could just see a fresh mound of still-settling wreckage across the street. Somewhere beyond the veil of dust came the sound of battle. The other 'Mechs must have run into Second Battalion's picket line. Aiello hoped they were having as much luck as Third Platoon. A ragged cheer swelled to full voice, joined by whoops of victory as Third Platoon pulled themselves to their feet and surveyed the altered cityscape.

"Well, now," Aiello said. "That went about as well as could be expected."

Unfortunately, their celebrations proved premature.

With a grating sound of protest—as if some monster were drawing titanic metal fingernails with vindictive delight across an unimaginably gigantic blackboard—the *Axman* levered itself up from the center of the debris pile. Its hatchet was gone, its right arm missing from the shoulder down. Only a mangled stump remained—a raw wound of twisted metal, cables and tubing that dripped sickly green coolant. Almost every square millimeter of the *Axman's* armored hide was caked in dust or dulled where the distinctive checker-work paint scheme had been scoured down to the Kallon Unity Weave ferro-fibrous armor. Only the Steiner fist emblem miraculously remained, clenched as if in defiance of their ambush attempt.

One final heave sent more rubble spilling out into the street as the maimed BattleMech regained its footing. Perhaps the MechWarrior had seen the spot from which they'd delivered the fatal blow against the IMI building, or maybe he was still stunned from the fall and lashed out blindly. Regardless, the result was the same.

"Take cover!" Sergeant Isaacs shouted. Aiello and the rest of the platoon dropped instinctively as the *Axman* opened up with its heavy autocannon. A whirlwind of high explosives raked the building, followed by a rain of coherent light as the Lyran BattleMech brought its surviving laser weapons into play.

Third Platoon weathered the storm of high-tech destruction, for Isaacs had chosen their position with care. The squat edifice of local granite and endo-steel might resemble a giant pillbox and surely harked back to the heyday of the First Star League, but unlike the snazzy glassed-in IMI building, it offered protection from heavy weapons—for a while.

The roar of the autocannon died. "I think we pissed him off," Ferrier said, bracing the SRM launcher into firing position. Hendman slapped another missile into the launcher, then slapped Ferrier's helmet. A sharp squeeze of the trigger sent the missile straight into the Lyran war machine's broad chest. The semis renewed their song of destruction accompanied by the sharp crack of AX-22s as Third Platoon scoured their foe with a tide of near-impotent bullets.

As if to ridicule their feeble attacks, the *Axman* fired its autocannon again. Further down the room, two figures flew back from the windows, as if jerked by invisible strings.

Aiello looked up at Hendman and slapped a fresh magazine into his AX-22, oblivious to a cut sliced across his left cheek by a flying shard of granite. "Yup. I'd say so!" Two more from First Squad were down now. So was Lieutenant Santorini. The air was thick with the smell of cordite and coolant, cooked meat and blood.

Once more the *Axman's* autocannon fell silent. Swinging up his reloaded weapon, Aiello sprayed fire into the 'Mech's elongated head, more in the hope of distracting the MechWarrior than doing any real damage. The BattleMech shifted its feet, leaning forward. Aiello's experienced eye read the move. "Sarge!" he called to Isaacs. "Think we're going to have company in here!"

The Lyran MechWarrior had to realize by now that he couldn't blast Third Platoon out of their building. Not quickly. Not if he wanted his *Axman* fit to deal with the Marik BattleMechs that Aiello prayed were rushing to intercept the Lyran thrust at this very moment. The *Axman*'s pilot had two choices: bypass this stubborn infantry position and find something else to molest, or physically root out the infuriating insects impudent enough to challenge the king of the battlefield. So how angry had they made that MechWarrior? Aiello hosed down the *Axman's* cockpit once more for good measure.

The *Axman* lunged at the building.

The collision threw Aiello to the floor so hard, he wondered if it was worthwhile getting back up. The structure shook a second time as sixty-five tons of BattleMech slammed into the ferrocrete outside. What remained of the ceiling plaster finally gave up its battle against gravity. It came crashing down in ragged sheets, throwing white powder everywhere. Aiello crawled out from under crumbling bits of roof and pulled himself up to the window. In the rubble-strewn street, the *Axman* was struggling to regain its feet—an operation hampered by its missing arm. Whether from its encounter with the building or the sidewalk, plates of armor had been torn away from the left thigh, exposing myomer bundles that writhed as the 'Mech continued to struggle. Aiello thought he spotted actuator damage, too. With all the shifting rubble, the 'Mech couldn't get its left leg under it.

"Oops!" Aiello muttered as the *Axman* overbalanced and fell forward. It crashed into the building and then slid back to the street, jolting the structure once more.

"This place can't take much more of this. Time for us to go." Isaacs spoke from behind Aiello's shoulder. "OK, people! Grab your gear! We're falling back to the first rally point. Cho! Wilson! You two bring the lieutenant."

Ominous grinding sounds told of movement in the street as they ran for the emergency stairwell.

Stumbling in the dark on uneven floors, Aiello expected the building to disintegrate around him as sixty-five tons of infuriated BattleMech came crashing through the walls. Panting now, he led the platoon down the stairwell with reckless haste. The others came scrambling after him—half carrying, half dragging the wounded.

Aiello hit the fire door at a run. After the dread-infested dark, the dim light from the overcast sky that lit the litter-strewn alleyway hit him like a drink of sweet spring water. No time to stop and admire the scenery, though. With Second Squad in the van, Aiello raced down the alley toward the river.

He had gone perhaps fifty meters when the sounds he'd been dreading came from behind—the thud of impact and falling masonry. The *Axman* had broken through the building's stone façade at last.

He endured a moment of endless silence before the dark ferrocrete convulsed under him. Aiello found himself thrown into the air with the rest of Third Platoon. He landed on his left side. Hard. His shoulder exploded in pain and a yawning blackness sucked at his consciousness.

He came to on a cold surface, gazing up at an empty gray sky as he tried to remember who he was. Then memory came rushing back, along with throbbing agony in his shoulder. He was lying on his back in the center of the grimy alley. Fighting to ignore his screaming shoulder, he pushed himself up to a sitting position with his right arm. He saw Sergeant Isaacs kneeling next to him, blood streaming from her nose.

"Looks like he found the basement," she croaked.

"I didn't even know that building had a basement." Aiello got his legs underneath him on the second attempt. Around him, Third Platoon's dazed survivors were beginning to regain their feet.

Isaacs stood up, looking as shaky as Aiello felt. She nodded toward the ruins of their hastily abandoned refuge. "Neither did he."

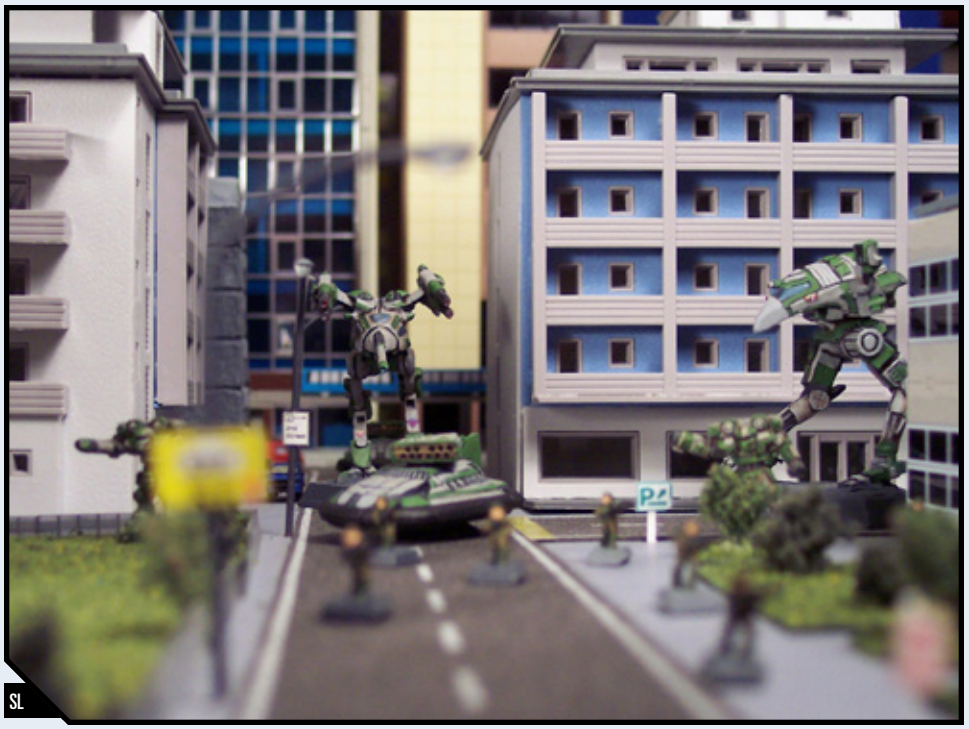
The grating sound that came from beneath their feet was felt more than heard. Aiello shot an incredulous glance at Isaacs. "You've got to be kidding me! What does it take to stop this guy?"

Isaacs didn't answer. "Third Platoon! Everyone move it! Now!" She grabbed Aiello's good arm and pushed him down the alley. "Quick! Take the first right. Head for the storm drain." Then she was gone, shoving stragglers in the same direction.

Waving Ferrier and Hendman ahead of him, Aiello began to jog unsteadily. He could hear grunts and curses mixed with the sounds of the entombed BattleMech's struggles behind him. He fought the urge to look back. Rounding the corner, he immediately saw the storm drain. But it was not the sight of Isaacs' sanctuary that brought a sudden grin to a face caked with dust and blood. The squat shape of an FWLM SRM carrier was parked just beyond the ferrocrete spillway.

As Third Platoon piled into the ready-made trench, thunderous footfalls made it abundantly clear that the *Axman* had freed itself once more. Bringing up the rear, a sprinting Isaacs leaped down into cover. Spraying wild shots from its remaining lasers, the BattleMech came staggering round the corner—straight into a firestorm of sixty short-range missiles. The high-explosive warheads ate into the heavy 'Mech like a shoal of high-tech piranhas. Armor shattered and internal structural components were blown clear. For a moment the ravaged titan stood motionless. Then it collapsed backward into a two-story garage.

Wiping his face, Aiello noticed the blood for the first time. He looked across to where Isaacs lay panting. "Can we go home now?"



House Marik's First Atrean Dragoons deploy to secure a city on a world in House Davion's Sarna March during Operation Guerrero.

The rampant destruction caused during the early Succession Wars appalled even the most hardened soldiers. Until the Jihad, recent decades saw the evolution of a common practice to avoid combat in populated areas, especially among the warrior Clans, who consider the collateral damage caused by such battles unacceptable. Despite this unwritten law, combat still had a tendency to drift from the intended battlefield into urban areas. There is also no shortage of less than noble commanders who set ambushes in cities, counting on the unspoken truce in those areas to offer an extra measure of surprise. The Jihad has opened up a whole new chapter of brutal combat within cities.

Historically, the buildings and irregular terrain in urban areas made it difficult for Combat Vehicles to successfully achieve their objectives. Though 'Mechs have superior flexibility, cities still complicate warfare in the thirty-first century. Battles fought in long, narrow streets filled with buildings that block line of sight, provide enemy hiding places and offer limited protection from weapons fire require a change in tactics and operations. In urban combat, even conventional infantry may substantially damage a 'Mech.

Note: The rules in this section represent a simplified system for integrating basic buildings into *BattleTech* play. A more comprehensive system for other kinds of structures (such as hangars, railway stations and so on, as well as how different units deal with those larger, more unique structures) are covered in *Tactical Operations*.

BUILDING TYPES

BattleTech divides buildings into four types: light, medium, heavy and hardened. Each type is rated to describe the damage it can withstand, the protection it provides and the weight it can bear. Two numbers describe buildings in *BattleTech*: the Construction Factor (CF) and levels.

Default Values: If a scenario does not specify a building's type, treat it as medium, Level 2.

CONSTRUCTION FACTOR

The Construction Factor (CF) determines how a building's physical structure affects the play of the game. Specifically, the CF is the number of damage points a building hex can take before being reduced to rubble; this damage, regardless of when it occurs, is tracked across a game until the building hex CF is reduced to 0. This number applies to the hex as a whole; each level of a building hex (regardless of how many) does not have its own CF, even though damage can be inflicted on different levels of a building hex under some circumstances (such as *Area Effect Weapons*; see p. 172). The CF also represents the number of tons of additional weight each level of a building hex can support without collapsing.

The range of possible CF values for each building type appears on the Building Modifiers Table, page 167. Regardless of a building hex's current Construction Factor, its type never changes. A damaged heavy building hex with a current CF of 15 remains a heavy building hex.

Some maps have buildings printed directly on mapsheets (for example, *MapPack: Grasslands* and *MapPack: Deserts*). Players can also use counters to represent buildings on a mapsheet. Any type of counter will do, but the building's type and level should be clearly marked (players can use the pre-printed buildings on the above-mentioned mapsheets as an example of how best to designate the counters), and the counter should fit appropriately within the hex or hexes it will occupy on the mapsheet.

Default Values: If the scenario does not specify a building's CF, assume that a light building hex has CF 15, a medium building hex has CF 40, a heavy building hex has CF 90 and a hardened building hex has CF 120.

Multiple-Hex Buildings: For buildings that cover more than one hex, each hex has its own CF value. The destruction of a single hex in a multi-hex building does not affect any other hex within the same structure, unless more than half the total hexes have been destroyed. At that point, the rest of the building collapses. For example, if four hexes of a seven-hex building are destroyed, the remaining three hexes will collapse. For more information, see *Collapse* (p. 176).

Current CF: The Current CF of a building is defined as the CF at the instant an action takes place. For example, if two 'Mechs enter the same building hex at different times in the same Movement phase, the current CF for both units will be different (as the first 'Mech will have damaged the building hex).

BUILDING LEVELS

Treat building levels like other terrain levels for line of sight and movement, with each level of a building measuring roughly six meters high. These levels do not represent a specific number of floors, but rather are an abstraction of the building's interior. See also *Changing Levels in a Building*, page 169.

MOVEMENT EFFECTS

Units can move into, through or onto buildings. Building levels affect movement in the same way as all other terrain levels. In other words, a unit can move to the roof of a building hex, change levels as though the building were a hill (provided the unit does not change more than its maximum allowed level changes in a single hex and the CF of the hex can support the unit). Of course units may also enter a building rather than climbing on top (see *Moving Through Buildings*, below). The Building Modifiers Table below summarizes movement costs and modifiers for each type of building.

If the total tonnage of units on any single level of a building hex exceeds the hex's current CF (except Level 0, the ground floor; see *Basements*, p. 179), the entire building hex immediately collapses (see *Collapse*, p. 176).

Prohibited Units: Aerospace units, VTOLs, WiGEs, Fixed Wing and Airship Support Vehicles, and naval vessels may not voluntarily enter a building hex.

MOVING THROUGH BUILDINGS

Note that the rules in this section cover entering building hexes below the level of the roof; i.e. movement actually inside the building in a hex, as opposed to entering a hex on the roof of the building. For example, when the rules talk of making a Piloting/Driving Skill Roll for entering a building hex, it refers to below the level of the roof.

All units can enter a building hex at ground level (Level 0), provided that other terrain in adjacent hexes does not block such movement. Units that involuntarily enter a building hex (such as during a skid or after being displaced by another unit's actions) should use *Skidding* and *Unit Displacement* rules to resolve such movement (pp. 62 and 151, respectively).

Collapse: If a building hex sustains enough damage to collapse during a unit's movement, the collapse is resolved immediately, before the unit exits the hex (such as in a continuing skid) or expends any more MP in any way (either to change facing, attempt to exit the buildings and so on); this includes assigning all damage to all units, resolving any accidental falls and/or displacement and so on. See *Collapse*, page 176.

'Mechs and Vehicles

A 'Mech can enter a building hex. By default this is done at the building's ground level (i.e. the level of the underlying hex the building is in). A 'Mech may only enter a building hex at a level higher than the building's ground level if entering from an adjacent hex with a higher level (e.g. if a 'Mech walks from a Level 3 hill into a neighboring building hex on a Level 1 hill, it would enter the building at Level 2). A 'Mech cannot use Jumping MP to enter a building hex, though it can enter the hex by jumping on top of the building (it lands on the building's roof). However, a 'Mech can use Jumping MP to leave a building hex, provided it does not enter another building hex, below the level of that building hex's roof, at any point in the rest of that 'Mech's current Movement Phase.

Every time a 'Mech or vehicle enters a building hex (not including movements onto the roof), the warrior must make a Piloting/Driving Skill Roll, adding all appropriate modifiers from the Piloting/Driving Skill Roll Table (see p. 60).

BUILDING MODIFIERS TABLE

Building Type	Original CF	MP Cost Per Hex*	Piloting/Driving Skill Modifier
Light	1–15	+1	0
Medium	16–40	+2	+1
Heavy	41–90	+3	+2
Hardened	91–150	+4	+5
Cost to Enter Any Hex		*1*	

*Infantry (except mechanized infantry) pay only 1 MP to enter a building hex regardless of building type; ProtoMechs and mechanized infantry only pay 2 MP to enter a building hex.

BUILDING MOVEMENT MODIFIERS TABLE

Hexes Moved In Turn	Piloting/Driving Skill Modifier	Hexes Moved In Turn	Piloting/Driving Skill Modifier
1–2	0	10–17	+4
3–4	+1	18–24	+5
5–6	+2	25+	+6
7–9	+3		

In addition, modify the roll for the unit's movement per the Building Movement Modifiers Table, above. If the roll is successful, the unit takes no damage. If the roll is unsuccessful, the unit takes damage equal to the building hex's current CF divided by 10 (round up). This damage hits from the front if the unit was moving forward into the hex, from the rear if the unit was moving backward into the hex. The damage hits from the left or right side as appropriate for a four-legged 'Mech entering a building using a lateral shift.

A failed roll does not cause a 'Mech to fall. In addition, whenever a 'Mech or vehicle enters a building hex, the hex suffers damage equal to the unit's tonnage divided by 10 (rounded up), regardless of the Piloting/Driving Skill Roll result.

WiGEs: While WiGEs cannot enter a building, a WiGE moving over a building immediately collapses that building if its tonnage x 0.25 exceeds the building's current CF (see *Collapse*, p. 176).

Vehicles: Vehicles that fail their Driving Skill Roll when entering a building hex must make one immediate roll on the Motive System Damage Table (see p. 193).

Large Support Vehicles: Large vehicles inflict double the standard damage against buildings when entering a building hex.

Falling: If a 'Mech falls inside a building hex, it inflicts the same damage on the building hex as though it entered that hex.

Infantry and ProtoMechs

Infantry enter building hexes as though entering clear terrain, paying only 1 Ground MP to enter a building hex, regardless of building type. Mechanized infantry must pay 2 Ground MP to enter a building hex, but a mechanized infantry unit with only 1 Ground MP available may still enter the building if it qualifies under the *Minimum Movement* rule (see p. 49). Infantry units may enter a building at a higher level, just like a 'Mech. When moving from one building hex to an adjacent building hex (including when inside a multi-hex building), infantry may only use Ground MP. Jump-capable infantry that wish to enter a building using their Jumping MP follow the procedure for jumping Battle Armor, below.

ProtoMechs enter and move through buildings according to the rules for infantry, except that ProtoMechs must pay an additional 1 MP (for a total of 2) to enter each building hex and cannot enter buildings using the rules for battle armor with Jumping MP. In addition, whenever a ProtoMech enters a building hex, the hex suffers 1 point of damage.

Battle Armor

A battle armor unit with Jumping MP may enter a building at any level higher than ground level (Level 0), provided that level is equal to or less than the sum of the battle armor's Jumping MP plus the level of the battle armor unit in the hex where the jump started. The unit must have sufficient Jumping MP to allow it to enter the target building hex (1 MP); it must have line of sight to the target building hex level before starting movement; and it cannot enter such a hex if that would violate the stacking rules. Finally, when using Jumping MP to enter a building hex below the level of the roof, the battle armor unit's movement ends immediately upon entering the first building hex.

When the battle armor unit jumps into a building hex (not including the roof), it must make an Anti-'Mech Skill roll. The controlling player should first consult the Piloting Skill Modifier column of the Building Modifiers Table and apply the appropriate target number modifier for the building type. If the roll is successful, the battle armor unit takes no damage. If unsuccessful, the battle armor unit takes a single hit, with damage based on the building type. A light building inflicts 2 points of damage; a medium building, 3 points; a heavy building, 4 points; and a hardened building, 5 points. Regardless of the roll result, the building never takes damage from battle-armored infantry movement. A battle armor unit does not make an Anti-'Mech Skill roll when using Jumping MP to leave a building hex.

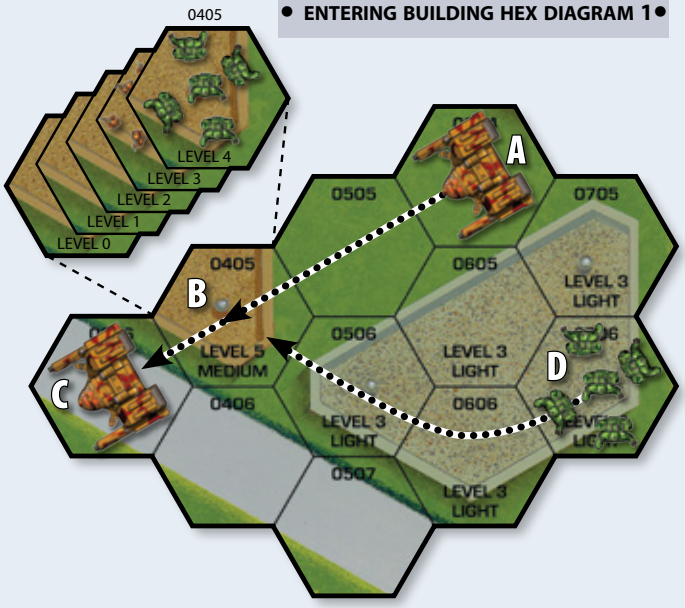
A battle armor unit with VTOL MP may enter a building hex at a level higher than ground level (Level 0). The unit simply moves into the target building hex at the same building level as the level of the adjacent hex it left. The battle armor unit must have sufficient VTOL MP to allow it to enter the target building hex (1 MP), and it cannot enter such a hex if that would violate the stacking rules. Finally, when using VTOL MP to enter a building hex below roof level, the battle armor unit's movement ends immediately upon entering the first building hex. Unlike Jumping MP, a battle armor unit using VTOL MP to enter a building hex does not make an Anti-'Mech Skill roll.

In the Entering Building Hex Diagram 1 below, two enemy units on the City (Downtown) map are moving through or into building hexes.

Player 1 wants to move his 65-ton JagerMech *(Piloting Skill 5) through a medium building (CF 40) hex to fire at units on the other side. The* JagerMech *starts in Hex A and will move to Hex C. The 'Mech runs one hex so that it is adjacent to the building hex (Hex B), then spends 3 MP to enter Hex B. As the 'Mech enters Hex B, the player must make a Piloting Skill Roll, modified by +1 because this is a medium building. This gives Player 1 a modified target number of 6 (5 + 1 = 6). As shown on the Building Movement Modifiers Table, the player need not add another modifier for the unit's movement because the* JagerMech *only moved two hexes so far. The player rolls 2D6 and gets a result of 10, a success. The BattleMech suffers no damage, but the building hex takes 7 points of damage (the* JagerMech's *65 tons divided by 10, rounded up), leaving it with a current CF of 33. The* JagerMech *then moves into Hex C.*

Had Hex C had been a building hex, Player 1 would need to make another Piloting Skill Roll to enter it. This time he would add a +1 building movement modifier, because the 'Mech

• ENTERING BUILDING HEX DIAGRAM 1 •



would be moving into its third hex, thereby raising the target number to 7 (5 + 1 + 1 = 7). On a die roll result of 6 or less, the JagerMech *would suffer 4 points of damage (Hex C's current CF of 40 divided by 10, rounded up. Hex C would suffer 7 points of damage, reducing its current CF to 33.*

Player 2 has an Elemental battle armor unit (Anti-'Mech Skill 4) in Hex D, at Level 3 (on the top floor of that building). The unit is out of short-range missile ammo, and so if Player 2 wants to fire on the JagerMech *he'll need to move the battle armor unit within three hexes of the target (the range of the unit's small laser). While Player 2 doesn't wish to leave his battle armor unit out in the open, he also doesn't want to enter the target hex at Level 3 of the building in Hex B; his opponent's infantry unit on that level has already moved in the current Ground Movement Phase. Player 2 verifies that he has line-of-sight to the target hex building level from the battle armor's current location, and that the unit has sufficient Jumping MP. The player wants to move his battle armor to Level 4 in the building hex, and the unit is already at Level 3, so Player 2 needs only 1 Jumping MP to make the vertical move. The battle armor's Jumping MP is 3; adding that to its current level makes 6. Level 4 in the target hex building is less than 6, and so Player 2 can make the jump (the player will expend all of the Jumping MP of the battle armor to actually traverse the three hexes to enter Hex B).*

As the battle armor unit enters the building hex, the player must make an Anti-'Mech Skill roll. Player 2 checks the Piloting Skill Modifier column on the Building Modifiers Table and applies the +1 modifier for a medium building, and another +1 because the unit is jumping. This gives him a modified target number of 6 (4 + 1 + 1 = 6). The player rolls 2D6 and gets a result of 3. The battle armor unit suffers 3 points of damage, but is now inside the building at Level 4 and ready to attack the JagerMech during the Weapon Attack Phase.

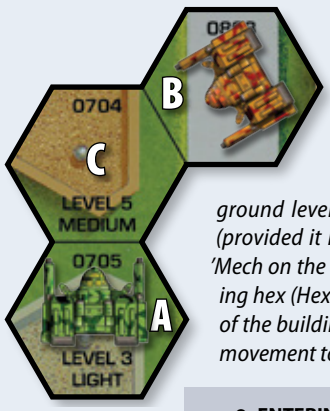
Because battle armor is a type of infantry unit, the building takes no damage from the unit's movement. Finally, even if the unit had spare MP and Player 2 wished to move it further, the use of Jumping MP to enter a building hex at a level below the roof immediately ends that unit's movement.

Changing Levels in a Building

Once inside a building, a 'Mech may not change levels, except as noted under *Basements*, page 179. Vehicles cannot move beyond the ground floor (Level 0).

Infantry and ProtoMechs may change levels in a building hex as though entering clear terrain. Infantry pays 1 Ground MP to move up or down one level regardless of building type, except for mechanized infantry, which must pay 2 Ground MP to change levels. If a mechanized infantry unit only has 1 Ground MP available, it can still change levels in a building using the *Minimum Movement* rule (see p. 49). Provided the unit has the necessary MP, infantry can enter a building hex and change levels in that hex during the same turn. ProtoMechs follow the rules for mechanized infantry when changing levels in a building hex, but inflicts 1 point of damage to the building hex for each level it enters.

Stacking: Normal stacking limits are in effect at each level in a building, in each hex. Players should remember that each level of a building hex can support tonnage equal to the hex's current CF.



In the Entering Building Hex Diagram 2 at left, two 'Mechs are on the City (Downtown) map. The 'Mech in Hex B is adjacent to the Level 5 building in Hex C. The 'Mech may attempt to enter the building hex at ground level, or it may jump up to the roof (provided it has 5 or more Jumping MP). The 'Mech on the roof of the adjacent Level 3 building hex (Hex A) may jump or climb to the roof of the building in Hex C, or it may use ground movement to enter Hex C at Level 3.

• **ENTERING BUILDING HEX DIAGRAM 2** •

A Beta Galaxy Mad Cat *from Clan Wolf's Thirteenth Battle Cluster searches abandoned buildings for* isorla.

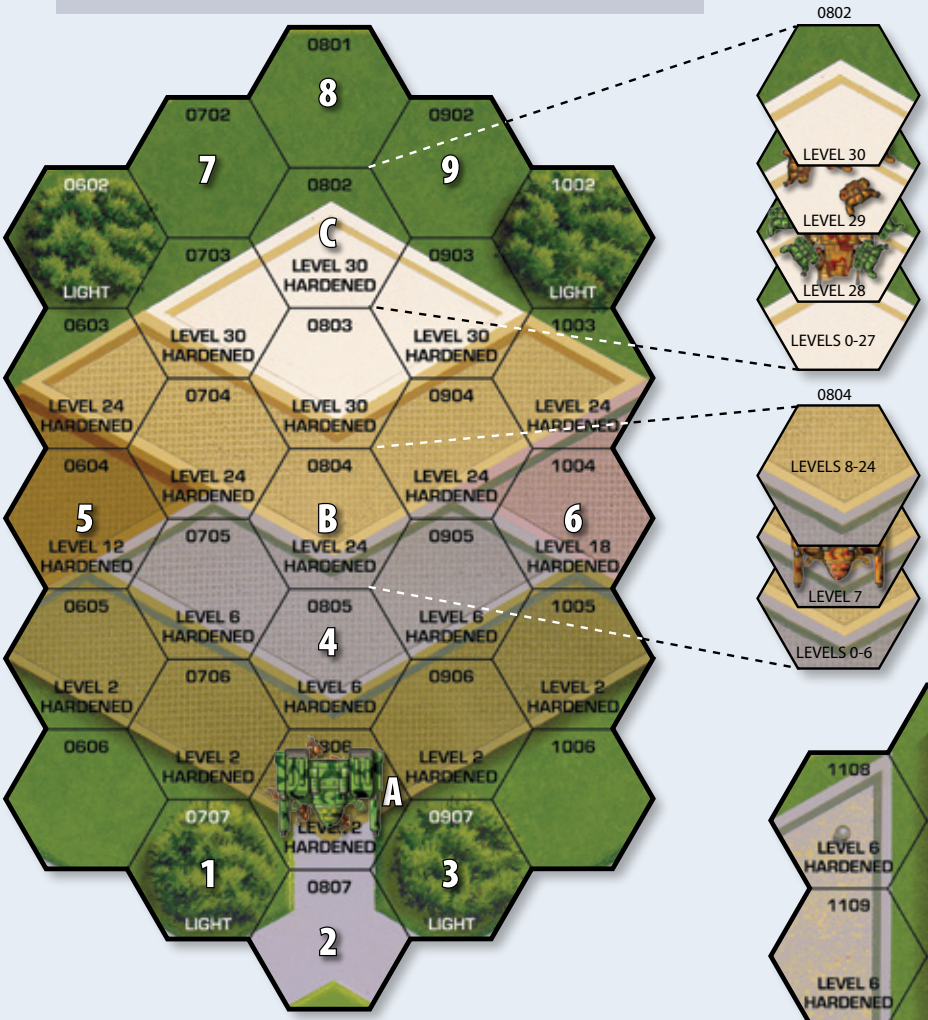
Exiting Building Hexes

In addition to the rules in *Moving Through Buildings* (p. 167) for entering a building hex, when a unit exits a building into a non-building hex, the following rule applies.

Unless a unit is using Jumping or VTOL MP, it cannot enter a new hex with a level more than one level higher or lower than the unit's current level (more than two for BattleMechs). If using VTOL or Jumping MP, the restrictions on level changes for those movement types apply (see pp. 54 and 53, respectively).

In the Exiting Buildings Diagram 1 below, the controlling player has several units on the City (Skyscraper) map that he wishes to move off of their buildings (the buildings are close to collapsing).

• EXITING BUILDINGS DIAGRAM 1 •



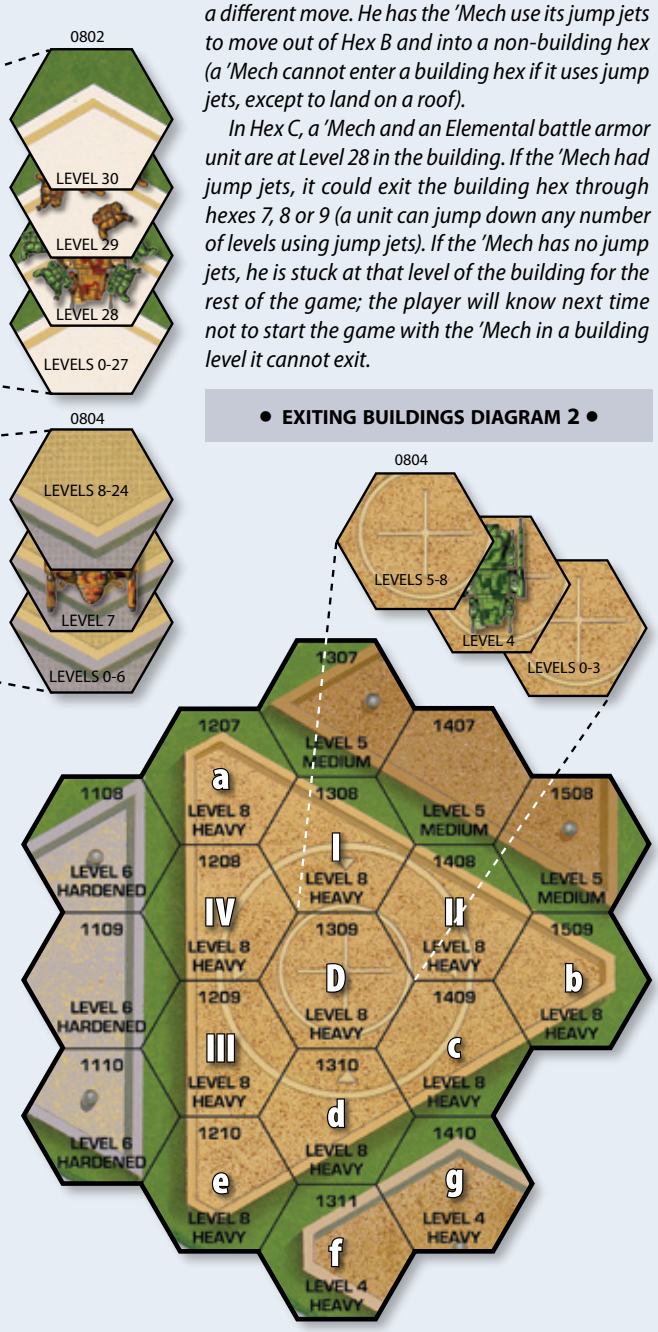
A 'Mech and a rifle (ballistic) foot platoon are on the roof in Hex A (Level 2). The controlling player wishes to move his 'Mech off of the building as quickly as possible. Hexes 1, 2 and 3 all have levels within the two-level limit on level changes for 'Mechs, and so the 'Mech can enter any of them provided it has sufficient MP available. If it had jump jets, the 'Mech could simply jump to its target hex, as none of the hexes into which it might move contain buildings (a 'Mech cannot enter a building hex using jump jets, except to land on a roof).

Unfortunately for the infantry platoon, infantry can only change one level per hex. In addition, this infantry unit cannot use the Minimum Movement rule, because such a move is prohibited per the Movement Cost Table (again, it cannot change more than one level per hex). The controlling player has no choice but spend the infantry unit's 1 MP to move to Level 1 in the building during this Ground Movement Phase. He would then move the unit to Level 0 in a subsequent turn, and finally exit the building during the Ground Movement Phase of the turn after that.

A 'Mech in Hex B is at Level 7, and so its controlling player can make two moves. The 'Mech can use ground movement to enter Hex 4; because the 'Mech is moving onto the roof, it can make the level change. From there, the 'Mech can enter hexes 5 or 6 at Level 6. Because no additional adjacent building roofs are within two levels of the 'Mech's current level, however, the controlling player chooses a different move. He has the 'Mech use its jump jets to move out of Hex B and into a non-building hex (a 'Mech cannot enter a building hex if it uses jump jets, except to land on a roof).

In Hex C, a 'Mech and an Elemental battle armor unit are at Level 28 in the building. If the 'Mech had jump jets, it could exit the building hex through hexes 7, 8 or 9 (a unit can jump down any number of levels using jump jets). If the 'Mech has no jump jets, he is stuck at that level of the building for the rest of the game; the player will know next time not to start the game with the 'Mech in a building level it cannot exit.

• EXITING BUILDINGS DIAGRAM 2 •



The battle armor, also using its jump jets, could exit Hex C through hexes 7, 8 or 9. As with the 'Mech, it can jump down any number of levels. However, unlike the 'Mech, if another building hex lies within range of its Jumping MP, the Elemental battle armor unit could enter that hex, using its Anti-'Mech Skill (see Moving Through Buildings, *p. 167).*

Also in Hex C, a Sylph battle armor unit is at Level 29. The unit has VTOL MP 5, so it cannot move to Level 0 in hexes 7, 8 or 9, but it can spend 1 MP to move into any of those hexes and then 4 more MP to descend to Level 25 (or continue at the same level for four more hexes, or any combination thereof). As with the Elemental battle armor, if an appropriate building hex is in range, the Sylph can enter that building.

In Exiting Buildings Diagram 2 on p. 170, a 'Mech in Hex D is at Level 4. Any new hex the 'Mech attempts to enter is a building hex, and so it cannot use jumping movement this turn. The controlling player can move the 'Mech to hexes a, b, c, d or e this turn, with the idea of jumping out of any of those hexes in the following turn's Ground Movement Phase. Depending on its facing, the 'Mech can also use ground movement to enter hexes f or g on the roof of either building hex; provided the 'Mech has sufficient MP available, the player can make such a move in this turn. If the 'Mech moved to hexes I, II, III or IV, it could not use Jumping MP to exit any of those hexes, as it would immediately enter another building hex below roof level.

The 'Mechs in hexes A, B and C, if they move using any of the options listed above, do not enter a building hex at below the level of the roof and so do not need to make any Piloting Skill Rolls to avoid damage and do not damage the building. Any move the 'Mech in hex D makes will automatically damage the building hex the unit enters and force the 'Mech to make an immediate Piloting Skill Roll to avoid damage.

COMBAT EFFECTS

Combat in and around buildings may damage the buildings and the units inside. Players may attack units inside buildings, or the buildings themselves.

ATTACKING BUILDINGS

Units firing directly at a building hex add a –4 to-hit modifier for firing at an immobile target. Weapon attacks targeted at a building hex from adjacent hexes always hit (use the full Damage Value for Cluster Weapons; i.e. Cluster Weapons do not use the Cluster Hits Table when determining damage against an adjacent building hex), as do all physical attacks (though players must still roll for weapon effects such as jamming if firing an Ultra autocannon at double the standard rate, and so on).

When a building hex suffers damage, subtract the damage points from the building hex's current CF and write the resulting number in pencil on the back of the counter or on a piece of scratch paper (with the hex number, to keep track of which building hexes have been damaged). When the cumulative damage equals or exceeds the building hex's CF, flip the counter over to the rubble side, or generate a rubble counter for use with buildings pre-printed on mapsheets. The building hex stays rubble for the rest of the game. If it is part of a multi-hex building, this may or may not result in the rest of the building hexes collapsing (see *Collapse*, p. 176).

ATTACKING UNITS INSIDE BUILDINGS

Players may make attacks against units inside a building hex. Any attacker must have a valid LOS to the building hex, as well as the level within the building hex occupied by the target unit. Like woods, building hexes block line of sight, but the building hex a unit occupies is not considered when determining LOS. A unit firing at non-infantry units inside a building hex does not modify the to-hit number to represent this situation, but the building provides some protection against damage to the non-infantry units.

Attacks against infantry in a building hex use different rules; see *Infantry Inside Buildings*, page 172.

From each attack that hits a unit inside the building, the hex absorbs an amount of damage equal to its CF at the beginning of the current phase, divided by 10 (round up). For this purpose, treat as a separate attack each individual Damage Value grouping for which the attacker would make a hit location roll, including all cluster weapons (LRMs, individual LB-X autocannon flechettes from Cluster Ammo and so on) as well as individual conventional infantry Damage Value groupings. The building hex absorbs the same amount of damage from each attack. Resolve the damage (reducing the CF) only after all weapons fire is complete.

All missed shots aimed at a target inside a building hex do not damage the building hex; in addition, when a cluster weapon successfully strikes a target inside a building hex (unless the attacker is adjacent, in which case all missed shots automatically strike the building hex), any damage that does not strike the target as indicated by a roll on the Cluster Hits Table also does not damage the building hex.

Partial Cover ('Mechs Only): A standing 'Mech occupying a Level 1 building or a building hex one level below the roof receives partial cover (see p. 102), even if its attacker is at a higher level. If the hit location roll indicates a leg, the attack strikes the building instead, damaging it as normal.

Physical Attacks: Physical attacks cannot be made against targets in a building hex by units outside the hex, unless the attacker is located in the same multi-hex building and is adjacent to the target, on the same level of the building hex (see *Combat Within Buildings*, p. 175). Charges are the one exception (see *Charge Attacks*, p. 148).

Several opponents make successful attacks against a Hunchback *inside a medium building hex, hitting it with an AC/10, a small laser, a large laser and nine missiles from an LRM-15. The building hex has a current CF of 38. Each attack's damage is reduced by 4 (38 ÷10 = 3.8, rounded up to 4). The AC/10 inflicts 6 points of damage on the* Hunchback. *The small laser inflicts no damage, while the large laser inflicts 4 damage points. The LRM damage is divided into a 5-point grouping and a 4-point grouping. One point of the 5-point grouping reaches the* Hunchback, *while the 4-point grouping is entirely absorbed by the building (the six missiles from the LRM-15 that did not strike the target do not damage the building hex). The* Hunchback *takes a total of 11 points of damage, while the building hex's CF is reduced from 38 to 19 (38 – 4 – 3 – 4 – 4 – 4 = 19).*

INFANTRY DAMAGE IN BUILDINGS TABLE

Building Type	Damage to Infantry is:
Light	75 percent of damage to building
Medium	50 percent of damage to building
Heavy	25 percent of damage to building
Hardened	None

Infantry Inside Buildings

Because infantry are comparatively small and are trained to use even the least bit of concealing terrain to their advantage, units outside a building hex cannot fire directly at infantry units inside a building. They must fire at the building hex instead. As with other units, the attacker must have a valid line of sight to the building hex, as well as the level within the building occupied by the target infantry unit. Damage applied to the building hex from an attacker that did not have LOS to the level occupied by the infantry has no effect on the infantry unit and only damages the hex's CF.

Damage done to a building hex that affects the infantry units inside the building hex, does so according to the Infantry Damage in Buildings Table (round .5 fractions up). Players should use this table only when damage is intentionally inflicted on the building hex from a weapon or physical attack, or from a 'Mech or vehicle entering a building hex (whether intentionally or due to a skid), corresponding to the level the infantry occupies. For damage to battle armor infantry inside a building hex, divide the damage into 5-point groupings and roll 1D6 for each grouping to determine hit location (see *Attacks Against Battle Armor*, p. 219).

If more than one infantry unit is affected by such damage, the damage is applied equally to all affected infantry units.

If an attacker is inside a building hex and in the same hex as an infantry unit, the attacker may make a weapon attack against the infantry, may fire at the building or may make a direct physical attack against the infantry unit (see *Combat Within Buildings*, p. 175).

Burst-Fire Weapons: Burst-fire weapons apply their standard damage value against building hexes, not their damage vs. conventional infantry (see *Attacks Against Conventional Infantry*, p. 215).

A controlling player wishes his 'Mech to attack a conventional infantry unit hiding in a medium building hex, so the 'Mech must strike the building rather than the infantry. However, the 'Mech still only inflicts damage as per the Non-Infantry Weapon Damage against Infantry Table (see p. 216). The 'Mech fires a large pulse laser (Pulse Weapon) and an Autocannon 20 (Direct-Fire Ballistic Weapon).

From the large pulse laser 10 points of damage is applied to the CF of the building hex, while 50 percent of the damage, Damage Value 5, is passed on to the infantry unit. The player than compares the Damage Value 5 to the Non-Infantry Weapon Damage Against Infantry Table, and notes that 3 troopers are eliminated.

From the AC/20 20 points of damage is applied to the CF of the building hex, while once again 50 percent of that damage, Damage Value 10, is passed on to the infantry unit. After consulting the table once again, he determines that the remaining damage eliminates a single trooper.

Clan Wolf Elementals finish securing a building.

AREA EFFECT WEAPONS

Area-effect (AE) weapon types (as defined under *Weapons and Equipment*, p. 113) affect building hexes in a unique fashion. Because such weapons are designed to blanket an entire hex, effectively creating a "sphere of damage," AE weapons do not simply damage the target hex or hexes, but also damage the building (and any units inside it) at levels above and below the level where the weapon struck.

Making the Attack

AE weapons can be targeted at a specific level of a building hex, as well as at the hex. However, LOS must exist between the attacker and the target level. This means an attacker may not be able to target the hex itself (Level 0) due to blocking terrain, but it may have LOS to higher levels of the building in that hex and so can make a valid attack against them.

AE weapons that use a scatter diagram on a failed to-hit roll must also determine what level of a building hex is struck (if the final hex where the AE weapon hits is a building hex). Once the target hex has been determined, the player first divides the margin of failure (MoF) for the to-hit roll by 2 (rounding up). This number represents the difference in levels between the original level targeted and the actual level struck. Finally, the player randomly rolls 1D6. On a result of 1 to 3, the difference in levels is down; on a result of 4 to 6, the difference in levels is up.

In the target hex, the target level for AE weapon damage can never go below Level 0 (unless a basement already exists in that hex; see *Basements*, p. 179), or above the building hex's highest level. If the difference in levels would make the target level higher than the roof, the damage is applied to the roof of the building.

If elevated terrain (for example, a hill) or a building is in the hex adjacent to the target hex along the LOS between the attacker and the target building hex, the AE weapon may strike the adjacent hex instead. Once the players have determined the difference between the target level and the actual level struck, compare that to the level of the building in the adjacent hex. If the level in the adjacent hex is greater than the targeted level in the target hex, the attack strikes the adjacent hex instead. Regardless of the height of the building in the adjacent hex, the damage is always applied to the roof in that hex.

Resolving Damage

When an AE weapon strikes a building hex, use the following rules to resolve damage. In all cases, building hexes do not absorb any damage until after it is applied to units occupying a building hex. Players should apply the full damage value for an AE weapon to all affected units.

It is important to note that while the assignment of damage is tracked per level within a building hex to determine what units (if any) are damaged and how much damage is applied over all to a building, the total CF of a building hex is tracked per hex, not per level.

If an AE weapon damages a single hex:

- In the target hex and at the target level, standard AE weapon damage is applied to all units per the rules for the AE weapon in use.
- Damage is also applied one level above and one level below the target level in the same building hex; the weapon's standard damage is divided by 2 (rounded up) and applied to all units in those two additional levels (use the Special Hit Location Table when determining damage location for 'Mechs in the levels above and below the target level).
- Damage to the building hex's CF is two times the standard damage value for the target level, and equal to the standard damage value for the levels above and below the target level (if any).

If an AE weapon damages a target hex and the six adjacent hexes:

- In the target hex and the six adjacent hexes (at the target level in all seven hexes), standard AE weapon damage is applied to all units per the rules for the AE weapon in use.
- In the target hex, damage is also applied to two levels above and two levels below the target level. For the first levels above and below the target level, standard damage is applied. For the second levels above and below the target level, the weapon's standard damage is divided by 2 (rounded up). In both cases, damage is applied to all units in those levels (use the Special 'Mech Hit Location Table when determining damage location for 'Mechs in the levels above and below the target level).
- In the adjacent six hexes to the target hex, damage is also applied one level above and one level below the target level; the weapon's standard damage is divided by 2 (rounded up) and applied to all units in those two additional levels (use the Special Hit Location Table when determining damage location for 'Mechs in the levels above and below the target level).
- Damage to the building hexes' CF is three times the standard damage value for the target hex and level, two times the standard damage value for the six adjacent hexes as well as the levels above and below the target hex level, and the standard damage value for the levels above and below the six adjacent hexes as well as the second levels above and below the target hex level.

In the AE Weapons Diagram on page 174, on the City (Downtown) map, Player 2 has parked an entire Star of Golem battle armor in buildings and is causing havoc for Player 1's ground units: two battle armor units at Level 2 in Hex A, a battle armor at Level 0 in Hex A, one in Hex B at Level 3 and the final unit at Level 0 in Building Hex C. A single Sylph battle armor unit has also just left Hex A at Level 2 and is now in Hex D at Level 2.

Player 1 might use some of his ground units to snipe at the enemy battle armor—specifically, his Tempest *and a rifle (energy) mechanized platoon in Hex G—or he could attempt to destroy the building hexes in which the Golem battle armor are taking cover. However, he has to deal with the opponent's other ground units in the open. Also, destroying multiple building hexes takes significant amounts of time and energy. Player 2 would likely move the Golem battle armor from building hex to building hex, forcing Player 1 to spend more time and dividing his firepower: a sure recipe for losing the battle. Instead, Player 1 decides to bring in area effect weapons.*

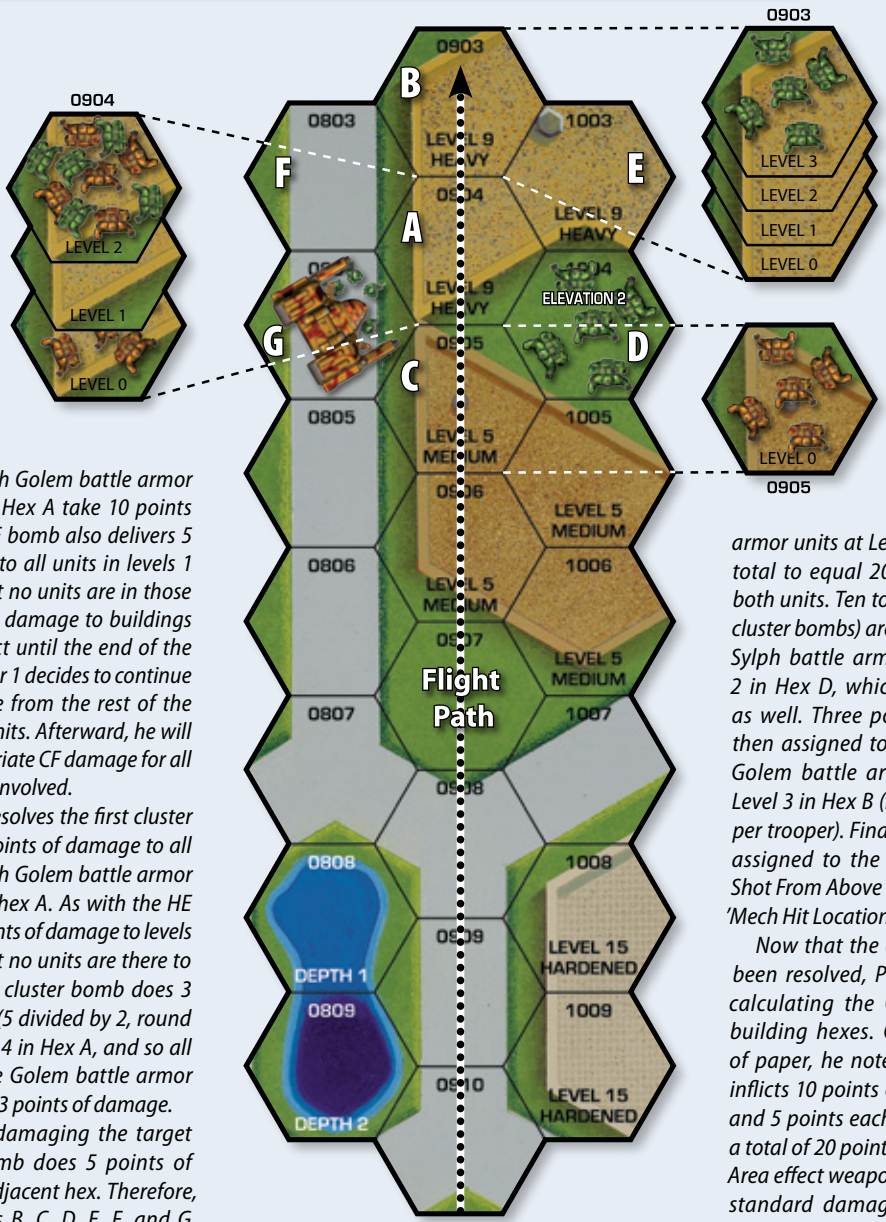
At the end of the Aerospace Movement Phase on a low-altitude map, Player 1's Shiva *aerospace fighter (Gunnery 4) is in the atmospheric hex corresponding to the City (Downtown) ground mapsheet. He designates an attack path over the map that includes the building hexes in question (see* Air-To-Ground Attacks, *p. 242); if the player was using the* Aerospace Units on Ground Mapsheets *rules, see p. 91, the attack path would have to correspond to the actual flight path across the map.*

During the Weapon Attack Phase, Player 1 announces that the Shiva *will dive-bomb Hex A. While Hex C along the flight path has a Level of 5, the* Shiva *is higher than the intervening terrain and so Player 1 can designate any level of Hex A as the target. He cannot, however, designate any level except Level 9 (the roof) of Hex B, as Hex A and B along the* Shiva's *line of sight are in the same multi-hex building. In the end, Player 1 announces the* Shiva *will drop one HE (high explosive) and two cluster bombs, targeted at Level 2 in Hex A.*

The modified to-hit target number for the dive-bombing attack is 6 (4 Gunnery + 2 for the dive-bombing modifier). Roll once for each bomb used in the attack. If the rolls are successful, that bomb hits the target building hex at the level designated.

The order of bomb damage resolution has no effect, and so Player 1 simply starts with the first HE bomb. It inflicts 10 points of damage against all units in the target hex and levels. In the case of battle armor, area effect weapons inflict all their damage against each trooper in a unit, and so all

Galedon Regulars Reivers *finish a straffing attack run in a city.*



• AE WEAPONS DIAGRAM •

ten troopers in both Golem battle armor units at Level 2 in Hex A take 10 points of damage. The HE bomb also delivers 5 points of damage to all units in levels 1 and 3 of Hex A, but no units are in those locations. Weapon damage to buildings does not take effect until the end of the phase, and so Player 1 decides to continue allocating damage from the rest of the bombs to enemy units. Afterward, he will sum up the appropriate CF damage for all the building hexes involved.

Next, Player 1 resolves the first cluster bomb. It deals 5 points of damage to all ten troopers in both Golem battle armor units at Level 2 in hex A. As with the HE bomb, it does 5 points of damage to levels 1 and 3 as well, but no units are there to take damage. The cluster bomb does 3 points of damage (5 divided by 2, round up) to levels 0 and 4 in Hex A, and so all the troopers in the Golem battle armor unit at Level 0 take 3 points of damage.

In addition to damaging the target hex, a cluster bomb does 5 points of damage in each adjacent hex. Therefore, any units in hexes B, C, D, E, F, and G at Level/Elevation 2 take 5 points of damage. The only unit in those hexes is the Sylph battle armor, at Elevation 2 in Hex D. Each of the five troopers in that battle armor unit takes 5 damage points.

Finally, because this area effect weapon exploded above Level 0, it inflicts 3 additional points of damage (5 divided by 2, rounded up) to each level above and below the adjacent six hexes (twelve total levels/elevations). First, all five troopers in the Golem battle armor unit in Hex B, Level 3, take 3 points of damage. The Golem battle armor unit at Level 0 in Hex C is out of the blast radius and so does not take damage. The rifle (energy) mechanized platoon at Level 0 in Hex G likewise takes no damage. Because 'Mechs rise two levels above the underlying terrain, however, the upper half of the Tempest *is at Level 1 and so takes 3 points of damage (assigned using the Shot From Above column of the Special 'Mech Hit Location Table).*

The second cluster bomb is resolved in the same manner. This final bomb does enough damage to the Golem battle armor units at Level 2 in Hex A for the total to equal 20 points, eliminating both units. Ten total points (from both cluster bombs) are then assigned to the Sylph battle armor unit at Elevation 2 in Hex D, which destroys that unit as well. Three points of damage are then assigned to each trooper in the Golem battle armor unit located at Level 3 in Hex B (for a total of 6 points per trooper). Finally, 3 more points are assigned to the Tempest (using the Shot From Above column of the Special 'Mech Hit Location Table).

Now that the damage to units has been resolved, Player 1 moves on to calculating the CF of the damaged building hexes. On a separate piece of paper, he notes that the HE bomb inflicts 10 points of damage at Level 2 and 5 points each at levels 1 and 3 for a total of 20 points of damage to Hex A. Area effect weapons inflict double their standard damage against buildings, and so the HE bomb inflicts 40 points of damage against Hex A.

Next, Player 1 notes that the first cluster bomb deals the following damage: three times standard damage at Level 2 (5 x 3 = 15), two times standard damage at levels 1 and 3 (5 + 5 = 10 x 2 = 20), and finally standard damage at Levels 0 and 4 (5 + 5 = 10). That damage adds up to 45, bringing the running total to 85 points of damage. The cluster bomb also deals two times standard damage to each adjacent building hex at Level 2 (5 x 2 = 10 per hex), and standard damage at levels 1 and 3 (5 + 5 = 10 per hex). This means that hexes C, B and E each take 20 points of damage. Player 1 repeats this process for the second cluster bomb, which gives a running total of 130 damage points to Hex A and 40 points each to building hexes C, B and E.

At the end of the Weapon Attack Phase, hexes A and C will collapse, causing Player 2 to resolve the damage of a building falling onto his Golem battle armor units at Level 0 in those hexes. Because hexes A and C do not amount to more than half

of either building's hexes, their collapse does not affect the rest of the hexes for both buildings.

While Player 1's Tempest took friendly fire (6 points of damage), he eliminated three enemy battle armor units and damaged three more (either directly with the area effect weapons or through the collapse of building hexes), while eliminating two building hexes as hiding spots and severely damaging the other nearby building hexes, making them easier to knock down should Player 2 attempt to move units into them again.

Of course, if the Shiva *had missed, the bombs would have scattered and could very well have ended up striking Player 1's own units…but such are the choices in battle. This time, at least, the plan worked as intended.*

SPECIAL 'MECH HIT LOCATION TABLE

Shot from Above	
Die Roll (1D6)	**Hit Location (Four legged)****
1	Left Arm (Left Front Leg)
2	Front/Rear Left Torso*
3	Front/Rear Center Torso*
4	Front/Rear Right Torso*
5	Right Arm (Right Front Leg)
6	Head

Shot from Below	
Die Roll (1D6)	**Hit Location (Four legged)****
1	Left Leg (Left Front Leg)
2	Left Leg (Left Rear Leg)
3	Front/Rear Left Torso*
4	Front/Rear Right Torso*
5	Right Leg (Right Rear Leg)
6	Right Leg (Right Front Leg)

*The attack hits the front if from the front or the side. It hits the rear if from the rear.

**Location in parenthesis are for a four-legged 'Mech.

INFANTRY DAMAGE FROM ATTACKS INSIDE BUILDINGS TABLE

Building Type	Damage to Infantry is:
Light	100% (building absorbs 0%)
Medium	100% (building absorbs 0%)
Heavy	75% (building absorbs 25%)
Hardened	50% (building absorbs 50%)

COMBAT WITHIN BUILDINGS

Units fighting in the same building (including units occupying different hexes in a multi-hex building) must do so according to the following special rules. Units on a building's roof use the rules given above under *Attacking Units Inside Buildings*.

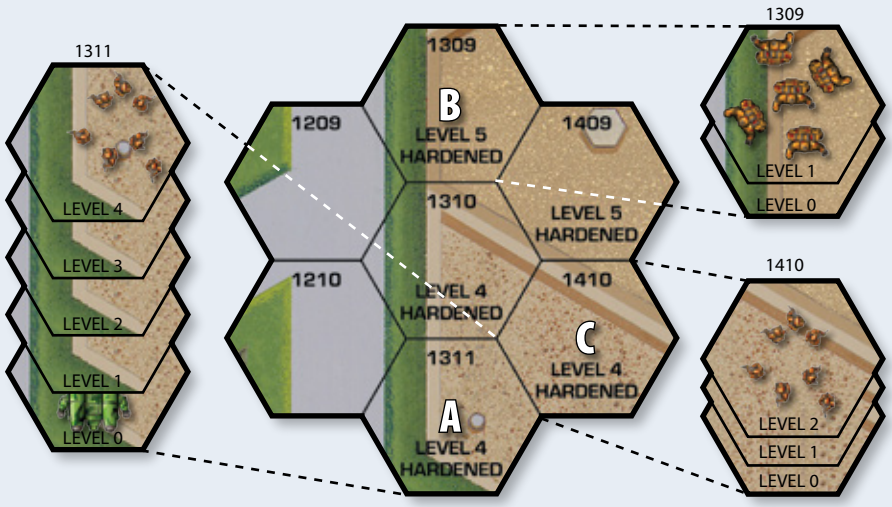
Unlike standard combat, units in the same building hex (and even at the same level in the same hex) can attack one another, treating the target as if it was in the forward arc. If the attacking unit is in the same building hex and on the same level as the target, use the normal weapon and physical attack rules, but do not modify the to-hit number for the terrain.

When units on different levels inside a building hex—or in different hexes (and/or levels) of a multi-hex building—fire at each other, use the standard to-hit procedures, with the following modifications:

- Each building hex and level acts like light woods for purposes of the to-hit modifier: a unit inside a target building hex being fired upon by another unit inside the same building receives +1 to-hit modifier, and line of sight is blocked if more than two building hexes and/or levels intervene between the attacker and target hex.
- Do not add a level to a 'Mech's height when it is inside a building hex for line of sight purposes.
- If a shot from a different level than the level a 'Mech occupies hits that 'Mech, roll 1D6 and consult the appropriate section of the Special 'Mech Hit Location Table. If the 'Mech is prone, use the Front/Rear column of the standard 'Mech Hit Location Table (see p. 119).
- If a shot from a different level hits a vehicle, consult that vehicle's Hit Location Table. The shot (meaning every individual weapon attack, including damage-point groupings) hits a randomly determined side of the vehicle. If a shot from the same level hits a vehicle, the vehicle's facing in relation to the shot determines which column to use on the vehicle's Hit Location Table.
- Some attack damage against infantry units may be assigned to the building hex the infantry unit occupies, depending on the building type (see Infantry Damage From Attacks Inside Buildings Table, at left).

Burst-Fire Weapons and Conventional Infantry: When burst-fire weapons are used against conventional infantry in a building hex, assign damage per the Burst-Fire Weapon Damage Vs. Conventional Infantry Table (p. 217), but reduce the damage by half (round as normal). Damage assigned to the building is per the weapon's non-burst-fire damage; see *Attacks Against Conventional Infantry*, page 215.

AS7-D Atlas, *Third Crucis Lancers (House Davion)*



• BUILDING COMBAT DIAGRAM •

In the Building Combat Diagram above, Player 1 has a Siren 2 ProtoMech (Gunnery 4) that runs to enter Building Hex A at Level 0. Player 2 has three infantry units: a rifle (energy) jump platoon that did not move this turn at Level 4 (the roof) in Hex A, a Kobold (TAG) battle armor unit that jumped 3 hexes to Level 1 of Hex B, and an LRM jump platoon (Gunnery 5) that moved from Level 3 to Level 2 in Hex C.

During the Weapon Attack Phase, Player 1 determines which infantry unit the Siren 2 will attack. He sees that 3 building hex levels are between the Siren 2 (Level 0, Hex A) and the rifle (energy) jump platoon (Level 4, Hex A). Three or more hexes and/or levels of intervening building between attacker and target means line of sight is not valid, and so Player 1 cannot attack the rifle jump platoon.

The modified to-hit target number for the Kobold is 13 (4 Gunnery, + 2 because the Siren ran, + 2 for medium range using the Siren's machine guns, + 2 for the target movement modifier, +3 for the building hex between the Siren and the target, the building hex the target occupies and the difference in levels). Player 1 cannot make this attack, either.

The modified to-hit target number for the LRM jump platoon is 8 (4 Gunnery, + 2 because the Siren ran, + 2 for the building hex the target occupies and the difference in levels), making that unit the only one suitable for attack. However, even if the attack strikes the infantry unit, the Siren's machine guns will only do their standard 2 points of damage to the platoon rather than the brutal 2D6 points of damage each, if the LRM jump platoon was not in a building hex. In addition, the 2 points will be reduced to 1 point because the infantry unit occupies a hardened building hex; a quick check of the Infantry Damage From Attacks Inside Buildings Table shows that the building absorbs 50 percent of any damage dealt to an infantry unit.

COLLAPSE

A building hex will collapse if it takes total damage equal to or greater than its CF, or if the combined tonnage of units occupying any one level of a building hex above the ground floor exceeds the current CF of that building hex; regardless of whether a building has a basement or not, this never includes Level 0 of a building hex (see *Basements*, p. 179). (This tonnage rule applies to infantry; use the Tons of Cargo Space Occupied column on the Generic Conventional Infantry or Battle Armor Organization/ Weight Tables for this calculation.)

Because CF is tracked per hex of a multi-hex building, the collapse of one hex will not affect any other hex in that building, unless it brings the total of collapsed hexes to more than half, in which case the entire building collapses.

When a building hex (or a multi-hex building) collapses because its maximum weight limit has been exceeded, or because of damage from unit movement, it falls immediately. If it collapses due to damage from attacks, the collapse occurs at the end of the attack phase in which the damage was inflicted.

When a building hex collapses, any unit in it takes damage. The base damage is equal to the hex's CF at the start of the phase divided by 10. If there are building levels above the unit, add to this the base damage multiplied by the number of building levels above that unit. Round the final result up. Units on the top level or roof apply no multiplier (i.e. the roof does not count as a level above for this purpose).

Players divide this damage into 5-point groupings, with any remaining points assigned to a final grouping. Each grouping is then assigned to a different hit location. For 'Mechs on the roof of a building hex, use the Front column of the 'Mech Hit Location Table; for 'Mechs inside a building hex, use the Front column of the 'Mech Punch Hit Location Table; for ProtoMechs, use the Special ProtoMech Hit Location Table; for vehicles, use the Front column of the Ground Vehicle Hit Location Table; for conventional infantry, apply the damage as though it were an attack from another infantry unit (see *Attacks Against Conventional Infantry*, p. 215).

Basements and Collapse: When a building hex collapses, the resulting rubble fills any basement the building might have had. A building with a basement becomes a rubble hex equal to the level of the terrain underneath the building, not a sublevel rubble hex. If the collapse occurs as a unit moves into the building hex at Level 0 for the first time in the scenario, the controlling player need not make a basement roll (see *Basements*, p. 179). A unit in a basement when the building above it collapses is destroyed.

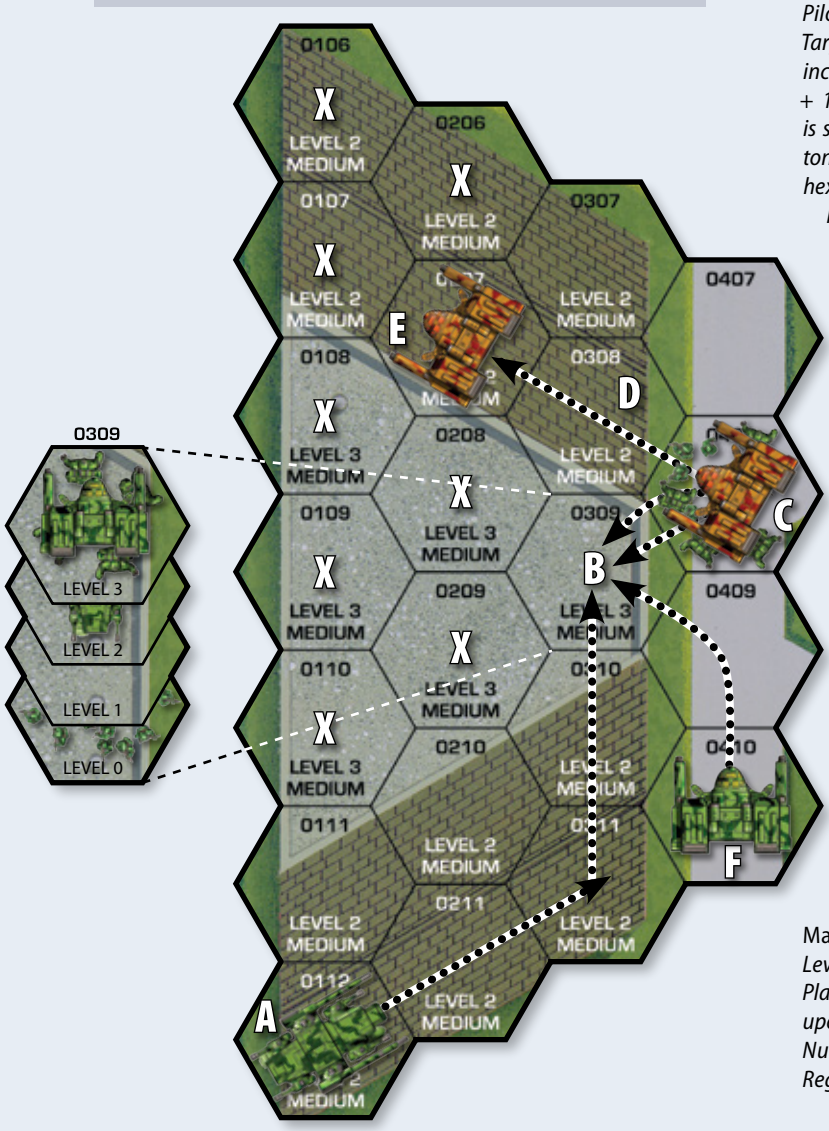
Extra Damage to Infantry: Conventional infantry suffers three times the normal damage caused by a collapsing building hex. Battle armor and mechanized infantry suffer twice the normal damage.

Falling: Any units occupying a building level higher than 0 (including the roof) suffer standard falling damage (see *Unit Displacement*, p. 151) in addition to the damage caused by the collapse.

Damage and Displacement

Damage from moving into a hex is applied first, if the unit fails its Piloting Skill Roll for entering a hex. All damage from the collapsing building hex or hexes is resolved next for all units involved, followed by falling damage (if any; see *Falling Damage to a 'Mech*, p. 68) and then unit displacement (accidental falls from above, domino effect and so on; see *Unit Displacement*, p. 151). When determining unit displacement, the units located in the lowest levels are dealt with first, then units in higher levels. If multiple units occupy a level, randomly determine which unit's fall and displacement is resolved first.

• BUILDING COLLAPSE DIAGRAM •



If enough units are occupying different levels of a multi-level building hex when it collapses, and those units survive the collapse, some units may be displaced multiple times. If a unit cannot be displaced (for example, all the adjacent hexes are prohibited terrain), the unit is destroyed.

In the Building Collapse Diagram at left, on the City (Residential) map, Player 1 wants the following to happen by the end of the same Ground Movement Phase: a Locust *to walk from Hex A to Level 2 of a building in Hex B, two infantry units to move to Hex B, and a* Spider *to jump to Hex B. (Because a 'Mech cannot enter a building hex using Jumping MP, the* Spider *must land on the roof, and so it will end up at Level 3). Player 1 lost the initiative, and so Player 2 plans to move his* Marauder *last, walking from Hex C through Hex D to Level 0 of Hex E.*

The building itself has taken significant damage. Each hex with an X represents a collapsed building hex that is now rubble, while hexes D and E each only have 8 CF remaining. Hex B has taken 1 point of damage, leaving it with a CF of 39.

As the Locust *enters Hex B, Player 1 must make a Piloting Skill Roll to avoid damage against a modified Target Number of 7: 5 (Piloting Skill) + 1 (four hexes moved, including the building hex the unit is attempting to enter) + 1 (Medium Building). Regardless of whether the roll is successful, Hex B takes 2 points of damage (20 for the tonnage of the* Locust *divided by 10), leaving the building hex with a current CF of 37.*

Following the Locust*'s move, Player 1 moves a rifle (ballistic) foot platoon from Hex C to Hex B using Ground MP, ending up at Level 0 inside the building. Because it is the first unit to enter this building hex at Level 0 in the scenario, Player 1 must immediately roll 2D6 for a basement. He gets a 9, indicating a small basement. Next, Player 1 moves the other infantry unit, a standard Inner Sphere battle armor unit. It jumps to the roof of Hex B.*

After the infantry units move, the Spider *jumps to the roof of the building in hex B. An infantry unit can occupy the same hex as a 'Mech, so this does not violate the stacking limit. No Piloting Skill Roll is required to enter the hex, nor is the hex damaged.*

The combined weight of the Locust *(20 tons),* Spider *(30 tons), battle armor (5 tons) and rifle platoon (3 tons) is 58 tons, more than the building's current CF of 37. (The infantry unit on Level 0 does not add its weight whether there is a basement or not.) However, because all these units are located on three different levels in the hex, their combined weight does not collapse the hex. (The combined weight of the* Spider *and the battle armor—the only two units on the same level—is 35 tons, 2 less than the current CF.)*

Player 2 can now make his planned move. His Marauder *first walks from Hex C to Hex D, ending up at Level 0 inside the building in Hex D. As with the* Locust*, Player 2 must make a Piloting Skill Roll to avoid damage upon entering the building hex, against a modified Target Number of 6: 5 (Piloting Skill) + 1 (medium building). Regardless of the roll's success or failure, the building hex*

takes 8 points of damage (75 for the tonnage of the Marauder divided by 10 = 7.5, rounding up to 8).

Hex D has a current CF of 8, and so it collapses. Before any other action is taken in the game, that collapse must be resolved. Because the building collapses as the Marauder is entering the hex, no roll is needed to determine if the building hex has a basement. The collapse of Hex D does not exceed more than half the total hexes of the multi-hex building. The entire building spans eighteen hexes, of which Hex D is the ninth to collapse; the rest of the building hexes remain unaffected.

Player 2 applies damage from the collapse after any damage received from entering the hex, if the Marauder failed its Piloting Skill Roll. At the beginning of the Ground Movement Phase, Hex D's CF was 8; divided by 10, this gives a base damage of 0.8. The building had two levels above the Marauder, and so the 'Mech takes 3 points of damage (base damage 0.8 x 3 = 2.4 (rounded up to 3). Player 2 assigns the 3 damage points using the Front/Back column of the 'Mech Punch Hit Location Table.

Having applied all appropriate damage, Player 2 can continue the Marauder's movement into Hex E. As before, he must make a Piloting Skill Roll to avoid damage upon entering this building hex, against a modified Target Number of 6. If the roll fails, damage is taken immediately. Regardless of success or failure, Hex E takes 8 points of damage (75 for the tonnage of the Marauder divided by 10 = 7.5, rounding up to 8). Like Hex D, Hex E has a current CF of 8, and so the Marauder's entrance collapses it. The collapse occurs as the Marauder entered the hex, meaning no basement roll is required.

The collapse of hex E means that ten of the building's eighteen hexes have collapsed. Ten is more than half, and so the rest of the building hexes automatically collapse as well. These events must be resolved before the players take any other action in the game.

First, the players apply damage inflicted by the collapsing building. In the case of the Marauder, at the beginning of the Ground Movement Phase, Hex E had a CF of 8. Divided by 10, this gives a base damage of 0.8. The building had two levels above the Marauder, and so the 'Mech takes 3 points of damage (base damage 0.8 x 3 = 2.4, rounded up to 3). Player 2 assigns the damage using the Front/Back column of the 'Mech Punch Hit Location Table.

Player 1's units, all in Hex B, fare somewhat worse. At the beginning of the Ground Movement Phase, Hex B had a CF of 39; divided by 10, this gives a base damage of 3.9. Luckily, the Spider is on the roof, meaning that no building levels are above it. It therefore takes 4 points of damage (3.9 rounded up), assigned against the Front/Back column of the 'Mech Hit Location Table. The battle armor is likewise on the roof, but battle armor takes double damage from buildings: in this case, a 5-point and a 3-point hit. The Locust is at Level 2 in Hex B. With only 1 level above the 'Mech, it also takes 4 points of damage, applied against the Front/Back column of the Punch Hit Location Table.

The unluckiest unit is the rifle platoon on Level 0. It has three building levels above it, and as a conventional infantry unit, it takes three times standard damage from a building collapse. The platoon takes 47 points of damage: base damage of 3.9, plus (3.9 x 3) 11.7 for the levels above the unit, then x 3 for being infantry (46.8, rounded up). The unit only has 28 troopers, and so is destroyed.

Next, the players resolve falling damage. The Locust falls two levels and so takes 6 points of damage: 20 tons divided by 10, multiplied by the number of levels fallen +1 (2 levels +1 = 3). Player 1 rolls on the Facing After a Fall Table (see p. 68) and gets a 1 (same direction, front). He assigns damage to the front of the Locust in one 5-point grouping and one 1-point grouping, using the Front/Back column of the 'Mech Hit Location Table. The Locust ends its fall prone at Level 0 in Hex B (now a rubble hex).

The battle armor unit and the Spider occupy the same level, and so Player 1 chooses which unit's damage to resolve first. He decides on the battle armor. Battle armor troopers take 1 point of damage per trooper for every two levels (or fractions thereof) they fall. A three-level fall inflicts 2 points of damage to each trooper.

Player 1 next resolves the Spider's fall. The Spider was at Level 3, more than two levels higher than the Level 0 hex it's falling into. Also, the hex contains another non-infantry unit, and so Player 1 must use the Accidental Falls From Above rule. The battle armor unit in the hex cannot be hit by an accidental fall, and so Player 1 need only determine if the Spider strikes the Locust. The modified Target Number is 6 (7 for the base to-hit number +1 for the target movement modifier, – 2 (target is prone and adjacent)).

If the roll result equals or exceeds 6, the Spider strikes the Locust and inflicts 9 points of damage (the weight of the falling

RFL-8D Rifleman, *Twenty-sixth Lyran Guard (House Steiner)*

'Mech divided by 10 x 3 for levels fallen) on the Locust*'s rear, using the Front/Back column of the 'Mech Hit Location Table. Player 1 then randomly determines an adjacent hex into which the* Locust *is displaced. If the result is less than 6, the* Spider *does not strike the* Locust*, but instead is displaced into a randomly determined hex adjacent to Hex B. (If a building were still standing in that hex, the* Spider *would take additional damage, but since every adjacent building hex is rubble, the 'Mech is off the hook.)*

Regardless of whether or not the Spider *struck the* Locust*, the* Spider *takes the same 12 points of falling damage: 30 tons (weight of the* Spider*) divided by 10, multiplied by the number of levels fallen, +1 (3 levels +1 = 4). Player 1 assigns the damage to the back of the* Spider *(per the standard rules for damage resolution after an accidental fall from above, see p. 152) in two 5-point groupings and one 2-point grouping, using the Front/Back column of the 'Mech Hit Location Table. The* Spider *ends the fall prone at Level 0 with a new facing. Its exact hex placement depends on whether the* Spider *struck the* Locust *or not.*

If the Locust *were struck and randomly displaced into a hex that contained another unit—or if the* Spider *missed and were randomly displaced into such a hex—and if the entrance of either unit into that hex would violate the stacking limit, a domino effect would occur, requiring immediate resolution.*

Had the Spider *instead been any 'Mech heavier than 30 tons, Hex B would have collapsed when the* Spider *made its jump, as the combined weight of the heavier 'Mech and the Inner Sphere battle armor would be greater than the building's current CF after the damage inflicted by the* Locust*. In this scenario, when the* Marauder *moved into Hex D, that hex's collapse would have demolished the rest of the hexes in the multi-hex building before the* Marauder *could continue its movement into Hex E, meaning that the* Marauder *would have moved into a rubble hex.*

Basements

Most building hexes have basements, which can work to a unit's advantage or disadvantage. For example, a heavy 'Mech might enter a light building hex and unexpectedly crash through the floor, suffering damage. On the other hand, a 'Mech might use a basement hex for partial cover.

Frequently, a building's description in the scenario being played will state whether or not it has a basement. Under other circumstances, players can determine if a building has a basement—and the effect of a unit falling into it—by rolling 2D6 and consulting the Basements Table below whenever a unit enters a building hex at Level 0 for the first time in a scenario. Only one basement roll is made for each building hex per scenario.

A unit automatically falls through the floor into a basement if the combined tonnage of all units located on Level 0 is greater than the building hex's CF at the start of the current Ground Movement Phase. This rule also applies to infantry; use the Tons of Cargo Space Occupied column on the Generic Conventional Infantry or Battle Armor Organization/Weight tables for this calculation. A collapsed basement creates a sublevel below the ground floor of the building hex, with a depth equal to the number of basement levels (1 or 2). A collapsed basement will not automatically collapse the building hex but the building hex will take damage equal to the tonnage of the falling units divided by 10 (round fractions up) double the damage for a two-level basement—for infantry use the Tons of Cargo Space Occupied column on the Generic Conventional Infantry or Battle Armor Organization/Weight tables for this calculation.

ProtoMechs, Vehicles and Infantry: ProtoMechs, vehicles and infantry take normal falling damage (see *Falling*, p. 68) when they fall into a basement; their facing remains as it was before they fell. To determine damage locations for ProtoMechs and vehicles, use the Special ProtoMech Hits Table (see p. 185) or the Ground Combat Vehicle Hit Location Table (p. 193), respectively. Vehicles that moved forward into the basement use the Front column, while vehicles that backed into the basement use the Rear column.

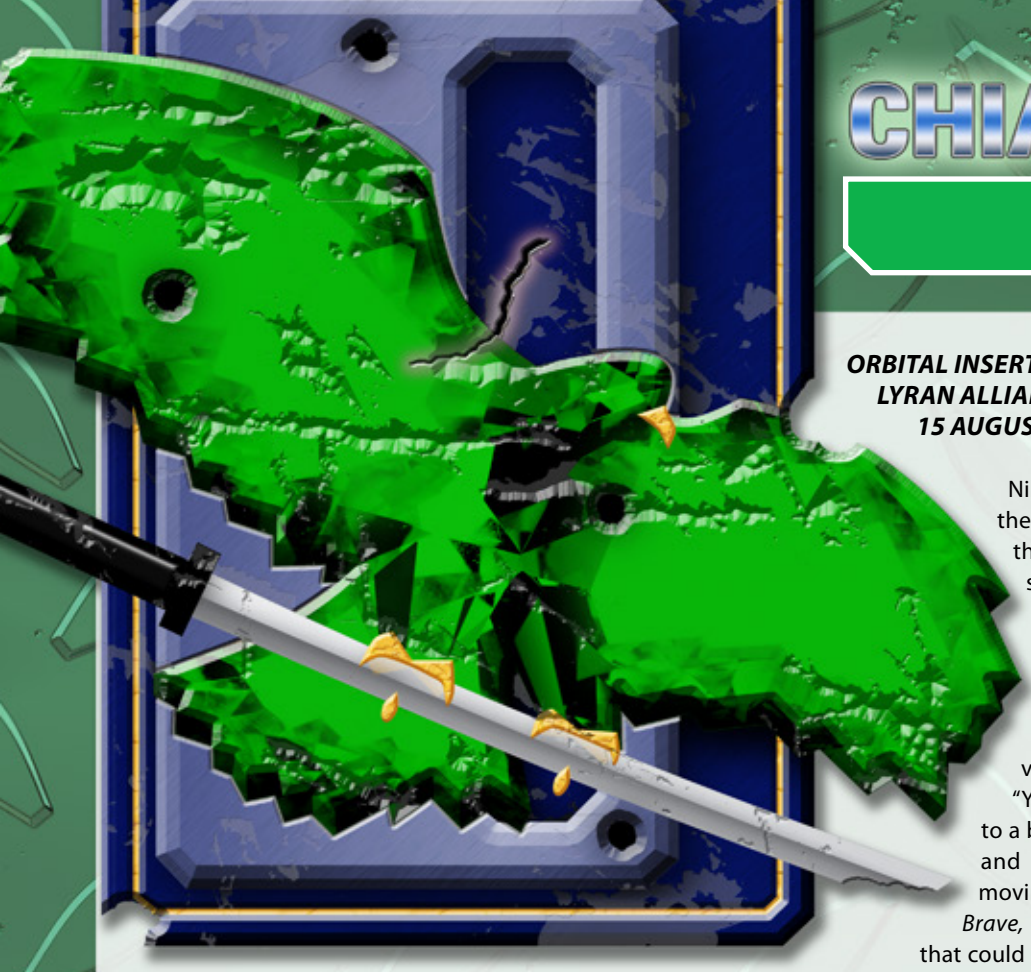
Trapped Vehicles: Any vehicle that falls into a double basement is trapped there for the rest of the game, unless an adjacent hex is also a building hex and becomes a single basement through a roll on the Basements Table at some point in the scenario (before or after the vehicle falls into the double basement).

See the Basements Table for additional effects.

BASEMENTS TABLE

Die Roll (2D6)	Effect
2	Double basement. The unit falls 2 levels.
3-4	Basement. The unit falls 1 level.
5-8	No basement.
9	Small basement. Infantry may move into the basement as though it were a new level of the building (Sublevel 1); ProtoMechs cannot enter this level. No effect on 'Mechs or vehicles.
10-11	Basement. The unit falls 1 level.
12	Double basement. The unit falls 2 levels.

Gorgon *ProtoMech, Tau Provisional Galaxy (Clan Blood Spirit)*



CHIAROSCURO

Randall N. Bills

JADE FALCON CLAN HALL, SUDETEN
JADE FALCON OCCUPATION ZONE
30 OCTOBER 3063

"Report." Khan Marthe Pryde's voice rang through the large Clan Hall.

Scientist Joach's hands twitched as he smoothed his immaculate white smock. He bowed to those gathered in the multi-tiered chamber, acknowledging the conclave of Bloodnamed warriors of the Jade Falcon Clan Council on Sudeten. "Scientist-General Renata bids me report that the Olivetti Weapons factory is fully upgraded and on-line," he said. He suppressed a shiver at the momentary quiver in his voice. *They are warriors, but I am a scientist. I serve the Clan, just as they do.* "The first run of *Spirit* BattleMechs is undergoing field-testing to assure quality control."

"Excellent. The time comes soon when the Falcon will spread its wings to blood a new flock of warriors." Khan Pryde turned away to discuss something with saKhan Clees.

Though he knew his Khan considered his report delivered, Joach nervously cleared his throat.

Marthe looked back, cool eyes biting.

Despite misgivings about some of the decisions made in designing the new ProtoMech (who was *he* to question), he finished his report. "The *Erinyes* will also be ready for combat by the end of the year."

He repressed a desire to raise his arms at the rustling that swept the room; an impression of a flock of raptors taking wing in angry surprise and zeroing in on the disturbance: Joach.

Khan Pryde's gaze turned colder. "Then we shall see if the new trinket is worth Falcon effort, or if Clan Blood Spirit and those who follow their lead are as deluded as ever."

Joach bowed and backed out of the room.

ORBITAL INSERTION , MELISSIA
LYRAN ALLIANCE
15 AUGUST 3064

Nikol ignored the heavy vibrations of re-entry as the *Broadsword*-class DropShip plowed through the thick atmosphere of Melissia, and finished suiting up in the cramped corner of the cargo bay. The one-piece suit flowed like liquid metal (instantly warm to the touch), the Clan copper composite mesh woven with biosynthetic fiber ribbings into a second skin.

"Five minutes to combat drop," an electronic voice echoed.

"You mean *second* combat drop," Nikol snapped to a bay that contained only strapped-down cargo and a labor casteman in a loader exoskeleton moving an ammo crate. *During combat operations? Brave, or stupid?* She shook her head at questions that could easily apply to her, stomped the two paces to the leg of her ProtoMech and scrambled up the lean-to ladder. Nikol couldn't believe that Star Colonel Uvin Buhallin had actually ordered two Clusters of Elementals, along with her Point of ProtoMechs, to cram into every available space in order to fool the Lyrans into thinking only a Star of 'Mechs were about to combat-drop onto their fortified base.

Yet what flared white-hot next to such a pale annoyance was that her Clan appeared at every step to throw up a roadblock to defeat her and her protokin. Whether Khan Pryde knew of Buhallin's order or not didn't matter. *They drop the Elementals and then move to a second pass to drop us? The fighting will be over before we even arrive. It will be too late! Stravag!*

At least I managed to keep my Roc, instead of being assigned our newest over-sized Erinyes battle armor.

The vibrations through the deck plating changed in cadence and worked up through the ladder, tickling skin as the seconds ticked down. With little choice, Nikol set aside her annoyance. Anticipation spiked as she slid into the ProtoMech's chest cavity, kicking away the ladder, pulled down the skein of wires connecting the neurohelmet and positioned it properly on her scalp. She quickly stripped the padding from a row of small monitors to her right as she ran a final course diagnostic. Then she activated the remote control they'd rigged for the makeshift gantry that held her *Roc*'s chest plate. The machine trembled and finally heaved toward her. Replacing the heavy padding over the monitors, she folded into a fetal-like position in the padded cavity as the chest plate banged into place. Locking mechanisms clanged, while ear drums popped with equalizing pressure. As the ProtoMech gained life, dozens of overlapping plates of the enclosure expertly adjusted to her size and weight until she eventually floated as though in the synthetic amniotic fluid of a Trueborn gestation chamber.

Power surged to the neurohelmet, which synched with the enhanced imaging circuitry along her shaved scalp. The first waves of pleasure swept through and warmth blossomed in the pit of her stomach. Three prongs snapped down from the back edge of the neurohelmet, just piercing neck skin, completing the circuit between the neurohelmet, her suit and the enhanced imaging circuitry that ran the length of her exposed skin. The pleasure surge broke in a torrent…

…and the world ballooned and expanded. Dull existence fell away, as though she stepped out of her body, beyond a transparent pane into another reality. She enlarged and expanded until she stood a giant. Meters taller. Stronger. Solid, metal legs and arms now her own; she knew her expression never changed, but the true inner ferocity of her warrior's visage was now etched in steely glowing eyes and a sharp, hooked alloy beak: she perceived her new metallic corporeal existence sheathing her consciousness as she never could her frail flesh.

Her blood flowed like magma, hot and demanding, her need for more and more a hot knife twisting her gut. She swam in raging ecstasy, her awareness expanded exponentially with wracking pleasure/pain. As ever, the ecstasy moved in crescendo as Nikol sensed another veil of existence behind her. And another beyond that. And another. Levels of perfect integration and interface. Levels of ecstasy and agony. Of understanding and perceptions. Mirrors within mirrors within mirrors; planes of knowledge and existence marching off in an endless corridor, beckoning.

In a small corner of her mind, Nikol recalled the pain she would experience upon interface termination until she could inject the drugs to keep her sanity in the dull existence outside of her ProtoMech…knew at this moment it mattered not at all.

The surging ecstasy finally gained equilibrium and her senses focused down to a razor wire: her body stood rock solid, ready to rend armor, to tear enemies—to become the ultimate warrior.

Her mind willed her ProtoMech into motion. It instantly responded, a hungry predator stalking toward a swift decapitation that would sunder the Lyran defender's head from its body and cede the Falcons the world of Melissia.

It is not *too late. MechWarriors believe they are the ultimate warriors in their twelve-meter tall giants. Yet they know nothing. They scorn our half-sized 'Mechs, but they have no understanding of what we bring to the strength of Falcon's talons and beak. They bring death. But I am* become *death.*

A God of War.

SCIENTIST CASTE TESTING STATION, LAST CHANCE
JADE FALCON OCCUPATION ZONE
15 MAY 3065

Though she knew the building scrubbed the air of any particulates from the Torrence Iron Mines located a half-hundred kilometers away, her nose twitched as her brain told Nikol she could still smell it. The dust coated the exterior of the scientific outpost, turning to clumpy, blackened streaks in the near-constant rains of spring that reminded her of the congealed blood slicking the burned remains of her protokin's *Erinyes*. She distantly noted her dirty fingertips rasping a nervous rat-a-tap-tap on the worn vinyl of her chair's arm rest, but couldn't bring herself to chastisement as her mind grasped at straws.

I am a warrior. Death shadows my footsteps, a constant companion. I must accept. But her words were as hollow now as when first spoken more than a half year ago.

Nikol started slightly as a scientist casteman entered the room. His light hair and immaculate white coat caused her to squint, forced her further back into the chair; the creak of rusty bolts and too-stressed, old metal legs an audible personification of her wounded state.

Moving to the other side of the table, he sat down, smile reaching eyes and lips with equal ease. "Hello, Nikol."

She stared sullenly behind the caged bars of her body and mind's desperate *need* and her soul's desire to forget.

"My name is Joach."

She tried to still her nervous tics, but gave up after several tense seconds. At least she had managed to keep her lips sealed; small victories were important.

"How are you?"

How do I look, surat.

"Can I get you anything?"

You know what I need.

"A drink, perhaps?" He raised his hand as though to signal an unseen camera.

She tried to marshal the piercing eyes of a warrior to put him in his place and found only hollowness. The ache intensified.

"How long have you been here?"

The affront of this man to question a warrior, someone above his station, un-stopped her tongue before she could resist. "You would know better than I, *surat*."

"Ah, so you can still talk," he rejoined, eyes searching her face. "I was beginning to think you might have fallen too far into an episode."

A sneer bared teeth and cracked too-dry lips; the pinpricks of pain and the teasing of copper to tongue brought some renewal. She leaned forward, with intensity. "Call it what it is, *surat*. Withdrawal. I need integration."

He reached into his pocket and pulled something out, placed it on the table. The room seemed to unfocus as a halo of light engulfed the self-applicable syringe-ampoule, focusing her attention like the razor-wire of integration. The clear liquid seemed to shine, scintillating as the few precious drops rocked gently back and forth with residual motion. She bared teeth until her lips felt like they might peel from her face. Then she glanced back at Joach. "I said integration. I will no longer accept your synthetic substitute."

"But the ProtoMech program has been canceled by official decree," he said, shrugging, voice coated in sympathy. "Our Khan has spoken. The performance of the ProtoMechs on Melissia was…less than adequate in our Khan's eyes. She—"

Rage blossomed past despondency and all her unspoken justifications of her own Clan cutting her off at the knees. She slashed the air with a hand. "You have told me that. Told me so many times…I do not care any more! Have all remaining pilots been consigned to this death as well?!" She lurched forward, slamming her fist into the desk. The ampoule skittered and danced, a siren to her body shrieking its need. "Have we Falcons become Spheroids to waste such resources? If so, then I shall welcome death, glad I'll not see the fall of my Clan! Will not see what you have done to Kerensky's dream." The shout still echoing, she collapsed back into her chair, all energy draining from her body, uncaring of her lazy use of a contraction as the last of her will seemingly flowed away into nothingness.

Joach did not move during the entire episode. Respect, sympathy and revulsion warred, creating his own turmoil. *How could our Clan do this? How can a warrior be reduced to such a shadow?* He just managed to avoid thinking about the most important question of all.

He slowly reached forward to stop the still-spinning ampoule, then pocketed the drug. His revulsion crested at the relief that peeked through her angry mien. Marveled at how so short a time could pass and yet perceptions could alter so unequivocally. *Warriors are not infallible.* Joach's own anger flared. *You speak of loss? I have been consigned to this hell-hole of a world at the edge of the Periphery because of my advocacy of the program. My advocacy of you! Have I not lost as well?*

She closed her eyes, her pain etching her skin muscle-deep. "All I want is…to be a warrior. To serve my Clan."

As her anger drained away, his flowed with it and sympathy returned. We *have done this to you.* He took a breath. The stench of her unwashed body and defeat-filled sweat almost curled his nose. *I follow orders now. Orders of a man I never thought to see again, but orders nonetheless.* He barely kept a cynical chuckle trapped behind tight lips. *Orders a bone that I might find a path to serve again. A bone I throw to you, warrior.*

"There is another way," he finally responded. He watched warring emotions cross her face and sympathy flowed to empathy. *I am sorry.*

"Tell me."

WATCH COMMAND CENTER, SUDETEN
JADE FALCON OCCUPATION ZONE
21 JANUARY 3066

"Why do we allow this? And why do you keep the *stravag* lighting so low?" Khan Marthe Pryde asked.

Loremaster Kael Pershaw's deep voice seemed to come from every direction in the darkened office. "I find warriors can accept my orders more readily when they cannot see that I am more machine than man…or see my age."

Marthe slashed the air. "I care not for such useless vanities. I know your value."

"Of course, my Khan. Mere habits."

"You did not answer the question."

"Of course, my Khan. We allow it, because if we do not…well, better to know what part of the garden houses the snake, than not to know where the snake is."

She shook her head, hating such philosophical talk. "But we should simply destroy the snake. After the scientists' machinations surrounding the Pryde Bloodname…" She snapped her jaw shut, all too aware of what Kael would say, yet unable to say it herself.

"Yet we cannot survive without them. And despite their…airs…of late, they have been a vast asset to the Clan over the centuries. We are where we are in no small part thanks to their contributions, *quiaff*?

"*Aff*," she ground out. "Yet I still should have killed him when I replaced him with Renata. What is he up to? Is he pulling Renata's strings?"

"I do not know. But we will continue to reap the rewards of a relatively unfettered scientist caste, while waiting for the ex-Scientist-General, and those that still follow his lead, to wrap the noose around their throats. *Quiaff?*"

She ground her teeth harder, but knew there could be only one response. Kael had painted all too stark a picture of the possible internal rebellion that a harsh crackdown might precipitate, now that her lower castes had drunk the base freedoms offered by Spheroid societies. *An event that might even force us down the path*

of the Ghost Bears and their vile integration with the Inner Sphere. If she must accept an affront to her honor to safeguard her Clan and the Founder's vision…so be it.

"*Aff*."

SCIENTIST CASTE TESTING STATION, LAST CHANCE
JADE FALCON OCCUPATION ZONE
1 SEPTEMBER 3066

The upgraded *Centaur* shot forward with the aid of the new myomer booster, fluid grace and precision a BattleMech could never hope to match, slicing through the other training *Erinyes* with exquisite beauty.

"Nikol seems to have adapted well to the newest interfaces, *quiaff*?" Joach said while monitoring the steady stream of data flowing across his computer terminal.

"Nikol?" Etienne Balzac responded, straightening from his own hunch over a monitor, rubbing a sore back. His ancient features matched his infamous reputation. Despite their close work over the last year and more, Joach's resolve to question the ex-Scientist-General concerning Nikol and their work here died against the emptiness of Etienne's black-eyed stare.

Why are we doing this? What are we doing? Why do we try to create a superior ProtoMech and pilot if the Jade Falcon program has been eliminated? The questions hammered relentlessly against his inability to confront Etienne. He cleared his throat. "The subject."

Etienne nodded. "*Aff*, the subject is adapting *very* well."

Silence descended except for the tapping of keys as two additional scientists in the control room continued diligent work. Joach grew increasingly uncomfortable as Etienne continued to stare at him. Warmth flushed his cheeks as a smile played at the corners of the older man's lips. "You have a question?"

Joach started, surprised. In all the time they'd worked together, the man never asked him that. "A question?"

"*Aff*. You have a question."

Joach licked his lips as he glanced away. *Can I ask?* He saw the ProtoMech, and for a moment the haunted look of a tortured warrior overlaid everything before him. He took a deep breath and spoke. "Why are we doing this? The program has been canceled. Why do we continue to increase ProtoMech capabilities and to adapt the pilots even more to their integration?" *Why do we torment Nikol?* The final question hovered, unasked. Joach knew it would cross the line, despite Etienne's apparent good mood.

The other man's half-smile stayed in place as he smoothed wrinkled hands across his bald pate. "Joach, I continue to work because my work is needed."

"But the Scientist-General has agreed with the Khan," Joach responded. "They failed during the Falcon Incursion into House Steiner. And failure is discarded."

"Of course it is."

"What?" A feeling in the depths percolated. A feeling he'd had for years, but could never articulate. Could never *allow* articulation.

"Of course I knew the program would be canceled."

"You could not have expected it?!"

"Of course I did."

"But…" Words failed.

The other man stood silent for a moment, then chuckled. "We Falcons are ever traditionalists, Joach. Ever warriors adherent to the Founder's strictest precepts. It is our greatest strength…and our greatest weakness. And all too often we do not bend without breaking. That leads to animosity toward anything out of the norm."

"Such as ProtoMechs?"

"Precisely."

"But she has canceled the program."

"She has canceled the Jade Falcon ProtoMech program. We no longer have an officially sanctioned Falcon program for developing new ProtoMech designs, or for turning failed aerospace pilots into ProtoMech warriors."

He paused. Joach struggled against a rising answer he did not wish to face and found another answer. "And by canceling official Falcon sanction, any such testing run on ProtoMechs falls one hundred percent within the authority of the scientist caste, *quiaff*?"

"*Aff*. Like any of half a hundred experimental programs we have in development, we need not report any part of it to Khan Pryde or the Clan Council."

"Yet I still do not understand. Why do we keep experimenting? And how could you know she would cancel the program?" The sinking feeling in the pit of his stomach opened like the fabric of reality torn asunder during a hyperspace jump. He knew…had known for years and refused to believe, until now. The horrid reality burned, and yet what sliced through it all like a hot energy beam was the crystal-clear knowledge that even the monstrousness of the act would not drive him away. Would not drive him from this bone that might eventually pull him out of this hell-hole. He'd sold his soul and everything with it to Etienne Balzac and his endless machinations. *I am sorry, Nikol….*

"Because I made sure of it."

Etienne enjoyed the stunned flush that swept Joach's features. The game of cat and mouse was almost more enjoyable at times than scientific research. It was art. The way he used and placed emphasis in his actions to highlight only what he wanted them to see. Making an object appear important to him, to hide the truth; a flat object made round. Chiaroscuro.

You think I will hang myself, Kael, but I know you watch. And I hide my actions in plain sight, right underneath your mechanically deformed nose.

Joach stammered. "You manipulated the Khan into canceling the ProtoMech program."

Though it came from the younger man as an accusation, the words flowed past Etienne without a ripple. "Of course."

"And Renata Salk?"

"An innocuous bureaucrat." He waved his hand. "If the Khan wishes the Scientist-General not to be manipulated by outside forces, she should not fill such a vital role with a sycophant."

Joach opened his mouth. Nothing came out for long seconds as the full impact of Etienne's words settled in.

You must learn to ask your questions, Joach. Questions are what make us human.

"I fail to see…" Joach finally choked out.

"You will." Etienne crossed over to him, gripping his arm in an unusual display of physical contact. "When you piece the puzzle together, you will be ready. I am confident you will find it eventually."

Etienne turned aside, glancing at the monitors as the ProtoMech finished the course and raised its arms triumphantly. Looked at what his machinations had wrought and knew it as one more step along the path…and smiled.

During the Falcon Incursion into the Lyran Alliance, a Falcon Night Gyr *and two Points of ProtoMechs face off against a Sixth Donegal Guard* Atlas.

The expense of manufacturing BattleMechs—combined with the general disdain that the Clans hold for combat vehicles—led the hence destroyed Clan Smoke Jaguar to develop a completely new piece of technology: the lightweight, agile quasi-'Mechs called ProtoMechs. Piloted by aerospace phenotype warriors—who use the Clans' advanced enhanced-imaging technology to literally become one with their machines—ProtoMechs work in five-unit Points that allow them to bring their larger cousins down. The relatively cheap cost to produce them, along with their combined effectiveness against 'Mechs, has insured that at least some of the more resource-starved Clans will always find a home for this unique *BattleTech* unit.

Most of the rules for ProtoMechs appear in the Movement and Combat sections. This section offers additional rules for these units in game play. Though ProtoMechs share many characteristics with vehicles and infantry, they follow all the standard rules for 'Mechs, unless otherwise noted.

Deployment: ProtoMechs are always deployed in Points consisting of five units, though circumstances may leave a Point with less. Each record sheet provides space for five Protos, but each ProtoMech is represented as an individual unit on the playing area. The player may choose to make all members of a Point the same type of ProtoMech or different types, unless otherwise dictated by the set-up of the scenario being played.

PLAYING THE GAME

Each of the five ProtoMechs in a Point is an individual unit for weapon attacks and damage resolution. However, the entire Point moves when the player declares his ProtoMechs' movement, and the Point's fire declaration counts as if for a single unit. The player resolves all attacks for a Point before moving on to another unit.

MOVEMENT

During the Movement Phase, when a controlling player chooses to move a ProtoMech Point, he must move all ProtoMechs in that Point before going on to the next unit. However, each ProtoMech is still moved separately, without regard for how the other ProtoMechs in the Point move. If damage reduces the number of ProtoMechs in a Point, the controlling player moves the remaining ProtoMechs in that Point; multiple ProtoMech Points that each have less than five ProtoMechs due to damage do not combine for movement purposes.

Skidding: ProtoMechs cannot skid, regardless of what movement they use or the terrain they traverse.

COMBAT

ProtoMechs make attacks and are targeted by attacks in the same way as 'Mechs, with the following exceptions.

Weapon Attacks

All standard rules for 'Mech weapon attacks apply to ProtoMechs, except that ProtoMechs may not fire arm-mounted weapons in the same turn that the main gun is fired.

Firing Arcs

ProtoMechs use the same firing arcs as 'Mechs (see *Firing Arcs*, p. 104).

Hit Location

Players determine hit location against a ProtoMech by rolling on the ProtoMech Hit Location Table. This table appears on the ProtoMech record sheet and is duplicated on page 185. Hits

PROTOMECH HIT LOCATION TABLE

2D6 Result	Hit Location
2	Main Gun
3	* Near Miss
4	Right Arm
5	Legs
6	Torso
7	Torso
8	Torso
9	Legs
10	Left Arm
11	* Near Miss
12	Head

*A result of 3 or 11 inflicts no damage on the target. In the case of a kick attack from a 'Mech, a Near Miss on the ProtoMech Hit Location Table does not force the attacking 'Mech to make a Piloting Skill Roll.

against ProtoMechs are not affected by attack direction, and ProtoMechs have no rear armor locations. Both legs are considered a single hit location, as is the torso.

Near-Misses: ProtoMechs make difficult targets because of their small size and extreme agility. They are constantly in motion, and their limbs are especially narrow and difficult to hit. As a result, an attack (or part of an attack, in the case of missiles and similar weapons) that would have hit a 'Mech might miss a ProtoMech. As shown on the ProtoMech Hit Location Table, a hit location roll result of 3 or 11 is considered a near-miss. This damage has no effect on the ProtoMech, even though the to-hit roll result indicated a hit.

SPECIAL PROTOMECH HIT LOCATION TABLE

2D6 Result	Hit Location
2	Main Gun
3	Legs
4	Legs
5	Right Arm
6	Torso
7	Torso
8	Torso
9	Left Arm
10	Legs
11	Legs
12	Head

Fully embracing ProtoMechs, Clan Blood Spirit's Iota Galaxy fields a Point of Centaurs along side a Shamash and Crimson Langur.

Special Circumstances: Regardless of their small size and agility, ProtoMechs cannot avoid certain types of damage using the *Near-Miss* rule. Players should consult the Special ProtoMech Hit Location Table below when determining damage under the following circumstances: area-effect weapons, building collapse, crashing aerospace units, falling and collisions with skidding and sideslipping units. See also *Weapons and Equipment*, p. 113; *Collapse*, p. 176; *Crashes*, p. 81; *Unit Displacement*, p. 151; *Skidding*, p. 62; and Sideslipping, p. 67.

Targeting Computers: ProtoMechs are so small that targeting computers cannot be used to make attacks against specific hit locations. The standard –1 to-hit modifier for a targeting computer still applies.

DAMAGE

As with attacks against ´Mechs, damage first destroys the armor in the location hit (white circles), and then inflicts internal structure damage (shaded circles) in the same location. Damage transfers normally when a location is destroyed; damage from all locations transfers to the torso, including damage from the head.

Roll on the Determining Critical Hits Table (see p. 124) whenever the internal structure in a location is damaged. Each location has a number of critical hit boxes on the record sheet. Players mark these off from left to right as the ProtoMech takes critical hits. Each time an attack forces a player to cross off one or more critical hit boxes, the warrior takes a point of damage. When a location is destroyed, all of the location's critical hit boxes are automatically crossed off and all equipment in the location is destroyed. Critical hits do not transfer, and excess critical hits to a location have no further effect.

Effects for specific critical hits and location destruction appear below.

Arm Hits

For the first critical hit to an arm, add a +1 modifier to the to-hit number for attacks made with that arm, for the weapons mounted there and for the main gun. The second hit destroys the arm, along with its weapon (if any). After one arm has been destroyed, add a +2 modifier to attacks with the main gun.

After both arms have been destroyed, the main gun may not be fired.

Leg Hits

The first critical hit to the legs reduces the ProtoMech's Walking MP by 1 (which means the player must also recalculate Running MP). The second hit reduces the Walking MP by half, rounding up. The third hit blows the legs off and makes movement impossible. The ProtoMech cannot use Jumping MP, though it can still make a single-hexside facing change during each Movement Phase provided that it still has at least one arm. When doing so, it is considered to have used Running Movement. If the ProtoMech has lost both arms, it cannot make this move.

Legs Destroyed: After the legs are destroyed, the ProtoMech can no longer torso twist, but it can fire its weapons. A ProtoMech whose legs are destroyed is not considered prone.

Torso Hits

The first critical torso hit reduces Jumping MP by 1, and may also destroy a torso-mounted weapon. To determine if a torso critical hit destroys a weapon, roll 1D6. On a result of 1 or 2, Torso Weapon A (as shown in the Weapons Inventory) is destroyed. On a 3 or 4, Torso Weapon B is destroyed. A result of 5 or 6 has no additional effect. If the result indicates an empty or destroyed weapon slot, do not roll again.

The second critical hit reduces Jumping MP by half (round up), and may also destroy a torso-mounted weapon. Roll as described above. The third critical hit destroys the engine and the ProtoMech, killing the pilot.

Main Gun Hits

The main gun cannot suffer a critical hit, but is affected by critical hits to the arms. All effects from arm damage are cumulative when determining to-hit modifiers for firing the main gun. For example, if the right arm has been destroyed (+2) and the left arm has suffered one critical hit (+1), the total modifier for attacks with the main gun is +3.

Head Hits

The first critical head hit damages the sensors, adding a +1 to-hit modifier to all weapon and physical attacks. The second critical hit destroys the head, resulting in +2 to-hit modifier to all attacks. In addition, the ProtoMech may make no attacks against targets at long range for any of its weapons. For example, after a *Roc*'s head is destroyed, it can attack targets up to ten hexes away with its extended-range medium laser (at short and medium range for that weapon), but cannot attack units eleven to fifteen hexes away (at long range for that weapon).

Because the pilot is in the torso, a ProtoMech can survive head destruction.

In a final effort to prove (or disprove) the battle worthiness of ProtoMechs, Clan Jade Falcon fields them in a Trial of Possession against Clan Blood Spirit.

FRENZY

As noted in *Physical Attacks* (see p. 144), ProtoMechs cannot make such attacks. However, a ProtoMech can make a single "frenzy" attack that combines a punch, a kick and anything else the ProtoMech can muster. The net effect of this effort is a single attack with a Damage Value of 1 for ProtoMechs that weigh two to five tons, or 2 for ProtoMechs that weigh six to nine tons.

The base to-hit number for this attack is 4, with the standard modifiers for a kick. The attack can only be made against targets in the same hex as the ProtoMech. This attack never forces the target to make a Piloting Skill Roll, because the ProtoMech does not have Piloting Skill.

If the attack hits, consult the 'Mech Kick Location Table (see p. 147) for a target on the same level. If the target is a 'Mech one level lower than the ProtoMech, the attack uses the 'Mech Punch Location Table (see p. 145). When making this attack against vehicles, use the appropriate hit location table for the attack direction.

PHYSICAL ATTACKS

A ProtoMech can be the target of physical attacks as though it were a vehicle: a kick if on same level as attacker, a punch if one level higher than attacker, a club or a hatchet in either case. It cannot be charged, though it may be the target of a death-from-above attack. These attacks use the standard ProtoMech Hit Location Table to determine damage locations.

OTHER COMBAT EQUIPMENT

If ProtoMech's Technical Readout or record sheet game statistics indicate that it carries this equipment, it may significantly affect game play. Players should consult the unit's statistics, then familiarize themselves with the equipment rule below before play begins.

Advanced Weapons and Equipment: If a unit mounts any weapons and/or equipment not found below or on the appropriate Weapons and Equipment Tables (see p. 303), then the weapon/equipment in question is either advanced (not appropriate for standard tournament play) or is covered in *Tactical Operations,* or it only affects construction and so has no direct impact on *BattleTech* game play. Any such weapons and/or equipment that is not considered advanced are covered in *TechManual.*

PROTOMECH MYOMER BOOSTER

The system increases the Running MP of a given ProtoMech by double its standard Walking MP (i.e. a 6 Walking MP/9 Running MP ProtoMech with a ProtoMech Myomer Booster would have a 6 Walking MP/12 Running MP). A ProtoMech unit can choose to engage the booster as it declares what movement mode it will use. Upon doing so, it must roll 2D6 (this is a single roll made for any amount of MP used in excess of standard movement in a single turn). On a result of 2, the warrior immediately takes a single point of damage.

Masters of the ProtoMech, Clan Blood Spirit allows the battle to devolve into a brutal maelstrom of infighting, pushing the Falcons at every step.

Eisenjäger

Herbert A. Beas II

SEMIER DATA TRON
FACTORY RUINS
MAKO CITY OUTSKIRTS,
THARKAD
LYRAN ALLIANCE
13 JANUARY 3071

With thunderous, deliberate strides, the *Blue Flame* trampled the earth, pounding through meter-thick ice-encrusted snow only three shades lighter than the whitewash covering each of its four cloven feet. The footfalls shook the earth despite the snow's cushioning effect, sending icicles raining down from the blackened skeletons of nearby structures. Red-tinged cockpit glass lent the 45-ton quadruped an otherworldly look, like the eyes of a ghostly mechanical hellhound, searching the charred factory ruins for prey.

And all the while, its prey watched back.

Through the rangefinder on his targeting display, Sergeant Major Rolf Solomon watched the Blakist monster with a steady gaze. His breath, tinged with the stink of stale coffee, puffed frosty clouds in the cabin despite the woolen black scarf that covered most of his face. Even with the insulation built into the armored hide of his Manteuffel attack tank—so new Rolf could still smell the factory welds over his own stench—the effort to keep out the bite of another Tharkan winter was relentless. Hiding beneath two days' worth of drifting snow, with only a Magna 350 Extralight—set to low idle to avoid discovery—for heat…

Sometimes, playing dead came too close to the real thing.

The *Flame* slowed right in front of him, the armored beast suddenly hesitant about moving forward. Solomon frowned.

"They know we're here!" Though spoken barely louder than a whisper, and carried over a hundred meters to his headset earphones, the morose tone of the tinny voice made the veteran tank gunner cringe. Leutnant Kramer, stating the patently obvious as usual.

More than two years of occupation—two years spent hiding from the fanatics' fire, dodging BattleMech and fighter patrols, seeking shelter in burned-out cities, popping up only long enough to scavenge for food, parts, and maybe a little revenge along the way—had taught the survivors of the Blakist *Ragnarok* that the invaders had eyes everywhere.

Even when help came from outside, it had invariably failed. The Word was always one step ahead. All-knowing. All-powerful. They had kept an Archon imprisoned on his throne world, stymied every effort to reclaim the Alliance, crushed the Lyran spirit with victory after bloody victory.

Conventional wisdom now held that they could not be stopped.

And Kramer was entirely too full of conventional wisdom right now.

"*Halt die Klappe*, Leutnant," another voice hissed back, harsh and stern, yet echoing softly within the Manteuffel and Solomon's earpiece. Hauptmann Stella Heigl occupied the tank's command station directly behind him. Silent for hours, her sudden reaction to Kramer's defeatism startled Solomon, but he did not dare flinch from the targeting display. His reticule settled over the *Blue Flame*'s stubby snout.

They may know we're here, Solomon told himself, *but they don't know exactly where*.

"Jäger One," a new voice chimed in, barely above a mutter. This one came from Sergeant Isaka, whose older Pegasus hid beneath

a drift in the shadow of a ruined *Buccaneer* DropShip half a kilometer further east. "Forward shows a new contact inbound. Support-model *Legacy*, with black skull markings."

Solomon's eyes narrowed.

The Marauder of Mako Valley, at last…

"That's him," Heigl replied. "Everyone get ready."

Solomon sucked in a breath and nodded imperceptibly as his fingers tensed on the trigger and the engines thrummed to life behind him.

The *Legacy* appeared on Solomon's tactical display as a simple red dot on the far right edge of the board, while the *Blue Flame* stood due north, barely a finger's breadth away. Surrounding the *Flame* were six blue dots, the hidden members of half his company. Six armored hunters, hidden among the ruins, beneath snow and ice.

The *EISENJÄGER*—Iron Hunters.

Solomon grinned inwardly. Finally, Precentor Roman McKinnsey, the Marauder of Mako Valley, would be the Jäger's prey.

Suddenly, the *Blue Flame* shifted, kicking up snow as its body swung around. Its menacing glare turned straight toward the Manteuffel. Solomon released his breath with a hiss..

Come back to tour your latest atrocity, monster? He thought bitterly, remembering the hard-fought battle here that pitted a hodgepodge of corporate security, mercenary troops and a remnant of LAAF forces against a wall of Blakist shock troops. The Jägers missed the fight, but all of Tharkad heard of the outcome, saw the mangled ruins of the factory complex, the smoking remains of DropShip hulls and the twisted, blackened hulks of BattleMechs and hastily converted WorkMechs—the pitiful wreckage that remained after the Marauder of Mako Valley called in another orbital weapons strike from the captured WarShip above. Captives taken from the battle went to gods-only-knew-where, but Solomon remembered the Blakists' propaganda-vids showing lines of civvies and military prisoners being dragged from the rubble and escorted at gunpoint by 'Mechs and battle-suit squads after McKinnsey's forces mopped up the remaining defenders.

Another "glorious" victory for the Word of Blake. Solomon had to force his jaw to unclench.

Kramer's voice cursed on the tactical channel. With no further warning, the earth around the *Flame*'s hindquarters exploded amid the roaring blasts of autocannon fire. One burst caught the Blakist 'Mech square on its right rear flank, gouging away armor and clawing at the SRM housings that rode just above the hip. Shaken by the loss of more than a ton of armor, but far too stable and skilled to fall down, the ghostly hound twisted toward Kramer's Fortune wheeled assault tank—unseen from Solomon's vantage point—and unleashed a pair of angry sapphire laser bolts.

"*Scheiße!*" Heigl spat, her voice carrying over to the tactical channel as well. "Kramer, you *Arschloch*! ECM, now! *EISENJÄGER* open fire!"

With a savage growl, Solomon mashed down his triggers, unleashing a trio of ruby laser bolts that flashed a triangular chunk of armor away from the *Flame*'s broad left side even as the Manteuffel's turret-mounted rotary autocannon screamed to life. The fast-rotating barrels poured fire and tracers into the Blakist's armored hide even as missiles, lasers and autocannon fire converged on the same target from no less than four different directions. Explosions and fire scattered snow, ice and mangled metal in all directions while the armored hellhound writhed under the onslaught, its pristine white hide chewed to pieces in seconds.

Conventional wisdom held that the BattleMech was the king of the battlefield, but even the king had to bow beneath the combined might of enough tanks—especially with surprise on their side. An explosion erupted along the *Blue Flame*'s right side, possibly coming from the hole opened by Kramer's panicked weapons fire. With a blossom of golden flame and a blast that practically spun the machine around ninety degrees, the 'Mech's missile bins ruptured. Lacking the benefit of CASE, secondary explosions quickly tore the *Flame* open from end to end, until the machine's death throes ended in a blast powerful enough to produce a ring of scattering ice and steam. Two ruined hangars nearby collapsed as well.

On the tactical channel, Kramer was screaming incoherently and Heigl was barking orders, but Solomon barely registered any of it as the Manteuffel lurched forward. The vehicle's treads clawed their way free of its hiding place of snow and ice, throwing him hard against his gunnery chair. Lurching into the open, the tank tore past the corpses of secondary machine shops and the twisted, blackened remains of two forgotten LoaderMechs, already swinging away from the bonfire of burning metal that had once been a *Blue Flame*.

With the landline broken, the communicators automatically switched to standard tactical channels, which laced each transmission with the pops and static caused by the Manteuffel's own Guardian ECM suite. Even so, Solomon caught up quickly with the action beyond this little intersection, and the news was not good:

The Marauder's *Legacy* had brought more friends.

"Forward taking fire here!" Isaka's voice called out. "Now count two *Thug*s, in support of target *Legacy*! We have lost Forward Three and Four!"

"We're coming, Forward!" Heigl reassured him, her voice clipped. "*EISENJÄGER*, ignore those *Thug*s. Focus all fire on the priority target. That bastard's not getting away this time."

Solomon nodded again, more to himself than to anyone. With Kramer's panicked fire, they had lost the element of surprise, and already, two hovertank crews—whose vehicles sacrificed armor for speed—had paid the ultimate price. Now three assault 'Mechs--one the assault 'Mech—the Marauder's own *Legacy*—stood against a depleted company of vehicles.

But *EISENJÄGER* always got their man.

The Marauder had to die.

Jorg brought the Manteuffel around and slammed the vehicle to full throttle, coaxing almost eighty kilometers per hour out of the tracks to lead the eastward charge, sending chunks of hard-packed snow and ice flying back in the tank's wake. Solomon let out a grunt as he was thrown back in his seat. He swiveled the turret through a complete 360-degree rotation, sweeping the entire field before his rangefinders while brushing away the 48-hour accumulation of snow and ice.

Hot on the trail of his Manteuffel, Solomon saw the twin Manticores commanded by sergeants Donovan and Resse, followed by Kramer's Fortune, wheels wildly whipping up slush in an almost comical effort to keep up. The ruins of the DropShip factory grounds, the half-buried wreckage of buildings and blackened 'Mechs—every one a Lyran machine—created an eerie, skeletal labyrinth of cold death that sent an involuntary shiver down Solomon's spine. The chill was forgotten by the time he reset the turret forward and caught a glimpse of azure PPC fire in the distance ahead.

The *Thug* that fired it was at a full run, chasing down Isaka's slate-gray Pegasus as it darted over a mound of wreckage. Instead of hitting the fast-moving hovercraft, the particle cannon discharge struck the debris mound, vaporizing snow and setting what looked like the arm of some dead and unrecognizable 'Mech twitching. Just behind the *Thug*, Solomon spotted the hated *Legacy*, its V-shaped torso so similar to that of the *Thug*, and yet so much more sinister with twin 20-pack LRM launchers sprouting up from the shoulders. And there, riding high on the 'Mech's left chest, was the telltale mark—the broadsword logo of the Word of Blake superimposed on the black silhouette of a giant skull.

At the extreme range for the Manteuffel's autocannon, Solomon let loose with one screaming burst. The stream of tracer fire chased the *Legacy*, but the MechWarrior within dodged the hasty shots with a strangely graceful sidestep.

The Marauder retaliated with a double flight of LRMs that showered the Manteuffel with bone-jarring explosions.

The ripple of warhead blasts rattled the vehicle's five-man crew, and Solomon felt the bite of his four-point harness even through the padded armor of his vest. The thrum of the fusion plant became a brief stutter and the cabin lights flickered.

"*Schweinehund*!" he spat, even as he heard the loaders chamber the next volley.

Outside, two PPC bolts converged on the *Legacy*, fired from the turret muzzles of Donovan's and Resse's Manticores. Though incapable of penetrating the armor with a single hit, the two bolts staggered the 'Mech just long enough for Solomon's second burst of autocannon fire to track in on its torso, marring the black skull logo beyond recognition.

"Got you!" Solomon hissed.

"*Damage!*" Heigl snapped.

At the sudden request, Solomon became aware of a strange new smell, the oily stench of fused electronics, and a rattling sound somewhere outside that sent a harsh vibration through the cabin. Had one of those missiles penetrated after all?

"It's a drive wheel," Corporal Reuben came back, his voice piped in from the rear section. "Left flank number three. We're slipping, but not too badly."

"Not too badly?" Jorg echoed in a voice laced with contempt. "This thing's dragging like a stuck pig now! *Verdammtes* StarCorps engineering!"

"Keep us on that *Legacy*!" Heigl yelled.

Solomon ground his teeth as he swiveled the turret to keep the *Legacy* bracketed on the rangefinders. The red reticule of a partial weapon lock flashed gold as the targeting sensors gained confidence in his bead, incidentally noting that the range had closed

to less than 360 meters—close enough to add the Manteuffel's trio of medium lasers to his next volley. Even as the image of the *Legacy* bounced before his eyes to the irregular rhythm of the vehicle's inhibited ride, he squeezed the triggers again, unleashing a fresh stream of depleted uranium shells and a triple-bolt of coherent light at the Marauder's 'Mech.

Only to miss with half of it when a spine-tingling jolt of electricity stunned him.

Reuben's pain-filled cry filled Solomon's ears, even as he screwed his eyes shut to clear his vision.

PPC hit! his mind screamed. The metallic scent of ozone filled his lungs.

"*Thug*!" Jorg called out. "Port flank!"

"Ignore it!" Heigl snapped.

Solomon glanced at the tactical display and cursed.

"Two more Blakies," he called out. "One klick and closing! Looks like assaults!"

"Stay on the mark!"

"Take that, you bastards!" came Kramer's voice again, exultant as his Fortune finally reached range and opened up with its Disintegrator LB 20-X cannons. Once more opting for the heavy punch of solid bursts over the sandblasting effect of cluster munitions, his vehicle's fire tore over a ton of armor off the 'Mech's right arm, twisting it violently sideways and spoiling its aim. A volley of LRMs streaked out from the *Legacy*'s right-side missile rack, only to splash harmlessly in the battle-churned snow.

Two flights of missiles showered the stricken machine next, adding insult to injury by rending ghost-white armor in clusters that rained on the ground. A lesser MechWarrior would almost certainly have lost his balance, but the *Legacy* seemed to absorb its punishment, bracing its doglegs against the incoming storm of missiles and shells.

Straightening, it fired back with a fusillade of missiles and laser fire that—this time, at least—did not focus on the incoming Manteuffel.

Kramer's terrified scream told Solomon who the target was.

"Jäger One!" Sergeant Donovan's voice cut in over the scream, "Striker Three is pouring smoke! I think that last one hit his engine!"

"Kramer," Heigl growled, her voice sounding only within the cabin "so help me! Don't you flake out on us now!"

"*Die, you motherless* schwein!" Kramer's shriek filled the channel as the scream of autocannon fire once more resounded across the battlefield.

This time, both streams of tracers caught the *Legacy* in its right leg, tearing through armor to claw away at the endo-steel bones within.

Go down! Solomon willed the hated machine, but again, the *Legacy* kept its feet.

The PPCs flashed again, and this time Solomon felt the hits as a thunderous pounding that shook the entire cabin. A fiery tingle made his fingers spasm and set his skin crawling along the back of his neck. His vision blanked for a moment—he was sure it was only a moment—and popping sounds echoed around him. He opened his eyes to find sparks still dancing across the targeting panels, telltale signs of a hit that had penetrated armor to touch the delicate electronics.

But it was Heigl's low moan that finally tore Solomon's eyes away from his flickering targeting displays.

She was hunched over her boards, the right side of her neck and the shoulder of her uniform shredded by shrapnel from an exploding monitor. Her eyes, already half-glazed, found his as her blood-slicked fingers clutched at the wound. Solomon began to move, but she shook her head.

Her mouth opened, but no words came out. She glanced past Solomon, at his weapons console. Her eyes narrowed.

Solomon nodded and returned to his post, turning away and trying to ignore the wet coughing that suddenly racked his commander.

Nothing else mattered now.

The targeting system placed the *Legacy* to the left, limping away from the ruins of Kramer's Fortune. Only two friendly blue discretes remained on the tactical displays—Resse and Donovan, he figured, but how did they get ahead of him? He tried to swing the weapons around, only to see the red idiot lights flash beneath the targeting displays: turret jam.

Were we out? he wondered. *How long?*

"Jorg!" he croaked after a moment, "bear left!"

A low groan answered, but the Manteuffel's engine still thrummed. With jerks that shook him in his chair, the tank fought its own damage and came about. Solomon spared only a moment to consider just how crippled they were, before the tracking systems again found the *Legacy*'s silhouette. Its armor in tatters, its leg gimped and missing its right arm, the BattleMech was struggling to get between its barely damaged partners—two *Thug*s trying to play bodyguard for their wounded commander.

But a BattleMech could only cover another BattleMech so well from the firepower of a dedicated Jäger…

At last, the jerky motions of the Manteuffel's awkward turn brought the reticule over the *Legacy*'s heart, where its forward-thrust cockpit gleamed in the overcast afternoon light. In that instant, Solomon unleashed one last blast, pouring every last shell and kilojoule of lethal force out of his weapons, even as the *Thug*s retaliated on their battered commander's behalf.

Even as manmade lightning sprang forth from the muzzles of the twin *Thug*s, Solomon let out a triumphant whoop as his autocannon fire scored a direct hit on the Marauder's cockpit, shattering the ferroglass canopy and—if there was any justice in the universe—the MechWarrior within.

A heartbeat later, a quartet of PPC bolts washed over his crippled Manteuffel, boiling away armor to flash-fry the crew inside in a blinding burst of white-hot particles. But even in death, Sergeant Major Rolf Solomon knew one last moment of victory.

At the end of the day, the *EISENJÄGER* got their man.

In the Chaos March, a Tikonov Republican Guard mixed force deploys in the hopes of catching Word of Blake insurgents.

BattleMechs reign supreme on the battlefield, but Combat Vehicles can hold their own in battle. Though not as tough as BattleMechs, they are generally much cheaper and easier to build. *BattleTech* provides rules for four types of vehicles: ground, VTOL, WiGE and naval, as defined in *Components* (see p. 20).

Most of the rules regarding the use of Combat Vehicles in the game are contained in the *Movement* and *Combat* sections. Those rules are not repeated here; instead, this section covers rules that only apply to specific Combat Vehicles, along with hit location and critical hits tables used exclusively for Combat Vehicles.

movement

Combat Vehicles move on the map like 'Mechs, with the restrictions and differences addressed in the *Movement* section. Keep in mind that any time a ground vehicle (except hover vehicles) fails a Driving Skill Roll that results in a skid, that vehicle must make an immediate roll on the Motive System Damage Table; see *Skidding*, p. 62.

combat

Combat Vehicles use the standard rules for multiple targets and to-hit modifiers; a turret rotation is treated exactly like a 'Mech torso twist for purposes of multiple target modifiers. They follow the standard rules for firing arcs as well, with two exceptions: side-mounted weapons never fire into the front arc, and turrets have a three-hex wide arc that resembles the front arc (see *Firing Arcs*, p. 104).

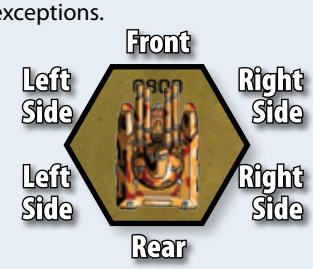
Combat Vehicles use slightly different rules for taking damage.

GROUND COMBAT VEHICLES

Ground Combat Vehicles use the standard rules for resolving hit locations, with the following exceptions.

Attack Directions

The diagram shows the front, side and rear attack directions for all Combat Vehicles.



• ATTACK DIRECTIONS •

Determining Hit Location

Combat Vehicles take hits to four or five locations: Front, Right Side, Left Side, Rear and Turret or Rotor (if applicable). When a Combat Vehicle takes a hit, roll 2D6 and consult the Ground Combat Vehicle Hit Location Table for that vehicle type to determine the location that took damage, using the appropriate column based on the attack direction. Other results may also apply, as noted on the table.

Armor-Piercing Special Munitions: Every successful attack against a vehicle automatically causes a roll on the appropriate column of the appropriate Vehicle Critical Hits Table, corresponding to the location damaged. The standard modifiers indicted by armor-piercing ammunition for determining critical hits still apply when rolling on the Vehicle Critical Hits Table (see *Armor Piercing Ammo*, p. 140).

Turret Hits: If the Combat Vehicle has no turret, a turret hit strikes the armor on the side attacked.

Critical Damage

A Combat Vehicle may take critical damage under two circumstances, both of which require an immediate roll on the Ground Combat Vehicle Critical Hits Table on the following page.

GROUND COMBAT VEHICLE HIT LOCATION TABLE

	Attack Direction		
2D6 Roll	Front	Rear	Side§
2*	Front (critical)	Rear (critical)	Side (critical)
3	Front†	Rear†	Side†
4	Front†	Rear†	Side†
5	Right Side†	Left Side†	Front†
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side†	Right Side†	Rear†
10	Turret	Turret	Turret
11	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or an 8 if the attack strikes the side) may inflict a critical hit on the vehicle. For each result of 2 or 12 (or 8 for side attacks), apply damage normally to the armor in that section. The attacking player then automatically rolls once on the Ground Combat Vehicle Critical Hits Table, p. 194. A result of 12 on the Ground Combat Vehicle Hit Location Table may inflict a critical hit against the turret; if the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction.

†The vehicle may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table, at right. Apply damage at the end of the phase in which the damage takes effect.

§Side hits strike the side as indicated by the attack direction. For example, if an attack hits the right side, all Side results strike the right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

- As described on the Ground Combat Vehicle Hit Location Table, critical damage occurs when a specific roll on that table indicates a roll on the Ground Combat Vehicle Critical Hits Table.
- A critical hit occurs whenever a location's internal structure is damaged; the controlling player automatically rolls on the appropriate column of the Ground Combat Vehicle Critical Hits Table.

Ground Combat Vehicle Critical Hit Effects

Critical hits only affect items in the location struck. If the item listed on the Ground Combat Vehicle Critical Hits Table does not apply in that location (the item doesn't exist, only one such critical hit can occur per location and so on), simply move down the column until an applicable critical result is achieved. For example, a dice roll result of 9 for the Rear location indicates Weapon Destroyed. If the vehicle mounts no weapons

MOTIVE SYSTEM DAMAGE TABLE

2D6 Roll	Effect*
2–5	No effect
6–7	Minor damage; +1 modifier to all Driving Skill Rolls
8–9	Moderate damage; –1 Cruising MP, +2 modifier to all Driving Skill Rolls
10–11	Heavy damage; only half Cruising MP (round fractions up), +3 modifier to all Driving Skill Rolls
12+	Major damage; no movement for the rest of the game. Vehicle is immobile.

Attack Direction Modifier:	
Hit came from rear	+1
Hit came from the sides	+2

Vehicle Type Modifiers:	
Tracked, Naval	+0
Wheeled	+2
Hovercraft, Hydrofoil	+3
WiGE	+4

*All movement and Driving Skill Roll penalties are cumulative. However, each Driving Skill Roll modifier can only be applied once. For example, if a roll of 8-9 is made for a vehicle, inflicting a +2 PSR modifier, that is the only time that particular +2 can be applied; a subsequent roll of 8-9 has no additional PSR effect, but the additional –1 Cruising MP would still be applied. This means the maximum Driving Skill Roll modifier that can be inflicted from the Motive System Damage Table is +6. If a unit's Cruising MP is reduced to 0, it cannot move for the rest of the game, but is not considered an immobile target. In addition, all motive system damage takes effect at the end of the phase in which the damage occurred. For example, if two units are attacking the same Combat Vehicle during the Weapon Attack Phase and the first unit inflicts motive system damage and rolls a 12, the –4 immobile target modifier would not apply for the second attacker. However, the –4 modifier would take effect during the Physical Attack Phase. If a hover vehicle is rendered immobile while over a Depth 1 or deeper water hex, it sinks and is destroyed.

Alacorn Mk VI Heavy Tank, Tikonov Republican Guard (House Steiner)

GROUND COMBAT VEHICLE CRITICAL HITS TABLE

	Location Hit			
2D6 Roll	Front	Side	Rear	Turret
2–5	No Critical Hit	No Critical Hit	No Critical Hit	No Critical Hit
6	Driver Hit	Cargo/Infantry Hit	Weapon Malfunction	Stabilizer
7	Weapon Malfunction	Weapon Malfunction	Cargo/Infantry Hit	Turret Jam
8	Stabilizer	Crew Stunned	Stabilizer	Weapon Malfunction
9	Sensors	Stabilizer	Weapon Destroyed	Turret Locks
10	Commander Hit	Weapon Destroyed	Engine Hit	Weapon Destroyed
11	Weapon Destroyed	Engine Hit	Ammunition**	Ammunition**
12	Crew Killed	Fuel Tank*	Fuel Tank*	Turret Blown Off

*If Combat Vehicle has ICE engine only. If Combat Vehicle has a fusion engine, treat this result as Engine Hit.
**If Combat Vehicle carries no ammunition, treat this result as Weapon Destroyed.

in that location, the player moves down to the Rear result for 10: Engine Hit. If a player reaches 12 without achieving a critical result, start over at 6 and continue down again. If a vehicle has already taken all the critical damage in a column, ignore the critical hit.

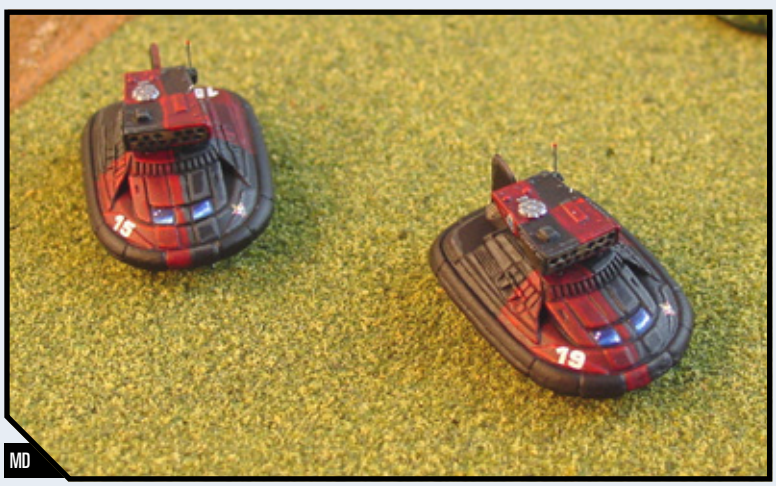
Ammunition: This result means the Combat Vehicle's ammunition explodes. Unlike a 'Mech, where only a single slot explodes, the Combat Vehicle loses all its ammunition (see p. 125), excepting one-shot weapons. Count the total damage for all ammunition carried and apply the damage directly to the vehicle's internal structure in the location struck. If the vehicle has CASE, apply the damage instead to its rear armor, with any excess damage ignored and the vehicle suffers a Crew Stunned result.

Cargo/Infantry Hit: The Combat Vehicle's internal cargo and/or infantry troops are hit. (This result applies to items in a dedicated cargo bay, not carried using the *Cargo Carriers* rules on p. 261.) Infantry suffers damage as though the weapon that caused the critical hit had struck the infantry unit; apply the weapon's full damage. For example, if an SRM causes the critical hit, the infantry unit suffers 2 points of damage, while a Gauss rifle inflicts 15 points of damage. Cargo is destroyed. If the Combat Vehicle carries more than one type of cargo or more than one infantry unit, randomly determine which one gets hit.

Commander Hit: The vehicle's commander is injured, causing confusion among the crew equivalent to a Crew Stunned critical hit. In addition, for the rest of the game the vehicle suffers a +1 modifier to all to-hit rolls and Driving Skill Rolls. Treat successive Commander Hit results as Crew Stunned.

Crew Killed: The critical hit penetrates the crew cabin, killing or severely injuring the entire crew. The Combat Vehicle remains intact, but is considered destroyed for purposes of determining victory. Without its crew it cannot move, fire or take any other action for the remainder of the game and is considered immobile. (VTOLs and WiGEs crash and are considered destroyed). However, all its electronics function until the vehicle is destroyed (see *Destroying a Unit*, p. 128). This result has no effect on any infantry the vehicle is carrying.

Crew Stunned: Damage from the critical hit shakes the crew compartment, disorienting the crewmen. During the following turn, the Combat Vehicle may move no faster than Cruising speed, and may take no other actions (firing weapons and so on).



Pegasus, Tikonov Republic Guard (House Steiner)

After that, the vehicle may act normally. Multiple Crew Stunned results in the same turn extend the number of turns for which these effects last. If the vehicle has suffered Commander Hit and Driver Hit results, and then takes a Crew Stunned hit (even if all this occurs in the same phase), treat the latter result as Crew Killed. This outcome has no effect on any infantry units the vehicle carries.

Driver Hit: The vehicle's driver is injured. For the remainder of the game, apply a +2 modifier to all Driving Skill Rolls. Treat successive Driver Hit results as Crew Stunned.

Engine Hit: The vehicle's engine is severely damaged. The vehicle may not move or change facing for the remainder of the game and is considered an immobile target. However, its electronics still function; any Direct-Fire Energy and Pulse Weapons no longer work; also treat as a turret lock.

Fuel Tank: The fuel tank is breached, causing the entire Combat Vehicle to explode in a spectacular fashion. Any cargo or infantry carried is destroyed. This critical hit only affects ICE engines; if the vehicle has a fusion engine, treat this result as Engine Hit.

Sensors: Each critical hit to the vehicle's sensors adds a +1 modifier to all to-hit rolls, with multiple hits being cumulative. The fourth sensor hit makes it impossible for the vehicle to fire weapons.

Stabilizer: A vehicle's weapon stabilizers help it fire straight while moving. When this system takes a critical hit, double the attacker movement modifier for all attacks from weapons mounted in the location struck. Weapons mounted elsewhere in the vehicle are not affected. Second and subsequent hits to the stabilizer in the same location have no further effect.

Turret Blown Off: The Combat Vehicle's turret gets blown off, effectively destroying the vehicle.

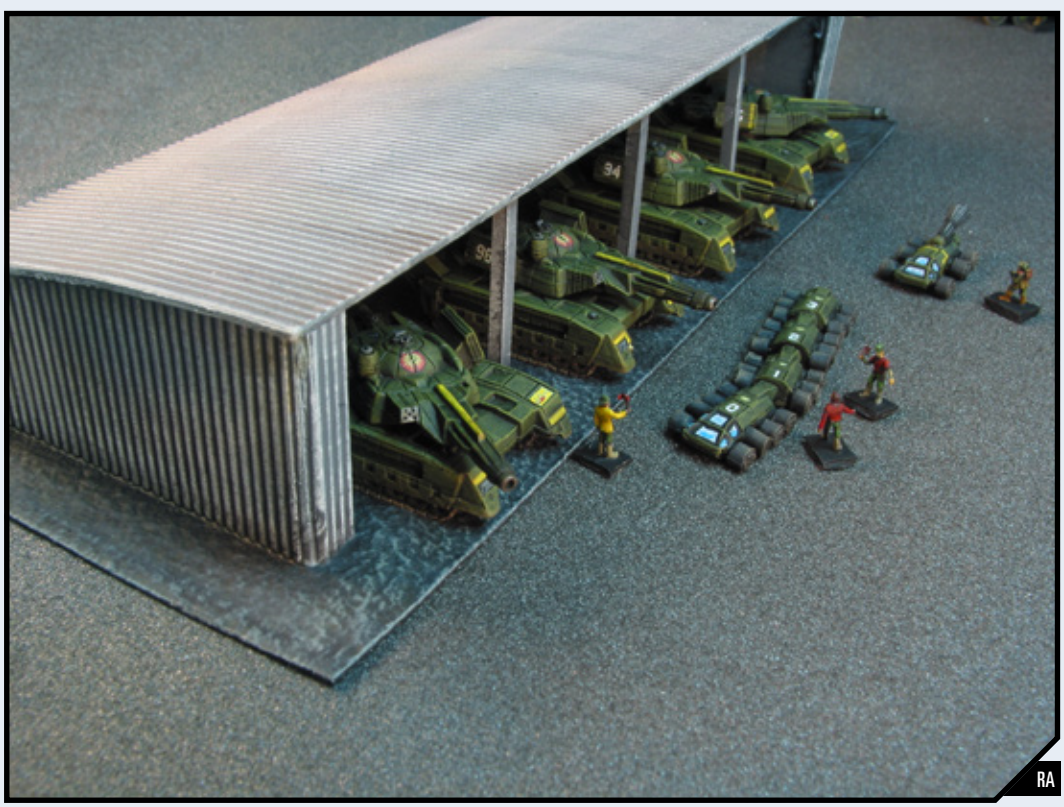
Turret Jam: The turret rotation mechanism temporarily freezes, leaving the turret stuck in its current facing until the crew spends a Weapon Attack Phase fixing the jam. The Combat Vehicle may not fire any weapons while the jam is being fixed. Treat a second or subsequent Turret Jam critical hit—regardless of whether the crew cleared first jam—like a Turret Locks critical hit.

Turret Locks: The turret rotation mechanism is severely damaged, locking the turret in its current facing for the remainder of the game. Additional critical hits of this type—or Turret Jam critical hits—have no further effect.

Weapon Destroyed: One weapon mounted in the damaged location suffers major damage and ceases to function. The attacking player then rolls 1D6. On a result of 1–3, the player controlling the target unit chooses which weapon in that location stops working. On a 4–6, the attacking player chooses which weapon stops working. The vehicle cannot fire that weapon for the remainder of the game.

If a weapon is destroyed that can explode (such as a Gauss rifle, see p. 135), it is treated as an ammunition explosion for the location where the weapon is mounted (see *Ammunition*, p. 125).

Weapon Malfunction: This critical hit causes a weapon mounted in the location struck to malfunction. If a Combat Vehicle has multiple weapons in that location, randomly determine which one takes the hit. The vehicle cannot fire that weapon until the malfunction is fixed. The vehicle crew must spend one Weapon Attack Phase clearing the malfunction, during which the vehicle may make no weapon attacks



A lance of Davion Patton tanks in their shed, awaiting maintenance.

VTOL COMBAT VEHICLE HIT LOCATION TABLE

2D6 Roll	Front	Rear	Side
2*	Front (critical)	Rear (critical)	Side (critical)
3	Rotors†	Rotors†	Rotors†
4	Rotors†	Rotors†	Rotors†
5	Right Side	Left Side	Front
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side	Right Side	Rear
10	Rotors†	Rotors†	Rotors†
11	Rotors†	Rotors†	Rotors†
12*	Rotors (critical)†	Rotors (critical)†	Rotors (critical)†

*A result of 2 or 12 (or 8 if the attack strikes the side) may inflict a critical hit on the VTOL. For each such attack, apply damage normally to the armor in that section. The attacking player then immediately rolls once on the VTOL Combat Vehicle Critical Hits Table, below.

†Damage Value / 10 (round up); see *Rotor Hits*, p. 197. Additionally, damage to the rotors slows down the VTOL. Each hit reduces the VTOL's Cruising MP by 1, meaning that the controlling player must also recalculate Flank MP; multiply the new Cruising MP by 1.5 and round up. As with all damage, such movement penalties do not apply until the end of the phase in which the damage occurred.

(though it may move normally during the Ground Movement Phase). The crew may only fix one weapon malfunction per Weapon Attack Phase.

VTOL COMBAT VEHICLES

BattleTech VTOLs represent a wide range of vehicles, from the standard rotor-helicopter to tilt-wing craft and so on; they include any airborne craft designed for atmospheric flight that can make vertical take-offs and landings. However, for simplicity, the following rules center on the standard rotor-helicopter and apply that template to all VTOLs for game purposes, regardless of any VTOL's artistic portrayal or how the sourcebook fiction describes a VTOL in a technical readout.

Combat VTOLs use the same rules as ground Combat Vehicles for firing arcs, multiple targets, to-hit modifiers, taking damage and so on, with the following exceptions.

Attack Declaration

A VTOL vehicle may not fire at a target in the same hex it occupies, regardless of its elevation.

Line of Sight

Resolve line of sight as if the VTOL occupies a clear hex at a level equal to the VTOL's present elevation; see LOS example on page 101.

To-Hit Modifiers

Because a VTOL flies above woods, it does not benefit from woods modifiers for the hex it occupies while in flight.

Apply an additional +1 target movement modifier when making attacks against airborne VTOLs (this includes non-vehicles airborne and expending VTOL MPs). Even when a VTOL is airborne, attacker movement modifiers remain +1 or +2 depending on whether the VTOL expended Cruising or Flank MP.

VTOL COMBAT VEHICLE CRITICAL HITS TABLE

	Hit Location			
2D6 Roll	Front	Side	Rear	Rotors
2–5	No Critical Hit	No Critical Hit	No Critical Hit	No Critical Hit
6	Co-Pilot Hit	Weapon Malfunction	Cargo/Infantry Hit	Rotor Damage
7	Weapon Malfunction	Cargo/Infantry Hit	Weapon Malfunction	Rotor Damage
8	Stabilizer	Stabilizer	Stabilizer	Rotor Damage
9	Sensors	Weapon Destroyed	Weapon Destroyed	Flight Stabilizer Hit
10	Pilot Hit	Engine Damage	Sensors	Flight Stabilizer Hit
11	Weapon Destroyed	Ammunition**	Engine Damage	Rotors Destroyed
12	Crew Killed	Fuel Tank*	Fuel Tank*	Rotors Destroyed

*Only if the VTOL has an ICE engine. For VTOLs with fusion engines, treat this result as Engine Damage.

**If the VTOL carries no ammunition, treat this result as Weapon Destroyed.

Motive System Damage

If at any time during a turn a VTOL vehicle is airborne when damage reduces its MP to 0, treat it as if it had received an Engine Damage critical hit, see below. The engine itself remains functional, but the VTOL cannot move for the rest of the game.

Determining Hit Location

When a combat VTOL takes a hit, roll 2D6 and consult the VTOL Combat Vehicle Hit Location Table to determine the location that took damage, using the appropriate column based on the attack direction. Other results may also apply, as noted on the table.

Rotor Hits

For each attack that strikes a rotor location, for every 10 points (or fraction there of) of a weapon's Damage Value, apply 1 point of damage. For example, a 5-point medium laser and a 10-point PPC would both inflict 1 point of damage each, while a heavy Gauss Rifle at short range (25-points of damage) would inflict 3 points of damage to the rotors.

Any source of damage without a weapon Damage Value is not modified in this manner. In addition, any successful physical attack by a 'Mech automatically destroys the VTOL's rotor (and thus the VTOL).

Cluster Weapons: When determining the damage to a rotor, each Damage Value grouping is considered separately. For example an LRM 20 that stuck a VTOL with 12 missiles, and all three groupings (5, 5 and 2) struck rotors, would inflict a total of 3 points of damage to the rotors (1 point for each Damage Value grouping).

Critical Damage

A VTOL may take critical damage under two circumstances, both of which require an immediate roll on the VTOL Combat Vehicle Critical Hits Table below:

- As described on the VTOL Combat Vehicle Hit Location Table, critical damage occurs when a specific roll on that table indicates a roll on the VTOL Combat Vehicle Critical Hits Table.
- A critical hit occurs whenever a location's internal structure is damaged; the controlling player automatically rolls on the appropriate column of the VTOL Combat Vehicle Critical Hits Table. At least 1 point of damage must have been dealt to trigger this.

VTOL Combat Vehicle Critical Hit Effects

Unless stated otherwise in this section, critical hits against a VTOL are the same as those for ground Combat Vehicles (see p. 192).

Co-Pilot Hit: The VTOL's co-pilot or gunner is injured. For the rest of the game, apply a +1 modifier to all to-hit rolls. Treat a subsequent Co-Pilot Hit as Crew Killed.

Engine Damage: If a landed VTOL's engine takes damage, the unit cannot move for the rest of the game. If a flying VTOL's engine takes damage over a clear, paved, rough or building hex, make a Driving Skill Roll with a +4 modifier (plus any additional modifiers that might apply). If the roll succeeds, the VTOL lands in that hex and is rendered immobile. If the roll fails, the VTOL is destroyed. If the VTOL takes engine damage while flying over other terrain, it is automatically destroyed.

Per standard rules for buildings, if a VTOL is forced to land in a building hex that cannot support the VTOL's weight, the hex collapses (see *Construction Factor* and *Collapse*, pp. 166 and 176 respectively).

Fuel Tank: A fuel tank hit causes the VTOL to explode; see *VTOL Explosions*, p. 198. If the VTOL mounts a fusion engine, treat this result as an Engine Hit.

Pilot Hit: The VTOL's pilot is injured. For the remainder of the game, apply a +2 modifier to all Driving Skill Rolls. In addition, the controlling player must immediately make a successful Driving Skill Roll or the VTOL drops one elevation. The drop may cause the vehicle to crash. Treat a subsequent Pilot Hit as Crew Killed.

Rotor Damage: Damage to the rotors slows down the VTOL. Each critical hit reduces the VTOL's Cruising MP by an additional 1, meaning that the controlling player must also recalculate Flank MP (multiply the new Cruising MP by 1.5, rounding up). This results in a loss of 2 MP, one for the critical hit and one for the actual rotor damage (see *VTOL Combat Vehicle Hit Location Table*, p. 196).

Rotors Destroyed: The VTOL's rotor is destroyed, destroying the vehicle.

PHYSICAL ATTACKS AGAINST VTOL VEHICLES TABLE

Difference in Levels	Type of Physical Attack Allowed
–1 or lower	None
0	All except Punch
1–2	All except Kick
3	Club and Physical Weapons only
4+	None

Flight Stabilizer: The VTOL suffers damage to its flight stabilizer, making it difficult to turn steadily or fly straight. The VTOL may move no faster than Cruising speed for the remainder of the game; also apply a +3 modifier to all Driving Skill Rolls. Finally, apply a +1 to-hit modifier to all attacks. Additional critical hits to the flight stabilizers have no further effect.

VTOL Explosions

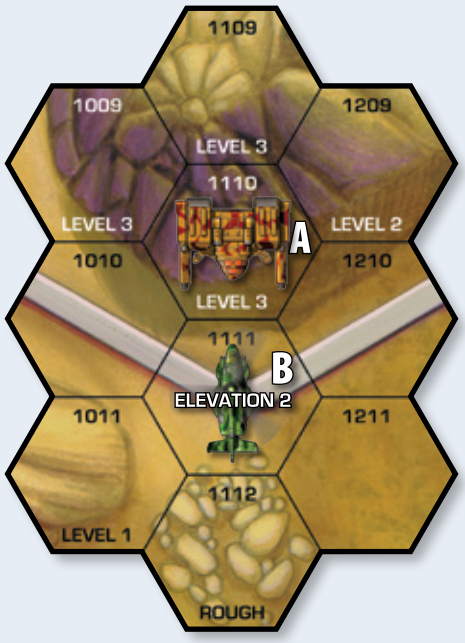
If any part of a VTOL's internal structure takes damage from a crash, the VTOL explodes and is destroyed. A VTOL may also explode as a result of a critical hit, as noted on the VTOL Combat Vehicle Critical Hits Table. The latter rule does not apply to a vehicle mounting a fusion, fission or fuel cell engine.

Physical Attacks Against VTOLs

'Mechs may make physical attacks against landed VTOLs in the same manner as against ground vehicles. A 'Mech may also physically attack a flying VTOL per the Physical Attacks Against VTOL Vehicles Table. The first column lists the difference in levels between the 'Mech's hex and the VTOL; to find this number, subtract the 'Mech's hex level from the VTOL's elevation. Any successful physical attack by a 'Mech automatically destroys the VTOL's rotor.

Death From Above: A 'Mech may only make a death from above attack against a VTOL if the ´Mech's Jump MP equals or exceeds the difference in levels between the two units.

In the Physical Attacks Vs. VTOLS Diagram at above, a BattleMech in Hex A is on a Level 3 hill facing a VTOL in Hex B at Elevation 2 on the BattleForce 2 map. The level difference between the BattleMech's hex and the VTOL's elevation is –1 (2 – 3). The BattleMech may not physically attack the VTOL. However, if the BattleMech has not yet moved and is jump-capable, and the VTOL has finished its movement, the BattleMech can make a death from above attack. If the VTOL were 1 elevation higher, the level difference would be 0 and the BattleMech could make a kick, club or physical weapon attack.



• PHYSICAL ATTACKS VS. VTOLS DIAGRAM •

Note that if the VTOL were a Large Support Vehicle, even if it were at Elevation 2, a Large Support Vehicle rises one level (in this case elevation) above its underlying elevation, meaning in this example it occupies both Elevation 2 and Elevation 3 of Hex B, which means the 'Mech could make a kick, club or physical weapon attack against the VTOL.

NAVAL COMBAT VEHICLES

Naval Combat Vehicles use the standard rules for ground Combat Vehicles with respect to firing arcs, multiple targets, to-hit modifiers, taking damage and so on, with the exceptions below. Use the same rules and tables as for ground Combat Vehicles when rolling for hit locations, taking critical damage and so on.

Hull Integrity

Naval Combat Vehicles that take damage may require a Hull Integrity roll, as described in the *Underwater* section of *Damage* (see *Combat*, p. 98). Submarines follow all the standard rules for hull integrity.

Surface Vessels: Surface vessels follow all the rules for hull integrity, except that only damage to such a vehicle's front, side or rear armor locations requires a Hull Integrity roll. A strike against a unit's turret—provided the unit mounts one—does not require a roll.

Finally, attacks against a surface vessel from an underwater unit use the standard rules for the Hull Integrity roll, while attacks from units that are not underwater must roll a 12 for a hull breach (to represent the fact that the weapon strike will more often hit a section above the waterline).

WIGE COMBAT VEHICLES

WiGE Combat Vehicles use the standard rules for ground Combat Vehicles with regard to firing arcs, multiple targets, to-hit modifiers, taking damage and so on, with the exceptions described below. Use the same rules and tables as for ground Combat Vehicles when rolling for hit locations, taking critical damage and so on.

BattleTech WiGE vehicles are effectively low-flying airplanes (see *Technical Readout: Vehicle Anne*x for a sample of what such vehicles look like). An entire series of rules could merge the effects of conventional aircraft with hovercraft, but for simplicity WiGE in combat are treated as vehicles. They have some unique characteristics; they are tougher than VTOLs, but more fragile than standard ground vehicles, with a few unusual movement options (see *Wing-in-Ground-Effect*, p. 55).

Attack Declaration

A WiGE Combat Vehicle may not fire at a target in the hex it occupies, regardless of its level.

Line of Sight

Resolve line of sight as if the WiGE vehicle occupies a clear hex one elevation above the level of the underlying hex it occupies.

To-Hit Modifiers

Since a WiGE vehicle operates one elevation above the ground, it remains below the level of a woods hex, and so gains the modifier from woods as would a VTOL at the same elevation. If a WiGE vehicle follows a road through a woods hex, it also gains this bonus by being in the hex. Apply an additional +1 target movement modifier when making attacks against airborne WiGEs. Even when a WiGE vehicle is airborne, the attacker movement modifiers remain +1 or +2 depending on whether the WiGE vehicle expended Cruising or Flank MP.

Motive System Damage

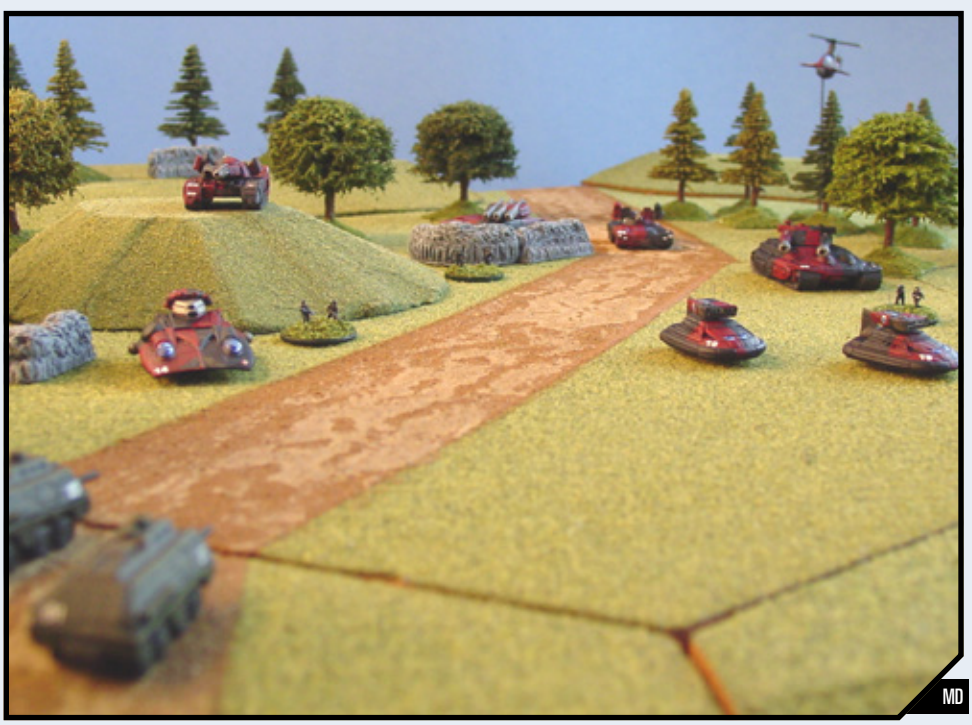
If damage reduces a WiGE vehicle's MP to the point that it cannot enter at least five hexes in a turn, it must land at the end of its movement. Landing does not cost MP, and WiGE vehicles may only land in clear or paved hexes. WiGE units cannot land on water hexes unless the unit has the Amphibious chassis modification, nor can they descend below Depth 0 in a water hex. A WiGE vehicle that makes either of these movements crashes and is destroyed.

In addition, if at any time during a turn a WiGE vehicle is airborne when damage reduces its MP to 0, it automatically crashes in the hex where the damage occurred.

Engine Damage

If a landed WiGE vehicle's engine is critically damaged, the unit cannot move for the rest of the game. If a flying WiGE vehicle's engine takes damage over a clear, paved, rough or building hex, make a Driving Skill Roll to avoid crashing. If the roll is successful, the WiGE vehicle lands in the hex but may not move for the rest of the game. If the roll fails, the WiGE vehicle crashes. If the WiGE unit takes engine damage while flying over other terrain, it automatically crashes.

Buildings: Per the standard rules for buildings, if a WiGE unit is forced to land in a building hex that cannot support its weight, the hex automatically collapses (see *Construction Factor* and *Collapse*, pp. 166 and 176 respectively).



Too late, Word of Blake soldiers realize they've fallen into a Tikonov Republic Guard ambush.

Simple Farmer

Kevin Killiany

> The Twelfth Deneb Light Cavalry on David was attacked by the Ninth Dieron Regulars and Brion's Legion. ... The early stages of the fight for David were inconclusive. The efforts of Combine forces to pin down the Deneb 'Mechs were thwarted repeatedly by a determined militia and the actions of civilians, who aided the AFFS forces whenever possible.
>
> —From *Fourth Succession War Military Atlas, Volume 1,* by Doctor B. Banzai (copyright March 3029), by permission of the New Avalon Institute of Science

OREGON PLAINS
ANDROPO, DAVID
DRACONIS MARCH, FEDERATED SUNS
17 APRIL 3029

Ty pretended he couldn't see the *Dragon* standing at the edge of the field as he finished his final pass. He kept his head turned, looking back over one shoulder at the whirling disks of metal as they pulverized the ground cover, shredding the thick sod and driving it down into the topsoil. The ground and vegetation were too moist for a dust cloud.

He glanced forward again, keeping his head low. He hoped the hat brim shielding his eyes from the reddish sun would give the impression he was only checking his ancient tractor's alignment with previous swaths.

A second BattleMech had come out of the sandalwoods to stand behind the other's right shoulder. It was bigger than the *Dragon*. Given the Dracs' passion for appearances, Ty would have expected the bigger boss to drive the bigger machine, but its position indicated the newcomer was of lower rank.

As if rank mattered when two BattleMechs confronted a simple farmer driving his tractor.

Ty decided the big guy wasn't a Drac design. It had hulking rotator shoulders like the *Dragon*, but its cockpit was lower and thrust forward, making it resemble a lowlife brawler more than the noble warrior look the Dracs preferred. It looked tougher to Ty's untrained eye, but he knew it made Drac sense for the boss to drive a Drac 'Mech even if a better one was available.

Coming up on the end of the pass, Ty could see he was running out of field. The Combine BattleMechs were standing between him and the access road. He'd either have to drive straight into one or admit he could see them.

Tough choice. At the last moment he snapped his head back, dropping his jaw in amazement as he stared up at the towering war machines.

Yes, folks, the local yokel is an idiot.

The driver of the *Dragon* said something over his external speakers. Maybe her external speakers. Ty couldn't tell for sure over the yammer of his tractor's aging diesel. He made a show of cupping his ear and gaping while gunning the engine just a bit.

He'd laid it on too thick. The Drac 'Mech jockey let him know he—or she—wasn't buying it by pointing the *Dragon*'s left arm at the tractor's nose.

Not anxious to see what a medium laser could do to a six-hundred-year old Deere, Ty—with much comic fumbling—shut his machine down. Any way he could waste these guys' time was a victory.

"This is the wrong time of year to harrow," the MechWarrior's voice boomed in the sudden silence. Definitely a woman. "This field should be left fallow."

A hundred Drac 'Mech jockeys on David, and Ty had to draw the only farmer.

"Killing dung voles, Captain," he called back, then kicked himself for revealing that he'd recognized the blue katana "five" badge on the Dragon's breast. He could also read the unit designations—four weeks of resistance had taught him a little about the invaders. Commander of Second Company, First Battalion of the Ninth Dieron Regulars would be—Ty flipped through his mental files—*Tai-i* Lisa Montgomery.

"Trying to, anyway," he went on, hoping she hadn't noticed the pause during his mental gymnastics. "Once they get in a field like this, the only way to keep them from spreading to the crops is burn 'em out or chop 'em up. They don't dig deep," he added helpfully.

The *Dragon* kept its medium laser leveled at his tractor. Ty suspected the first indication he'd have that Montgomery knew no dung voles existed would be a bolt of coherent light burning him to smoke.

"Did a group of BattleMechs pass this way?"

You mean the Twelfth Deneb's recon lance? Ty thought. *I was just covering their tracks*.

"No, ma'am," he said. "Until you two popped up, I hadn't seen a soul."

On the heels of his words, two more Combine BattleMechs stepped out of the forest—both good, solid, predictably Dracbuilt *Lancelot*s.

Ty felt his mouth go dry as he realized one had come from the north. He waited out the silence as Second Company's First Lance chose not to include him in their deliberations.

"What is the metal building to the north?" Montgomery asked. Ty wished she'd point her laser elsewhere.

"That'd be my tractor shed," he said. No point in playing too dumb, particularly with the *tai-i* clearly not buying his innocence. "It's full of tractors, harvesters, stuff like that. Half of it doesn't work." Then, making no effort to hide his pride: "The Jones farm has been here ever since folks colonized David."

"Jones farm?"

"What you're standing on," Ty said, then swept his arms to illustrate. "From Mount Shasta to the Sometimey River; from Taylor east to the desert. Grains, vegetables, koi ponds and timber. That's Jones farm and I'm Tybalt Jones."

"The owner of such an estate plows the fields like a common hand?"

"The owner of such a working farm." Ty had no trouble putting an appropriate level of pride-fueled heat into his words. "I spend twelve hours a day, seven days a week, keeping everything running right."

Pause. Unmoving laser.

"Show us this tractor shed."

The shed—which Ty had to admit was actually an extensive garage that covered a good quarter of an acre—stood at the north end of Home Ridge, a long hill named by the third-generation Jones. Ty didn't imagine his long-dead ancestor had put much thought into naming the place after building the family homestead on its highest point.

Building high was a David tradition without explanation, as far as Ty knew. On such an arid world, everyone built their

houses as high above the plains as they could, as though expecting floods momentarily.

The badlands began just north of Home Ridge, the abrupt transition to rocky hardpan demarking the end of the Jones family's terraforming efforts. The ground was not stone, but even the Drac assault 'Mech failed to mark the packed clay with its passing.

The treeless land was rumpled like a coarse blanket thrown on the ground, a place of blind arroyos and abrupt escarpments. The broad shape of Danson's Hill was visible to the northeast and the rugged white cone of Mount Shasta dominated the northern horizon. Ty made certain not to glance toward the peak, crowned with white mineral deposits that gave the illusion of year-round snow—and that reflected most active sensors.

He made a production of working the clumsy mechanical combination lock that secured the shed's double doors. They should not have been locked at midday. In fact, they had been wide open, giving Sid and the boys light and air while they'd stripped a harvester when Ty had taken the harrow out. No doubt his mechanic and farm hands had run for the woods when they'd got wind of the Dracs.

The doors were high enough and wide enough for the *Dragon* to enter. Montgomery didn't wait for the sodium lights far overhead to heat up. Instead, she turned on external spotlights, probing the shadows as she moved through the cavernous shed. One of the *Lancelot*s filled the doorway, the muzzles of its two large lasers casting about in a vague search for targets.

Ty would have stood back and waited for something to flush while the guys getting paid for it beat the underbrush, but the Dracs worked backward. Or maybe it was a military thing. He suspected their sensors had already told them there were no BattleMechs present, but from the way the *tai-i* was examining every truck and fruit gondola, there were probably enough similarities between farm equipment and military vehicles to make eyes-on inspection necessary.

From the way she was peering at everything, Ty guessed the Drac captain wasn't as familiar with tractors as she was with growing seasons. He felt his pulse quicken as she spent several long seconds considering a rounded cylinder—the size of a ten-thousand-liter water tank—protruding from a pile of parts and vehicle panels.

"This is built for underwater," Montgomery said, her amplified voice echoing off the corrugated metal walls.

"It's one of the oldest things in here," Ty shouted back. "Maybe they needed to be sealed while terraforming?"

He got no answer. No doubt more convinced by the encumbering mound of dust-covered debris than Ty's words, the Drac captain moved away from his multiple-great grandfather's most beloved treasure to examine a combine.

Ty didn't draw an easy breath until he saw the backs of the four BattleMechs leaving his land, heading south.

MOUNT SHASTA, ANDROPO, DAVID
DRACONIS MARCH, FEDERATED SUNS
22 APRIL 3029

"Thank God."

The captain made no effort to hide her delight as Ty threw back the tarp, revealing the crates of Combine MREs.

Ty grinned, bending to lift the first case out of the trailer.

There had not been enough vaccine—or enough time—for the FedSuns MechWarriors and troops to have been immunized against David's native microorganisms. Though the water could be boiled and irradiated to purity, the Twelfth Deneb had been forced to live on hoarded battle rations, dependent on local supporters for fresh supplies.

One man could not work fast enough, and Ty found himself politely moved aside as a squad of volunteers took over food distribution. Stepping back, he looked up at the narrow sliver of grey sky visible past the overhanging roof of the shallow cave—*more an alcove*, he thought—that shielded Second Battalion from sight of any Drac overflights.

"Any news, Tybalt?"

Ty turned to find Major Marcia Teon at his elbow. Almost literally. At maybe fifty kilos and a hundred and sixty centimeters, she was the smallest MechWarrior he'd ever seen.

She smiled at his startled reaction, her chocolate-brown cheeks squeezing her grey-green eyes nearly shut. Ty suspected that if she ever gave up the military's strict physical training she'd turn plump. The thought of a butterball MechWarrior made him smile in return.

Then he sobered as he remembered his news.

"The Dracs have figured out that if they can't find you anywhere, you must be somewhere their sensors don't work," he said. "They're eliminating the Badlands one area at a time."

"Any chance they're saving us for last?"

Ty shook his head.

"The Brion mercenaries are a few days east of here, headed this way," he said. "The Ninth Dieron are farther south—they went after the flats south of the Sometimey first—but it's a sure bet they'll get here pronto once the mercs call for help."

Teon nodded. Her eyes scanned the shallow cave, one of several in the flanks of Mount Shasta that concealed elements of the Twelfth Deneb.

Ty had no idea what her orders were, but he couldn't imagine this mountain as a good place for a last stand. The narrow gorges and shallow caverns might favor the Deneb's light 'Mechs, but they were easily blocked. A relatively small portion of the Combine forces could keep the Federated Suns warriors from breaking free while the rest of them methodically blasted the mountain to rubble around them.

Or not. Just contain them until their food supply ran out and they either surrendered or starved to death.

Teon didn't share her thoughts with Ty, of course. But it didn't take a genius to guess the Twelfth's job was to stay alive and keep the Dracs tied up until some kind of reinforcements got here. The staying alive part meant Teon's boss needed to get his people out of this hidey-hole before they got trapped.

With the ocean to the north and most of Andropo's civilian population to the west, east and south were their only options. Take what was left of a regiment of light 'Mechs through the Dracs or through the mercs—both units as big as the Twelfth used to be and both made up of heavy and assault 'Mechs.

"We need intel," Teon said, then looked quickly at Ty as though startled she'd spoken. "Sorry. You guys are doing one hell of a job. But getting news a day or two old isn't the same as hard numbers real time."

It was Ty's turn to look startled. But he only nodded as an idea formed in the back of his mind.

OREGON PLAINS, ANDROPO, DAVID
DRACONIS MARCH, FEDERATED SUNS
07 MAY 3029

"Look alive," Ty called down into the control cabin. "We got four coming out of the woods up ahead."

"We got eight more in the woods," Sid answered. "It's spooky. I can give you temperature, range, speed—I don't know what all these numbers mean. I think that's the pilot's shoe size."

Ty pulled his head down into the cabin, still gripping the rim of what Sid called the skylight with both hands. His eyes couldn't adjust to the dim interior after the noon glare, but he could see the glow of a dozen screens.

"Shut those things down," he said. "We don't know how well those guys can see us."

He heard a series of slaps and clicks, and the screens went dark. The only light was the smoky grey glow from the heavily polarized windscreen. The kid driving peered straight ahead through the thick ferroglass, oblivious to the activity behind him. Billy was driving because that job required the least imagination.

Ty pulled his head back up into the sunlight and tried to make balancing at the top of a truncated ladder look like relaxing in the catbird seat. According to the schematics loaded into the computer, he should have been head and shoulders inside a turret mounting a small laser.

The turret, the laser and half the waldos built into the hide of the ancient Cortez explorer had disappeared over the past half-millennium. Ty had no clue where to look for them and he didn't care. All that mattered was the Beagle Active Probe, which was in place and working—just enough—after Ty and Sid took apart the pieces they didn't recognize, cleaned them all carefully and put them back exactly the way they'd found them.

Ty raised his hand, ordering his little caravan to stop. No use pretending he didn't see the quartet of heavy 'Mechs striding toward them.

He didn't need to see the bear paw badge to know these weren't Dracs. These 'Mechs hailed from Brion's Legion, the merc unit he'd heard about but never seen. The Twelfth had moved up to Danson's Hill, a better place to make a stand and from which to make a quick break. From the way the mercs had been moving in these last few days, they had a pretty good idea where the Twelfth was.

He hoped Brion didn't field any farmers—or historians—among his MechWarriors.

One 'Mech—a high-shouldered fireplug Ty thought might be a *JagerMech*—stepped ahead of the others and leveled its arm-mounted cannon at his head.

Ty could see from the markings that he'd drawn another captain. With a total of twelve 'Mechs around, that meant this was another company commander. He guessed the habit of having the head man check things out wasn't restricted to the Dracs.

"Name and business," the mercenary captain demanded over his loudspeaker.

"Ty Jones, farmer," he shouted cheerfully, fighting the urge to duck down inside the explorer. "Just taking the harvesters and processor over to the Lattimer place."

Sarah and Jenny, each perched atop a fruit picker and dressed to risk sunburn and wind chill, smiled and waved at the BattleMech on cue. Ty knew he'd taken a risk betting on male 'Mech jockeys, but the odds were in his favor. Dressed as they were, he was betting his niece and Sid's wife were pretty enough to keep the merc from looking too closely at the "processor."

"Stick to the main roads," the merc's voice grated. "When you get where you're going, stay put until you're told you can travel."

"The way Marge cooks, that'll be a pleasure," Ty said as though that were the best news ever. He waved to the departing BattleMechs.

A trailer with a conveyor leading into the rear cargo bay wasn't much of a disguise. But it was enough to fool folks who couldn't tell a Cortez explorer from a farm truck.

"Jones, how did you get these readings?"

"Colonel, my great-great-gran laid some old tech away for a rainy day," Ty grinned at the radio speaker as though the Twelfth Deneb's commander could see him.

Outside the skylight was as dark as the Cortez's interior. After a day of casting back and forth in front of the mercenaries' position, he'd sent everything the Beagle Active Probe had recorded over the off frequency the resistance used to communicate with the Twelfth.

"Don't suppose you tagged Brion?" the colonel asked. "Chop the head off a personal merc group like this and they usually fall apart."

"No, sir," Ty admitted.

Figuring out that the equipment worked had been the extent of their success. They hadn't a clue how to analyze the data they'd recorded. He should have rolled his Cortez right up into the middle of the mercs, and then head honcho Brion would have stepped forward to look them over himself—

Ty straightened abruptly, hitting his head on an unnamed box of electrics.

"Sid," he said, holding his head and wondering if he felt blood. "The soil analysis augers work?"

"We can dig holes and throw rocks with the best of them," Sid assured him. "What do we need with soil samples?"

Keying open the mike so the colonel could hear him as well, Ty laid out his plan.

As [Brion's Legion] advanced up a gentle slope toward the Deneb Light Cavalry, a Legion MechWarrior noticed that the ground ahead had been dug up and strewn about. Suspecting vibrabombs, Colonel Pythonius Brion's *Dragon* moved to examine the freshly dug ground more closely. Finding no mines, an irritated Colonel Brion gave the order to advance. The Davion trick had succeeded, however, for Colonel Brion had identified himself to the watching Twelfth Deneb by moving to investigate the supposed minefield. An entire battalion trained its weapons on the commander as Brion's Legion moved within range. In a moment, Colonel Brion's 'Mech exploded, leaving only its legs standing on the field. The sudden loss of their commander demoralized the warriors of Brion's Legion. When they broke and retreated, the 'Mechs of the Deneb Light Cavalry were in hot pursuit.

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Sergeant Berlanga returns his Davion BLR-4S BattleMaster *to its hangar, followed by a Light Utility Truck.*

While 'Mechs and Combat Vehicles receive all the glory, no battle could be waged or won without the mammoth apparatus of Support Vehicles that feed the war machines of the Great Houses. From cargo trucks to tanker airships, patrol boats to fixed-wing aircraft, even hover and wheeled police cruisers and civilian vehicles conscripted into the military, the Support Vehicle is the backbone of any military machine.

BattleTech provides rules for several different types of Support Vehicles, as defined in *Components* (see p. 20). Most of the rules for using Support Vehicles in the game appear in the *Movement, Combat* and *Combat Vehicles* sections. This section covers additional rules that only apply to specific Support Vehicles.

Special Movement Rules

In general, Support Vehicles move on the map like other units, with the restrictions already addressed in the *Movement* section. Two types of these vehicles require unique sets of movement rules: Airship Support Vehicles and Support Vehicles with the Tractor and Trailer chassis modification.

AIRSHIPS

As a special class of conventional aircraft, Airships fly and maneuver in the same fashion as aerodyne DropShips (see p. 80), but they may also hover like spheroid small craft and must use the *Spheroid Small Craft* rules for landing and takeoff. Hovering maneuvers only cost an Airship 1 Thrust Point rather than 2, and landing maneuvers only require 1 Thrust Point (see p. 87). Because of their unique construction, Airships move far more slowly than most other conventional air vehicles and can be designed using fractional Thrust Points.

Rather than tracking fractional velocity, Airships instead must "stockpile" their thrust over a cycle of four game turns and may not change the rate at which they expend Thrust Points until the end of each cycle. If an Airship suffers damage that makes it impossible to maintain its current thrust rate, it must reduce its thrust appropriately at the end of the four turns. During each cycle, Airships using Thrust Points at their current rate may apply their accumulated points in each turn of the cycle as indicated

AIRSHIP VELOCITY TABLE

Current Velocity	Thrust Points per Cycle Turn			
	1	2	3	4
0.25	1	—	—	—
0.5	1	—	1	—
0.75	1	—	1	1
1	1	1	1	1
1.25	2	1	1	1
1.5	2	1	2	1
1.75	2	1	2	2
2	2	2	2	2
2.25	3	2	2	2
2.5	3	2	3	2
2.75	3	2	3	3
3	3	3	3	3

AIRSHIP RANDOM ALTITUDE CHANGE TABLE

2D6	Result
2	Altitude reduced by 3*
3	Altitude reduced by 2*
4	Altitude reduced by 1*
5	Altitude reduced by 1*
6	Altitude remains the same
7	Altitude remains the same
8	Altitude remains the same
9	Altitude remains the same
10	Altitude increased by 1*
11	Altitude increased by 1*
12	Altitude increased by 2*

*Airships may only climb as high as Altitude 10 on a low-altitude map (see *Low-Altitude Movement*, p. 80).

under the Thrust Points per Cycle Turn column on the Airship Velocity Table. Special maneuvers that normally use more than 1 Thrust Point (such as landing) must be announced at the beginning of each cycle. Unused Thrust Points are lost at the end of each cycle.

When using the *Aerospace Units on Ground Mapsheet* rules (see p. 91), an Airship moves the equivalent of four ground map hexes for every 0.25 points of velocity.

> *At the start of a game, the controlling player of an Airship sets its Velocity at 0.5. The vehicle must maintain this velocity for turns 1 through 4 (the four-turn cycle). After looking at the 0.5 Velocity row on the Airship Velocity Table, the player sees that in the first and third turns of each cycle, his Airship may expend 1 Thrust Point. The player may choose to apply that thrust in forward movement, or spend each point to hover, or even announce at the start of the cycle that the Airship will be landing, and may stockpile the first Thrust Point so that the vehicle can execute the landing maneuver in Turn 3. At the start of the Movement Phase (Aerospace) in the fifth turn, the Airship's controlling player can decrease its velocity to 0.25 or increase it to 0.75 for the next four-turn cycle.*

Airships attempting to travel at a Velocity greater than 3 automatically go out of control. Airships that go out-of-control after being struck by weapons fire do not lose 1d6 Altitude Levels, but instead roll on the Airship Random Altitude Change Table (above). Airships cannot operate beyond the limits of an atmosphere. When landed, Airships occupy a single ground hex.

TRACTORS

Wheeled and tracked Tractors may pull one or more Trailers whose combined weight is less than or equal to the Tractor's own weight. The weight of the Trailers reduces the Tractor's speed as follows: if the Trailers weigh up to a quarter of the Tractor's own weight, the Tractor must subtract 3 from its Cruising MP or half of its Cruising MP (round down), whichever is less. If the Trailers weigh more than a quarter of the Tractor's tonnage, the Tractor may only move at half its Cruising MP (round down). Once the player has calculated the Tractor's modified Cruising MP, he must also recalculate its Flank MP, multiplying that number by 1.5 and rounding to the nearest whole number (round .5 up). Wheeled or tracked Tractors always pull Trailers from the front.

A player may announce that a Tractor is detaching its Trailer at the end of the Movement Phase. In the following turn, the player can recalculate the Tractor's Cruise and Flank MP. The detached Trailer or Trailers become immobile targets.

TRAILERS

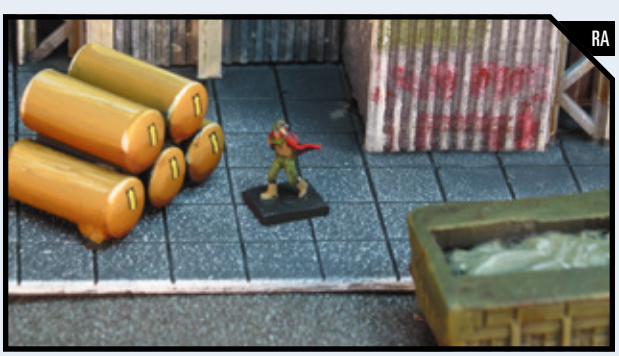
A Trailer may be towed by a Tractor or by another Trailer, but any Trailer intended to tow another must mount Tractor and Trailer chassis modifications. A Trailer cannot move under its own power; it must be towed by a Tractor or be part of a series towed by a Tractor.

Small and medium Trailers act as part of the Tractor Support Vehicle for purposes of movement, stacking and firing (two small and medium Trailers together act as a single Support Vehicle). Large Trailers are treated as individual units for purposes of stacking (see p. 57), and they must always follow the movement of the Tractor (or Trailer) in front of them.

If LOS falls across the hexside through which a Trailer/Tractor is connected to another Trailer/Tractor, no attack can be made. A turret mounted on the Tractor may fire as usual.

When attacking a Support Vehicle in a hex consisting of a Tractor and one or more large Trailers, or two or more small/medium Trailers, the attacker announces the intended target—a specific Trailer or the Tractor. The target must be visible to the attacking unit per standard LOS rules. For example, an attack from the sides may aim for any target, but an attack into the front firing arc can only be made against the Tractor, while one from the rear will strike the rearmost Trailer. In addition, a Tractor may be visible, while terrain obscures all or part of its Trailers.

Destroying a Trailer effectively detaches all Trailers behind it in a chain, rendering them immobile targets.



A Davion BattleMech technician scurries across the grounds of the massive Crucis Lancers base.

ADDITIONAL COMBAT RULES

Support Vehicles use the standard rules as Combat Vehicles for firing arcs, multiple targets, to-hit modifiers, taking damage and so on, with the following exceptions.

Fixed-Wing Support Vehicles: Fixed-Wing Support Vehicles are treated as conventional fighters (see *Aerospace Units* p. 242) for the purpose of making attacks and determining hit locations and critical hits. However, damage to the armor of Fixed-Wing Support Vehicles is resolved according to the rules under *Damage*, below.

TO-HIT MODIFIERS

Support Vehicles must take into account the following to-hit modifiers when making weapon attacks.

Fire Control Systems

If a Support Vehicle does not mount a fire control system, the unit suffers a +2 to-hit modifier. A Support Vehicle with a basic fire control system suffers a +1 to-hit modifier. If the vehicle mounts an advanced fire control system, no additional to-hit modifiers for weapon attacks apply.

Large Support Vehicles

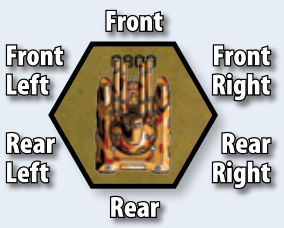
Large Support Vehicles ignore the multiple targets modifier when firing at more than one unit.

HIT LOCATION

Support Vehicles use the standard rules for resolving hit locations, with the following exceptions.

Attack Direction

Large Ground Support Vehicles take damage to more armor locations than standard vehicles. Use the adjacent diagram to determine attack direction for these units.



LARGE SUPPORT VEHICLES

• ATTACK DIRECTION DIAGRAM •

Determining Hit Location

When rolling to determine hit location, Support Vehicles use the same tables as Combat Vehicles. Large Ground Support Vehicles, however, use the Large Ground Support Vehicle Hit Location Table.

If the attack hits the front right side, all Front Side results strike the front right side armor, while Rear Side results strike the rear right side armor. If the Support Vehicle has no turret, a turret hit strikes the armor on the side attacked.

Airship Support Vehicles: Airships use the aerodyne DropShip hit locations on the Aerospace Units Hit Location Tables (see p. 237). However, players must re-roll all critical hits to the K-F boom, docking collar or gear until an applicable critical hit occurs.

VTOL Large Support Vehicles: VTOL Large Support Vehicles use the same Hit Location Table as Combat VTOLs (see p. 196).

DAMAGE

Support Vehicles handle damage differently than Combat Vehicles. Every time a Support Vehicle suffers a hit that exceeds its BAR rating, a chance exists for a critical hit (called a penetrating critical hit), even if armor remains in that location. Penetrating critical hits are rolled in the same fashion as standard critical hits (see *Critical Damage* p. 192), with the following exceptions.

LARGE GROUND SUPPORT VEHICLE HIT LOCATION TABLE

	Attack Direction			
2D6 Roll	Front	Rear	Front Side§	Rear Side§
2*	Front (critical)	Rear (critical)	Side (critical)	Side (critical)
3	Right Side†	Left Side†	Front†	Rear†
4	Front†	Rear†	Side†	Side†
5	Front†	Rear†	Side	Side
6	Front	Rear	Side	Side
7	Front	Rear	Side	Side
8	Front	Rear	Side (critical)*	Side (critical)*
9	Front†	Rear†	Side†	Side†
10	Turret	Turret	Turret	Turret
11	Turret	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or 8 if the attack strikes the side) may inflict a critical hit. For each such roll result, apply damage normally to the armor in that section. The attacking player then rolls once on the Ground Combat Vehicle Critical Hits Table, p. 194. A result of 12 on this roll may inflict a critical hit against the turret. If the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction.

†The vehicle may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table, p. 193 (applying damage at the end of the phase in which the damage takes effect).

§If the attack hits the front right side, all Front Side results strike the front right side armor, while Rear Side results strike the rear right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

Armor-Piercing Ammunition: Every successful attack against a vehicle automatically causes a roll on the appropriate column of the appropriate Vehicle Critical Hits Table, corresponding to the location damaged; in the case of Support Vehicles with a BAR less than 10, apply a +2 modifier to the die roll. The standard modifiers indicated by armor-piercing ammunition for determining critical hits still apply when rolling on the Vehicle Critical Hits Table (see *Armor Piercing Ammo,* p. 140).

Fixed-Wing Support Vehicles: Any location on a Fixed-Wing Support Vehicle without additional armor beyond the basic BAR of 2 receives a Damage Threshold of 0. Any location protected by armor with a BAR rating of up to 9 receives a Damage Threshold of 1 regardless of the amount of armor carried. When using armor with a BAR 10 rating, calculate Damage Threshold values per standard Damage Threshold value rules (see p. 239).

Modifications: If the Support Vehicle possesses the Armored Chassis modification and a BAR of 10, it is immune to penetrating critical hits. Treat the unit as a Combat Vehicle when resolving critical damage. If the Support Vehicle possesses the Armored Chassis modification but has a BAR of less than 10, modify the roll for penetrating critical hits by –1.

Penetrating critical hits may occur in addition to any normal critical hits due to location or internal structure damage. The Armored Chassis modification does not affect rolls for these normal critical hits.

A tracked Support Vehicle with an Armored Chassis modification and a BAR of 7, with 12 armor points per side, takes a hit from a large laser to its front side (Hit Location Roll result of 7). Because the laser's 8 points of damage exceeds the Support Vehicle's BAR, a penetrating critical hit has occurred, even though 4 points of armor remain in the front.

Because the Support Vehicle has an Armored Chassis modification, however, the roll for the penetrating critical is modified by –1. When the attacker rolls for the critical, his result of 6 becomes a 5, narrowly saving the unit from a possible critical hit.

In a later turn, the same Support Vehicle takes a second large laser hit to its front, in this case from a Hit Location Roll result of 2. The laser causes a penetrating critical hit, has breached the armor, and has struck a location that gives the attacker an additional possible critical hit. The attacker rolls three times for critical hit effects, modifying only the first roll—the one for penetrating critical hits—by –1.

If, on the other hand, the Support Vehicle were struck by an AC/5 using armor-piercing rounds, it would be forced to make a critical hit check regardless of its BAR (see Armor-Piercing Ammunition, *p. 206). If it had a BAR of less than 10, the vehicle would add a +2 modifier to this check.*

CARRYING UNITS

The following rules cover how units mount and dismount from Support Vehicles.

Unless specifically noted otherwise, units use the same rules to mount and dismount from Support Vehicles as for mounting and dismounting from grounded aerospace units (see *Carrying Units*, p. 89, in the *Aerospace Movement* section). The number of cargo doors and the type of bays a particular Support Vehicle may have will appear in the unit's technical readout or record sheet game statistics.

Infantry: Use the *Infantry Carriers* rules (see p. 223) for infantry mounting and dismounting from Support Vehicles.

MOUNTING

To mount a Support Vehicle during a turn, a unit must start its Ground Movement Phase in the same hex as the carrier (or an adjacent hex for Large Support Vehicles; the adjacent hex must be at the same elevation as the Support Vehicle's underlying hex). The unit may mount only at the end of the carrier's movement. Carrying units suffer no reductions in MP for hauling other units as long as those units' weight does not exceed the carrier's own weight or cargo capacity (see *Cargo Carriers*, p. 261).

A Support Vehicle must spend 1 MP to mount a number of units in a turn equal to the number of doors it contains. For example, a Support Vehicle with three doors would spend 1 MP to mount three units in a turn. If a vehicle has 0 MP to expend, it cannot mount any units.

Units may not mount enemy Support Vehicles using these rules.

Critical Damage: Critical damage to a carrying Support Vehicle affects its cargo in different ways (see *Ground Combat Vehicle Critical Hit Effects*, p. 193 of *Combat Vehicles*).

DISMOUNTING

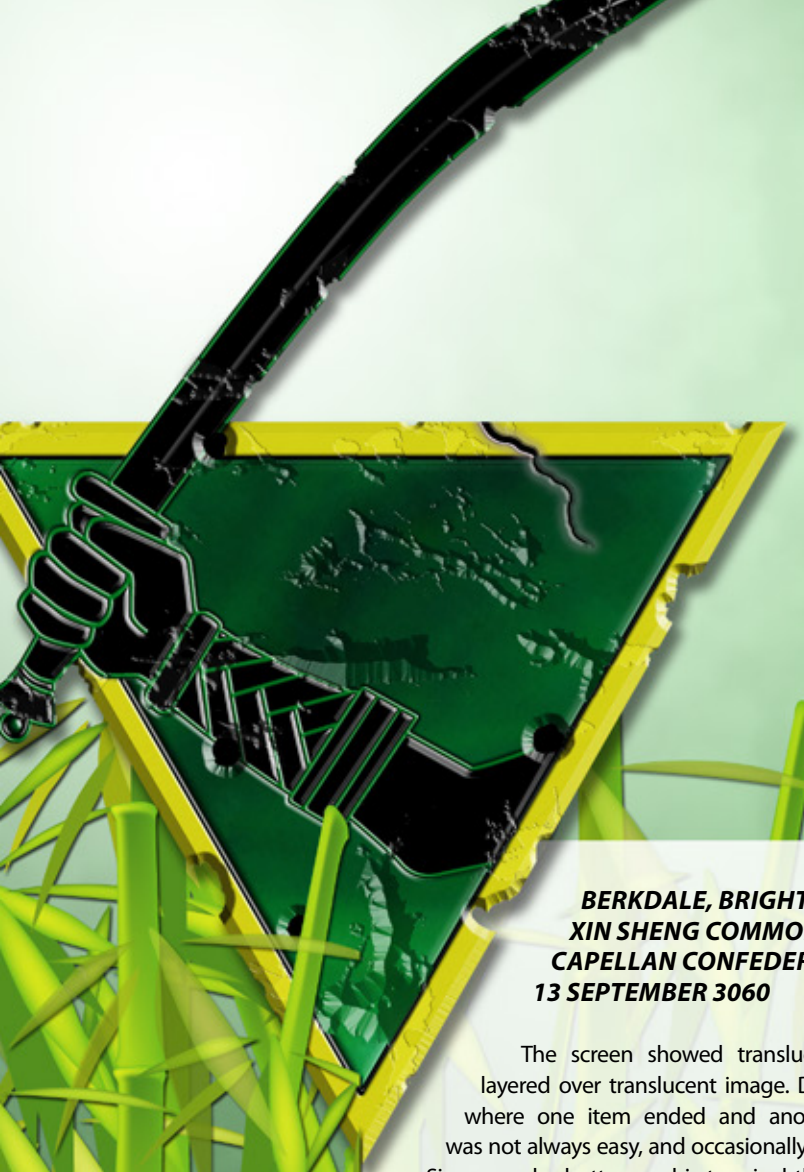
As with mounting, a Support Vehicle must spend 1 MP at the end of its movement to dismount a number of units in a turn equal to the number of doors it contains. If a carrying unit has 0 MP to expend, the carrier may only dismount a number of units equal to half its doors, rounded down (to a minimum of 1). For example, if a support vehicle has three doors but has had its Movement reduced to 0 through damage, it can dismount only one unit in a turn.

If a unit's movement is cut short—for example, if a vehicle fails a skid and slides into an object, thereby ending its movement phase prematurely—no unit may dismount even if the carrier has not expended all of its MP.

Mobile Army Surgical Hospital (MASH), Third Crucis Lancers (House Davion)

Proper Work

Jason M. Hardy



BERKDALE, BRIGHTON
XIN SHENG COMMONALITY
CAPELLAN CONFEDERATION
13 SEPTEMBER 3060

The screen showed translucent image layered over translucent image. Determining where one item ended and another began was not always easy, and occasionally *Si-ben-bing* Siu pressed a button on his terminal that told the vehicle outside to go even slower. He leaned forward and explained to *Shia-ben-bing* Lawson just what he was looking for.

"If you mean to do this job properly, the first thing you must remember is that many people are coming down from the mountain mines, and can therefore be expected to have many of the tools you'd expect to see in such an operation. Do not mistake those tools for any sort of weapon.

"At the same time, be aware that potential insurgents know mining equipment is regularly coming through the city's checkpoints, and they seek to smuggle in weapons by disguising them as mining equipment. Pay particular attention to such items."

So you're telling me something that looks like mining equipment may or may not be mining equipment, and that I should ignore it while simultaneously paying particular attention to it, Lawson thought. Part of him wanted to say the words aloud, but as Siu's trainee he didn't dare.

Lawson sat in the small yellow kiosk, perched on an unpadded metal stool, surrounded by screens and weapons and buttons. His uniform, with its long Liao-green sleeves, felt too warm for the Brighton sun. He tried to ignore his discomfort and absorb Siu's instruction while more vehicles passed through. The drivers waved their identification cards at the reader while the scanners gave their vehicles a thorough look. Some of them looked bored, some nervous, some strained to look casual. None of them looked happy. Lawson couldn't blame them.

Fifteen more minutes went by. Then Siu abruptly leaned forward and pressed a black button on his terminal. The checkpoint outside filled with flashing red lights, and an automated voice—a pleasant but firm female tone—came on.

"Please pull over to the green square on your right. Please pull over to the green square on your right. Please pull over to the green square on your right."

The voice did not mention what would happen if the vehicle didn't comply, but by this point it didn't need to. The residents of the St. Ives Compact (or, as Chancellor Sun-Tzu Liao had renamed it, the Xin Sheng Commonality) were by this point quite familiar with the lengths to which the soldiers of the Confederation would go to enforce law and order. The car pulled into the square.

Siu stood. "*Shia-ben-bing*, come with me. You'll need to learn how to work this side of the operation as well."

Lawson obediently followed Siu outside.

"Keep your hand near but not on your weapon," Siu instructed as they walked. "You don't want to make the subjects nervous, but you also don't want them to be able to shoot faster than you."

"Yes, sir," Lawson said. *Maybe someday Siu will give me a completely unambiguous piece of advice.*

The car in the green square was small and blue, a four-seater. A woman sat behind the steering wheel, a man in the passenger seat to her left. Siu walked up to the woman.

"*Ngh on*," he said politely, his long face dour. "May I ask your business in Berkdale today?"

"We live here," the woman said shortly. Her black hair was chin length, plastered to her head like a helmet, the front ends curling in toward her mouth.

"Then what took you out of the city?"

"Business."

"I'll need you to be more specific."

"A meeting with potential clients in Verdure. We run a catering business. We were discussing the terms of a job."

"I see. What sort of job?"

"I don't see how …"

"I'm not asking you to see how it matters," Siu said, his voice level but firm. "I'm asking you what sort of a job it was."

"A wedding reception."

"At a private residence?"

"Yes."

"Family of the bride or groom?"

"Friend. Of the bride's family."

"Will it be held indoors or outdoors?"

"Now, this is too …"

"Indoors or outdoors?"

"Outdoors. The wedding is in October. The weather should warm up nicely."

"What do you plan to serve?"

"Pastries, cakes, cookies. Assorted sweets."

"The groom likes sweets?" Lawson noticed that Siu was talking faster and faster.

"The bride. These are friends of the bride."

"Of course. And how many people are they going to be expecting?"

"About two hundred."

"And their living room is large enough to hold all those people?"

"Yard. Their yard is big enough. The reception is outdoors."

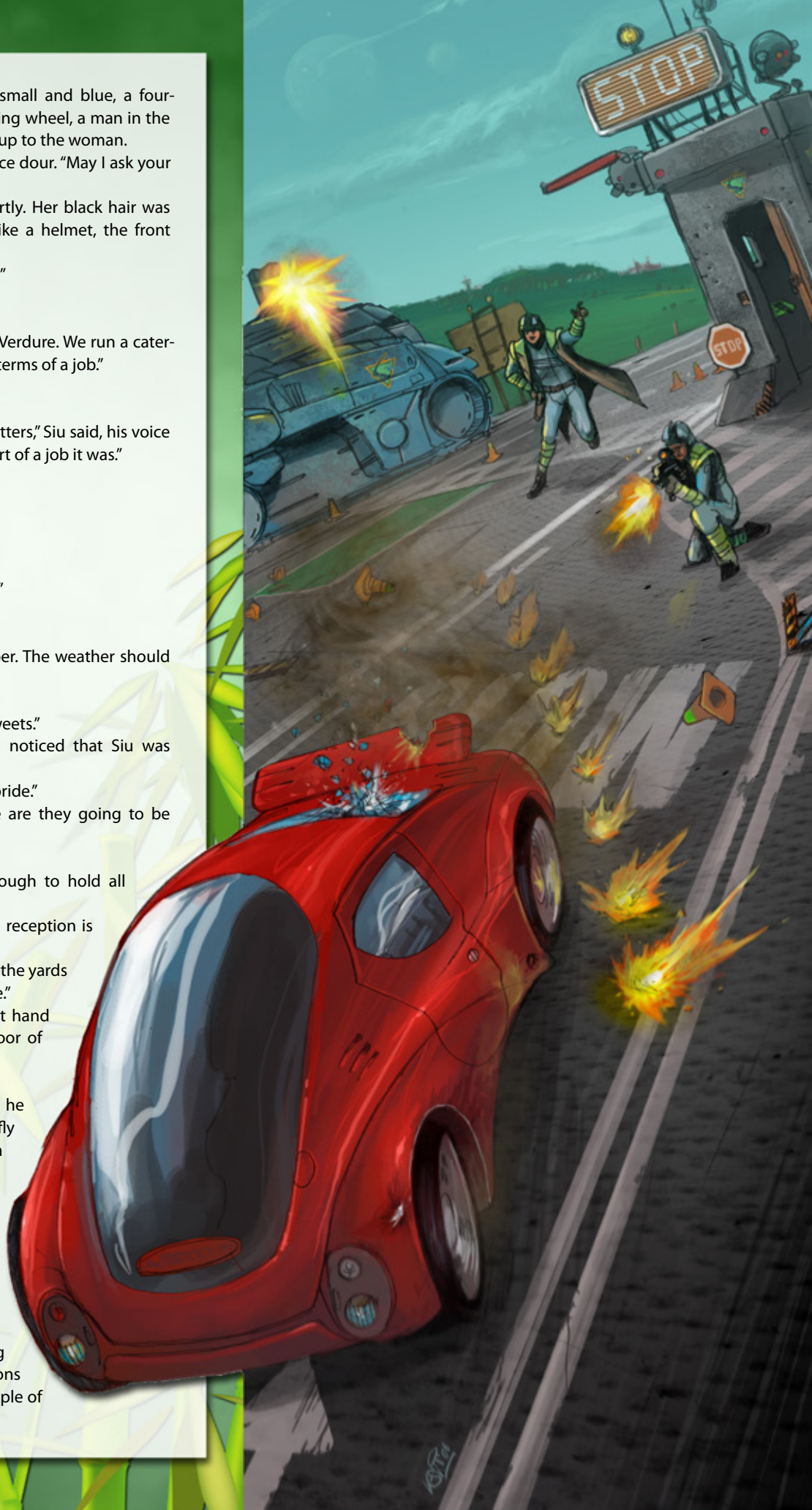
"Ah, yes, I believe you said that. Well, the yards in Corson Creek are usually quite large."

"Verdure," the woman said, her right hand drumming a rapid rhythm on the door of her car. "We were in Verdure."

"Fine. You may proceed."

The woman scowled at Siu as he walked away. She looked ready to fly away from the checkpoint with a scream of burning rubber. Instead, she pulled smoothly out of the green box and drove off.

Siu began offering more pointers as soon as the woman's car started moving. "Never apologize for pulling someone over. Never thank them for their time. They should never feel like they are doing you a favor. Ask them enough questions to make them repeat their facts a couple of



times, but don't rely on that. Any insurgents with even a small degree of skill will have a good cover story worked out that you can't easily shred. You need to use the interrogation time to look for visual clues as well as listening to their responses."

"What kind of clues?"

Siu, true to form, responded with contradictions as he walked back toward their kiosk. "Be cautious of anyone who does not display any items that reflect the spirit of Xin Sheng. All Capellan citizens should take part in this rebirth, especially those citizens of the newly christened Xin Sheng Commonality. Resisting this movement could be a sign of someone who harbors dangerous thoughts. However, you must also beware of those who cover themselves in Xin Sheng items. Such a rapid assimilation of the ideals of their conquerors is suspicious and is likely insincere. People who seem overly dedicated to the rebirth could be concealing treasonous tendencies."

Lawson dared venture a question. "Is there a specific number of Xin Sheng-related items that would be considered neither too many nor too few?"

He tried to make his tone as innocent as possible. It wasn't innocent enough. Siu stopped and pivoted, hands on hips, glaring at Lawson.

"Impertinence is not accepted in any branch of the Chancellor's *gwan deuih*," Siu snapped. "Perform your duty with a proper demeanor or you will not be in the service for long."

Lawson knew better than to attempt a response.

The rest of the day did nothing more to assuage his growing dissatisfaction. He managed to contain his frustration until the next morning, when Siu wandered to another kiosk in the checkpoint to enlighten another recruit with his unique wisdom. Lawson was left with *Shia-ben-bing* Lin, and *Shia-ben-bing* Lin was left to listen to Lawson's rants.

He covered his irritation with Siu, his dislike of the glares he regularly got from the citizens of Brighton, then moved on to his annoyances with his general assignment.

"Is this what you thought you were signing up for? Is this what you thought you'd be doing?" he asked—though, as he hadn't given Lin a chance to speak in the past twenty minutes, the questions were purely rhetorical. "There's a major offensive going on all around us, in systems just a jump away, and we're sitting here in a glorified *tollbooth*. We were trained to *destroy*, and they've got us acting like bloody thought police—like we're the *tian sha de* Maskirovka or something."

Lin's eyes widened. "Watch what you say!"

"Oh, who cares? You're not Maskirovka, are you? Of course not. And I'm not. So I can call them *tian sha de* if I want to. They wouldn't put me in irons just for a simple epithet, would they?"

Both of them knew the answer to that question was likely "Yes," but neither of them said so.

He hadn't succeeded in calming Lin. Her eyes darted back and forth; her right hand scratched her thigh. He knew she wasn't just nervous for his sake. For all she knew, *he* could be Maskirovka, and his little utterance could be an on-the-spot loyalty test. If she didn't adequately rise to the Maskirovka's defense, she might be the one in irons before the end of the day.

"It's just … not the best thing to say," Lin said. "They've got a part in this struggle just like we do. We shouldn't treat them like an enemy."

"Okay, fine. Sorry," Lawson said. "I guess it's our part in the struggle that really bothers me. More than anything they do."

"We're infantry," Lin said. "We do the things the big machines can't. Sometimes that's house-to-house combat. Sometimes open field operations. And sometimes—" she shrugged "—it's sitting in a kiosk helping keep a planet under control." She smiled. "Couldn't really put a *Ti Ts'ang* on the roadside, could we?"

"I dunno," Lawson said. "Could have a good effect on traveler morale. Good for us, I mean. Just seeing it hovering over the highway would keep people in line."

"But it would put them on their guard," Lin countered. "Everyone would clam up on us. Bad for business."

Lawson gave a dissatisfied snort. But there wasn't much to be gained by complaining anymore. At least, not out loud. He kept a running internal monologue going, most of it complaints. All the while, he imagined himself sitting by the checkpoint in the cockpit of a *Ti Ts'ang,* blasting anyone who didn't follow his instructions to smithereens.

Ten more days passed before Lawson got to lead his first questioning. Siu didn't like his trainees to think of it as interrogation, as he believed that made them come off too heavy-handed. The driver, identified by his papers as Roderick Hirt, was a square-headed man with a short, flat haircut. He looked ready to rip Lawson in two. Lawson stood 1.7 meters, and he guessed the driver was 1.9 and about 120 kilos. If the encounter turned physical, it could get bad—except, of course, for the fact that Lawson had his rifle.

"*Ngh on*, sir. Where are you coming in from?" He cringed as soon as he delivered the sentence, waiting for Siu to correct his poor grammar. His superior said nothing.

"Been out of the city for a few days."

"Yes, sir." The computers at the checkpoint had scanned the car, an Avanti Starfire that wore its newness with pride, as soon as it came through. They had alerted Lawson that the car had been out of the city for exactly five days. "And where were you?"

"Different places. St. Simon, Paulson, Friedlander."

All mining towns, Lawson thought—like pretty much every small town in the area around Berkdale. "And what brought you out to those towns?"

"Business."

Unwilled, one of Siu's "guidelines" came to Lawson's mind. "Be suspicious of people who provide a bare minimum of information in reply to your questions. It often means they have something to hide. At the same time, remember to respect the privacy of loyal citizens of the Confederation. If you encounter people who wish to withhold information from you in order to preserve their own dignity, you owe them a certain amount of respect. Though that respect should never compromise your pursuit of the truth."

Lawson tried to push all thoughts of Siu out of his mind.

"What sort of business?"

"Research. I'm with a commodities brokerage. Never hurts to see how the actual mining and production of commodities is going."

"Looking into the silver production in Paulson?"

"No silver in Paulson. Big copper mine there."

"Yes, yes, of course. Which brokerage firm did you say you work for?"

"I didn't."

"Then please do."

"Waterman and Clask."

"On Fifteenth Street?"

"Ninth."

"I assume you slept in hotels on your trip?"

"Of course."

"Which ones?"

"I'm pretty sure I don't need to tell you that."

"Actually, sir, you do. The names of the hotels, please."

Hirt squinted. "The Accord, the Yu Yang, and the Deep Valley Inn."

"That's three."

"Right."

"But you were gone five days. Four nights."

"That's not true. I was gone for three nights."

"Not according to our records."

"Then your records are wrong."

"I'm afraid that's not possible."

"It is."

"Sir, you left Berkdale four nights ago. I need to know where you spent that fourth night."

"There was no fourth night!"

Lawson put both hands on his automatic rifle. "Sir, I have to ask you to step out of your car."

"This is ridiculous!"

"Step out of the car!"

"All right, all right."

Hirt reached for the door handle. Then the Starfire's engine gunned, its tires squealed, and the sporty red car shot off toward Berkdale.

Alarms blared across the checkpoint. Red lights flashed. Monocycle engines roared to life, ready to give pursuit.

Lawson leveled his rifle and fired several rounds into the back of the red car. Clear shots at someone who was clearly an enemy.

The first rounds bounced off the back window, but Lawson wasn't the only one firing at the fleeing vehicle, and eventually the rounds had an impact. Glass flew away in chips, then in chunks, then the entire back window fell inward like hail. The rounds kept coming, and some of them found the driver. The Starfire skidded off the road before it had traveled three hundred meters.

Siu, who had been firing right along with Lawson, turned to his recruit once the red car came to a complete stop.

"It's unfortunate that your interrogation came to this," Siu said. "Perhaps you could have handled the situation in other ways, ways we will discuss in the near future. But I believe you'll be able to clear this as a good shooting."

Lawson kept his head tilted down, looking at his hands. It might make him look downcast, which he wasn't, but it also might make Siu follow his gaze downward.

It worked. Siu looked curiously at his recruit for a moment, then glanced down at Lawson's hands. Then he saw something Lawson thought he needed to see.

Siu's expression didn't change, but when he spoke, the condescension in his voice was gone.

"I'm certain it was a good shooting," he said.

The incident made Lawson's life better and worse. As it turned out, Roderick Hirt really did work for the wealthy brokerage firm of Waterman and Clask; in fact, he was a well-regarded vice-president. In the wake of his death, rumors about why he had been killed, what he might have been involved in and what, by extension, his firm might have been involved in spread across the city. Wealthy clients, understandably nervous about having any of their money attached to a firm with a trace of disloyalty, pulled their money by the millions. Almost overnight, Waterman and Clask's business dried up. One of the most powerful brokerages in the city became little more than a shell that had investments from Mr. Waterman, Mr. Clask and pretty much no one else.

The whole thing, Lawson thought, made an effective demonstration. He regretted that he had to reveal his true position to Siu, but his superiors had authorized the move. Not only had Lawson shut down Waterman and Clask's financing pipeline to St. Ives loyalists, but he'd effectively controlled Siu. The supposed superior officer was now quite deferential to his trainee, and he no longer offered a hint of his "wisdom." Lawson had long ago learned questioning techniques Siu had never even heard of, so Siu's new silence on the subject was welcome.

It didn't matter, though. He likely wouldn't stay at the checkpoint for long. He had shown the Maskirovka his worth in carrying out the assignment quickly and cleanly. Everything he planned—the computer tampering that made it look like Hirt had been gone for four days instead of three, the gizmo in the car that locked the doors and made the vehicle accelerate away when Hirt was getting ready to exit—had worked to perfection. Lawson didn't even have to pull any strings to get the shooting cleared.

He'd get into the battlefield soon. The front lines, the heart of the ongoing battle. He was sure of it. He could fight both sides then—using his Maskirovka skills to weed out disloyalty in the Confederation while aiming his weapon squarely at the faces of foreign foes. When he wasn't doing the agency's dirty work, he'd be firing rounds at the enemy. He knew well the importance of enforcing loyalty—what Maskirovka agent didn't?—but he'd recently gained an appreciation for the simple clarity of shooting people whose very uniform told you they were your enemy. He'd spent years developing his own rules for intelligence work, rules that made Siu's paradoxes seem cut-and-dried by comparison. He would, of course, keep following those rules, but when he needed to get away from them for a time, when he needed a black-and-white world, the battlefield would be waiting for him. Dividing his time between enforcing loyalty to the Chancellor and smiting the enemies of the Confederation—could any agent ask for more proper work?

A Fifth Syrtis Fusiliers Enforcer III *defends against anti-'Mech attacks by elite House Liao battle armor infantry.*

BattleMechs and vehicles are expensive to manufacture and difficult to maintain. In addition, the process of training MechWarriors and vehicle crews is time-consuming and costly. By comparison, infantry can be recruited and given rudimentary training and equipment rapidly and inexpensively. There is almost no limit to the number of infantry troops that can be thrown, willing or unwilling, into battle.

Though many stellar empires regularly include infantry as part of integrated 'Mech and vehicle forces, the strength of infantry reveals itself most in defensive operations, which bypass the difficulty of transporting and feeding a mass interstellar army. Infantry forces also rarely last long against BattleMechs, being heavily outgunned by those behemoths of the battlefield. Even in offensive operations, however, infantry can sometimes inflict enough damage to turn the tide of battle, and can become a serious threat in confined areas such as dense woods and urban zones.

Just as there is no limit to the number of troops that can be thrown into battle, there are few limits to the composition of such conventional infantry, with every faction fielding troopers bearing specific, faction-made weapons, armor and so on. Though basic unit types and organization apply across factions, conventional infantry are too varied to cover fully in a technical readout. While such differences rarely change the basic game statistics of a particular conventional infantry platoon, they can increase the enjoyment of the game as a player further immerses himself in the unique aspects of a given faction. This makes conventional infantry unique compared with any other unit type in *BattleTech*.

A detailed design system for conventional infantry platoons appears in *TechManual*, allowing players to build faction-specific infantry units sporting a myriad of weapons and armor types. *Total Warfare* presents a set of generic conventional infantry units, as noted on the Generic Conventional Infantry Units Table (see p. 213). The table also notes Movement Points and the number of men in a full-strength unit of each type. The basic units under each infantry type—a Rifle (Ballistic) Foot Platoon, Machine Gun (Ballistic, Support) Motorized Platoon and so on—can represent different kinds of weapons, though they all fall under the general description of the unit type in question. For example, a Rifle (Ballistic) Platoon can field standard rifles, Gauss rifles, gyrojet rifles, needlers and so on (or any combination thereof).

Finally, it should be noted that the specific number of troopers per platoon are for game purposes, regardless of how the sourcebook or story fiction has previously described the number of troopers per a given platoon type.

Record Sheets: As noted under *Record Sheets*, p. 11, blank, generic record sheets for conventional infantry are found in *TechManual*. Players can also locate generic sheets (as well as pre-generated generic conventional infantry platoon record sheets) online at bg.battletech.com. Using the information in this section, players can quickly fill out the infantry record sheet with a variety of conventional infantry units, as needed.

Though conventional infantry using the infantry platoon construction rules found in the *TechManual* can be armored beyond the single point of armor represented by the trooper, all the generic infantry units presented below have a single box of armor per trooper (representing the trooper's actual body, as depicted by the infantryman in each box). That means each point of damage inflicted against these infantry units eliminates a single trooper, with the exception of mechanized infantry (see *Attacks Against Conventional Infantry*, p. 215).

GENERIC CONVENTIONAL INFANTRY UNITS TABLE

Type	MP	Number of Troopers (Inner Sphere/Clan)	Tons of Cargo Space Occupied
Foot Infantry Platoon			3
Rifle (Ballistic)	1 Ground	28/25	
Rifle (Energy)	1 Ground	28/25	
Machine Gun (Ballistic)*	0 Ground**	28/25	
SRMs (Missile/Ballistic)	0 Ground**	24/25	
LRMs (Missile/Ballistic)	0 Ground**	20/25	
Flamers (Energy)†	0 Ground**	28/25	
Motorized Infantry Platoon			6
Rifle (Ballistic)	3 Ground	28/25	
Rifle (Energy)	3 Ground	28/25	
Machine Gun (Ballistic)*	2 Ground	28/25	
SRMs (Missile/Ballistic)	2 Ground	24/25	
LRMs (Missile/Ballistic)	2 Ground	20/25	
Flamers (Energy)†	2 Ground	28/25	
Jump Infantry Platoon			4
Rifle (Ballistic)	3 Jump/1 Ground	21/20	
Rifle (Energy)	3 Jump/1 Ground	21/20	
Machine Gun (Ballistic)*	2 Jump/1 Ground	21/20	
SRMs (Missile/Ballistic)	2 Jump/1 Ground	18/20	
LRMs (Missile/Ballistic)	2 Jump/1 Ground	15/15	
Flamers (Energy)†	2 Jump/1 Ground	21/20	
Mechanized Infantry Platoon††			
Hover‡			20
Rifle (Ballistic)	5 Ground	20/20	
Rifle (Energy)	5 Ground	20/20	
Machine Gun (Ballistic)*	4 Ground	20/20	
SRMs (Missile/Ballistic)	4 Ground	16/15	
LRMs (Missile/Ballistic)	4 Ground	12/15	
Flamers (Energy)†	4 Ground	20/20	
Wheeled‡			24
Rifle (Ballistic)	4 Ground	24/25	
Rifle (Energy)	4 Ground	24/25	
Machine Gun (Ballistic)*	3 Ground	24/25	
SRMs (Missile/Ballistic)	3 Ground	20/20	
LRMs (Missile/Ballistic)	3 Ground	16/15	
Flamers (Energy)†	3 Ground	24/25	
Tracked‡			28
Rifle (Ballistic)	3 Ground	28/25	
Rifle (Energy)	3 Ground	28/25	
Machine Gun (Ballistic)*	3 Ground	28/25	
SRMs (Missile/Ballistic)	3 Ground	24/25	
LRMs (Missile/Ballistic)	3 Ground	20/20	
Flamers (Energy)†	3 Ground	28/25	

*Machine Gun Infantry Platoons inflict an additional 1D6 damage against conventional infantry platoons (see *Attacks Against Conventional Infantry*, p. 215).

**Units with 0 Ground MP can either move or make a weapon attack in a turn, but not both (see *Anti-'Mech Attacks*, p. 220, for the exception).

†Flamers can cause either heat or damage at the discretion of the controlling player. Some weapons have the capacity to do both at the same time (see *Heat-Effect Weapons*, p. 113).

††Double the damage from all infantry attacks each mechanized infantry trooper can sustain (see *Attacks Against Conventional Infantry,* p. 215).

‡Mechanized infantry have the movement type and prohibited terrain of their vehicle type, as shown on the Movement Cost Table (see p. 52).

BATTLE ARMOR ORGANIZATION/WEIGHT TABLE

Type	Number of Troopers (Inner Sphere)	Number of Troopers (Clan)	Number of Troopers (ComStar/WoB)	Tons of Cargo Space Occupied
Battle armor	4	5	6	1 per trooper

Terminology: Conventional Infantry units use the same weapon terminology as other units, as defined in *Combat* (see p. 113), and all applicable rules apply.

Conventional and Battle Armor Infantry: As defined under *Units* (see *Components*, p. 20), in these rules the term infantry refers to any infantry unit, whether conventional or battle armor. If the rules refer to only one type of infantry, the text will stipulate either conventional or battle armor infantry.

INFANTRY MOVEMENT

Infantry units have no facing and can move in any direction unless blocked by impassable terrain. In general, infantry must pay the same Movement Point costs as other units (as noted on the Movement Cost Table, p. 52).

Changing Level: Infantry may only climb 1 level per hex when using ground movement.

Jump infantry and jump-capable battle armor move per the jumping rules for 'Mechs, with the exception that infantry cannot enter a water hex of Depth 1 or deeper (see *Jumping*, p. 53); Inner Sphere battle armor units with body-mounted missile launchers cannot use Jumping MP until they jettison such launchers (the controlling player can announce he is ejecting the missile launchers at any time, marking them off on the appropriate record sheet). Infantry with VTOL and UMU MP move per the rules for those types of movements (see *VTOL* and *Underwater Movement*, pp. 54 and 56, respectively).

Buildings: Infantry units enter building hexes and change levels within a building as though entering Clear terrain, paying only 1 Ground MP to enter a building hex regardless of building type. Mechanized infantry must pay 2 Ground MP to enter a building hex. If a mechanized infantry unit only has 1 Ground MP available, it can still enter the building using the *Minimum Movement* rule (see p. 49). See *Buildings*, p. 166, for more information.

Rifle, Ballistic (Foot) Platoon, Prefectorate Guard (House Liao)

Mechanized Infantry: Mechanized infantry have the movement type and prohibited terrain of their vehicle type (see the Movement Cost Table, p. 52). For example, hovercraft-based mechanized infantry may traverse water of any depth, but cannot move through woods of any type.

Water: Infantry may not move into Depth 1 or deeper water unless the rules regarding a particular type of infantry specifically state otherwise, such as a battle armor unit with UMU MPs.

Woods: To enter any light woods hex, infantry pay only 1 MP (except for permitted mechanized infantry units, which pay 2 MP). Infantry pay only 2 MP to enter any heavy woods hex.

INFANTRY COMBAT

Rules for infantry combat are divided into two categories: conventional infantry and battle armor.

Arcs: All types of infantry have a 360-degree arc of fire and may fire at units occupying the same hex; when determining damage, assume such attacks strike from the front.

Attacker Movement Modifier: Infantry units never add attacker movement modifiers to their to-hit numbers.

Weapons and Equipment: As with the rules under *Weapons and Equipment* (see p. 113) of the *Combat* section, players should determine if a given conventional infantry platoon or weapon on a battle armor unit has additional to-hit modifiers, or other special rules that might affect the way the weapon is fired, by first reviewing the record sheet and then consulting the appropriate Weapons and Equipment Table. Players should also consult *Other Combat Equipment* at the end of this section, to determine if any other equipment the unit might carry can affect the weapons the unit is firing or any weapon attacks against the unit.

CONVENTIONAL INFANTRY

The following rules apply to conventional infantry in combat. Unless specifically stated otherwise, conventional infantry follow all the standard applicable rules for weapons fire, to-hit procedures and so on (see the *Combat* section, p. 98).

Conventional Infantry Attacks

While conventional infantry use the same range modifiers as 'Mechs and vehicles, unlike those units, infantry can attack another unit in the same hex. The Conventional Infantry Range Modifier Table (see p. 215) shows the to-hit modifiers for each platoon type at 0 range; for convenience, the table also lists the range to-hit modifiers for every generic platoon type, out to their maximum range in hexes. Because conventional infantry units only have a single weapon attack, they can only target a single unit for a weapon attack during a given Weapon Attack Phase.

All platoons have a Damage Type, which specifies the Type of damage they inflict:

- "B" (Ballistic): The platoon's attacks are of the Direct-Fire Ballistic Type (see p. 113)
- "E" (Energy): The platoon's attacks are of the Direct-Fire Energy Type (see p. 113)
- "M" (Missile): The platoon's attacks are of the Missile Type (see p. 113)
- "P" (Point-Blank Weapon): See *TechManual*, page 148

A platoon might also have Special Features, also detailed via letter code:

- "A" (Anti-Aircraft Weapon): The platoon can attack airborne aerospace units
- "B" (Heavy Burst Weapon): The platoon deals additional damage vs. Conventional Infantry; see *TechManual*, page 148
- "F" (Flame-Based Weapon): The platoon's attacks are also of the Heat-Causing Type (see p. 113)
- "N" (Non-Penetrating Weapon): The platoon's weapons can affect only other Conventional Infantry

The amount of damage that a standard infantry platoon can inflict is based on its current number of troopers and the type of weapons with which it is armed, modified by a roll on the Cluster Hits Table. After making a successful attack, the controlling player cross-references the current number of active troopers in the unit to the appropriate column on the table (see p. 116); for example, a platoon with 19 surviving troopers would roll on the Cluster Hits Table using the 19 column (for a platoon with only one trooper remaining the result is always "1").

After determining the appropriate column, the controlling player rolls 2D6 and consults the Cluster Hits Table to determine how many troopers actually struck the target. The player then cross-references the number of troopers that struck the target with the appropriate Maximum Weapon Damage Per Platoon Type column on the Generic Conventional Infantry Damage Table (see p. 216) to determine the actual damage dealt to the target; players can also find this information on the Generic Conventional Infantry record sheet. Finally, the controlling player divides the damage into as many 2-point Damage Value groupings as possible and rolls that number of separate hit locations. If a single damage point remains, roll that separate hit location by itself. If the target is a conventional infantry platoon, the damage is instead simply applied all at once.

Machine Gun Platoons: An attacking Machine Gun Platoon inflicts an additional 1D6 of damage against any conventional infantry unit.

Stealth Equipment: To-hit modifiers generated by BattleMech, basic, improved, prototype and standard stealth armor systems (regardless of which unit mounts the equipment) have no effect on conventional infantry (see *Stealth Armor,* p. 142, and *Other Combat Equipment*, p. 228). To-hit modifiers from mimetic armor and camo systems do apply to conventional infantry.

Jim has a Gunnery Skill 4 Inner Sphere LRM (Jump) Platoon that begins the Weapon Attack Phase with its standard complement of 15 troopers. Jim makes a successful to-hit roll against an opposing unit, and so must determine how many troopers actually strike the target. Jim rolls 2D6 and gets a result of 7. Consulting the 15 column of the Cluster Hits Table, Jim finds that nine troopers actually struck the target. Jim now consults the Generic Conventional Infantry Damage Table and finds that 9 troopers, cross-referenced with the LRM column, provide a final result of 4. Jim now rolls two to-hit locations (two 2-points) against the target; if the target is a conventional infantry platoon, Jim can simply apply the 4 points of damage.

Attacks Against Conventional Infantry

Unlike other units, conventional infantry are spread across a hex, with each man finding maximum protection using the terrain. This means that damage from a single weapon does not magically transfer from one trooper to the next; that is, the infantry unit does not simply take damage equal to the weapon's damage value. Instead, the damage from a single weapon to a conventional infantry unit depends on the type and size of the weapon fired.

Once a non-conventional infantry unit has made a successful attack against a conventional infantry unit, consult the Number of Conventional Troopers Hit column on the Non-Infantry Weapon Damage Against Infantry Table (see p. 216) and compare it to the type and damage value of each weapon that successfully strikes the target to determine how many troops have been eliminated. Use the maximum damage potential for cluster weapons, instead of rolling on the Cluster Hits Table for damage. Successful non-conventional infantry attacks against conventional mechanized infantry double the number of troopers eliminated in this fashion.

CONVENTIONAL INFANTRY RANGE MODIFIER TABLE

	Range in Hexes (To-Hit Modifier)									
Weapon Type	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Rifle, Ballistic	–2	0	+2	+4	—	—	—	—	—	—
Rifle, Energy	–2	0	0	+2	+2	+4	+4	—	—	—
Machine Gun	–2	0	+2	+4	—	—	—	—	—	—
SRM	–1	0	0	+2	+2	+4	+4	—	—	—
LRM	–1	0	0	0	+2	+2	+2	+4	+4	+4
Flamer	–1	0	+2	+4	—	—	—	—	—	—

GENERIC CONVENTIONAL INFANTRY DAMAGE TABLE

Number of Troopers	Maximum Weapon Damage Per Platoon Type*					
	Rifle, Ballistic	Rifle, Energy	Machine Gun	SRM	LRM	Flamer
1	1	0	1	0	0	0
2	1	1	1	1	1	1
3	2	1	2	1	1	1
4	2	1	2	2	2	2
5	3	1	3	2	2	2
6	3	2	3	3	3	3
7	4	2	4	3	3	3
8	4	2	4	4	3	4
9	5	3	5	4	4	4
10	5	3	6	5	4	5
11	6	3	6	5	5	5
12	6	3	7	6	5	6
13	7	4	7	6	6	6
14	7	4	8	7	6	7
15	8	4	8	7	6	7

Number of Troopers	Maximum Weapon Damage Per Platoon Type*					
	Rifle, Ballistic	Rifle, Energy	Machine Gun	SRM	LRM	Flamer
16	8	4	9	8	7	8
17	9	5	10	8	7	8
18	9	5	10	9	8	9
19	10	5	11	9	8	9
20	10	6	11	10	9	10
21	11	6	12	10	9	10
22	11	6	12	11	9	11
23	12	6	13	11	10	11
24	12	7	13	12	10	12
25	13	7	14	12	11	12
26	14	7	15	13	11	12
27	14	8	15	13	11	13
28	15	8	16	14	12	13
29	15	8	16	14	12	14
30	16	8	17	15	13	14

*Damage is always applied in 2-point Damage Value groupings

Burst-Fire Weapons: When a conventional infantry platoon takes a hit from any burst-fire weapon (noted as Type AI on the Weapon and Equipment Tables), the attacking player rolls for damage based on the type of weapon used; see the Burst-Fire Weapon Damage Vs. Conventional Infantry Table, p. 217. Battle armor units equipped with burst-fire weapons that fire on a conventional infantry platoon should roll the appropriate number of dice per the Burst-Fire Weapon Damage Vs. Conventional Infantry Table for each successful hit rolled on the Cluster Hits Table (see *Battle Armor Attacks*, p. 217). Add the die roll result for each hit to create a running total. This total represents the damage inflicted on the unit. As damage is taken, mark off the boxes indicating troopers on the platoon's record sheet, left to right, one for each damage point inflicted. When an attacker uses burst-fire weapons against conventional infantry located in a building hex, treat such weapons as direct-fire ballistic weapons, with their standard Damage Values as noted on the appropriate Weapons and Equipment Tables (see *Attacking Units Inside Buildings*, p. 171). Assign damage as appropriate according to the Non-Infantry Weapon Damage Against Infantry Table.

Clear Terrain: Conventional infantry hit while in Clear terrain (or any other terrain that provides no terrain to-hit modifiers) suffer twice the normal damage. This includes damage received from infantry and burst-fire weapons, as well as other non-conventional infantry-mounted weapons, Area Effect weapons and so on.

Damage from Other Infantry Units: Damage done by one conventional infantry unit to another always equals the standard damage inflicted; it cannot be reduced by using the Non-Infantry Weapon Damage Against Infantry Table. As damage is taken, mark off the boxes indicating troopers on the platoon's record sheet, left to right, one for each damage point inflicted.

NON-INFANTRY WEAPON DAMAGE AGAINST INFANTRY TABLE

Weapon Type*	Number of Conventional Troopers Hit†
BattleMech Physical Attack**	Damage Value / 10
Direct Fire (Ballistic or Energy)	Damage Value / 10
Cluster (Ballistic)	Damage Value / 10 + 1
Pulse***	Damage Value / 10 + 2
Cluster (Missile)	Damage Value / 5
Area-Effect (AE)	Damage Value / .5
Burst-Fire	See Burst-Fire Weapons above
Heat-Effect Weapons	See Heat-Effect Weapons‡

*See *Combat*, p. 113, for weapon terminology. If a weapon falls under multiple types, use the type that inflicts the most damage. For example, a rotary AC/5 is defined as a direct-fire (ballistic) and a cluster (ballistic) weapon. A cluster (ballistic) weapon does more damage than a direct-fire (ballistic) weapon, and so players should use the statistics for cluster (ballistic) weapons when determining damage against conventional infantry.

**Not including Thrashing Attacks (see p. 151).

***Except for Small and Micro Pulse Lasers, which are treated as Burst-Fire Weapons (see Burst-Fire Weapons Damage Vs. Conventional Infantry Table, p. 217).

†This equals the number of conventional infantry troopers hit and eliminated, regardless of armor protection. Attacks by non-infantry weapons against mechanized infantry double the number of troopers eliminated; round all fractions up.

‡Heat-Effect Weapon each has specific damage against conventional infantry, as noted on either the appropriate Weapon and Equipment Tables or in *Other Combat Weapons and Equipment* (see p. 129).

BURST-FIRE WEAPON DAMAGE VS. CONVENTIONAL INFANTRY TABLE

BattleMechs, ProtoMechs and Vehicles	
Weapon	**Damage vs. Conventional Infantry**
AP Gauss Rifle	2D6
Light Machine Gun	1D6
Machine Gun	2D6
Heavy Machine Gun	3D6
Small/Micro Pulse Laser	2D6
Flamer	4D6

*Battle Armor**	
Weapon	**Damage vs. Conventional infantry**
Light Machine Gun	1D6/2 (round up)
Machine Gun	1D6
Heavy Machine Gun	2D6
Flamer	3D6
Light Recoilless Rifle	1D6
Medium Recoilless Rifle	2D6
Heavy Recoilless Rifle	2D6
Light Mortar	1D6
Heavy Mortar	1D6
Automatic Grenade Launcher	1D6/2 (round up)
Heavy Grenade Launcher	1D6

*Any burst-fire weapon available to battle armor but not listed on the "Battle Armour" subtable (such as the small pulse laser) defaults to the burst-fire damage listed on the "BattleMechs, ProtoMechs and Vehicles" subtable.

Ying Long (Trinity) battle armor, Death Commandos (House Liao)

Mechanized Infantry: Successful non-conventional infantry attacks against conventional mechanized infantry double the number of troopers eliminated unless they are made with burst-fire weapons.

Against successful conventional infantry and burst-fire weapon attacks, double the damage each mechanized infantry trooper can sustain before being eliminated. If such a trooper is not eliminated, that unit's record sheet always retains at least one box of armor (which requires 2 points of infantry damage to eliminate) until the trooper is crippled or killed.

Suzanne's Inner Sphere Machine Gun (Mechanized/Hover) Infantry Platoon and her Atlas *attack Jim's Inner Sphere LRM (Jump) Platoon, which is located in light woods. The* Atlas *declares it will attack with a Gauss rifle, ER large laser and LRM-20. Much to Jim's shock, Suzanne's infantry platoon and all three weapons fired by the* Atlas *successfully strike his LRM (Jump) Platoon.*

Suzanne declares damage from her infantry platoon first. After rolling on the Cluster Hits Table and then consulting the Generic Conventional Infantry Damage Table, Suzanne sees that she has inflicted 11 points of damage (20 troopers, corresponding to the Machine Gun column). Because she is attacking a conventional infantry unit with a Machine Gun Platoon, she rolls 1D6 for an additional 4 points of damage. Jim marks off 15 troopers killed out of 21, leaving him with 8 troopers.

Suzanne then moves to her Atlas *and compares each type of weapon that hit the infantry unit against the Non-Infantry Weapon Damage Against Infantry Table. The Gauss rifle is a direct-fire ballistic weapon that does 15 points of damage, eliminating 2 troopers (15/10 = 1.5, rounded up to 2). The ER large laser is a direct-fire energy weapon that does 8 points of damage, taking out 1 trooper (8/10 = .8, rounded to 1). Finally, the LRM-20 is a cluster/missile weapon that does 20 points of damage, eliminating 4 troopers (20/5 = 4). The* Atlas *has cost Jim 7 of his remaining 8 troopers, leaving him with a single trooper, eliminating that platoon's offensive capability as it can no longer deal damage.*

If Jim's platoon had been in clear terrain, it would have taken 30 points of damage from Suzanne's infantry platoon alone, obliterating the jump platoon without the Atlas*' weapons fire. If Jim had fielded a Mechanized/Tracked Infantry Platoon carrying ballistic rifles, Suzanne's platoon would have eliminated 7 troopers, because each mechanized trooper absorbs double the standard damage. The trooper taking the fifteenth damage point would retain his armor and survive. Each successful strike by the* Atlas *would double the number of troopers eliminated: 4 troopers for the Gauss rifle, 2 for the ER large laser and 8 for the LRM-20. This would have cost Jim a total of 20 troopers, leaving 8 alive.*

Had Jim's Mechanized/Tracked Infantry Platoon been in clear terrain, Suzanne's platoon would have eliminated 15 troopers (15 x 2 = 30, with each trooper taking 2 points of damage for a total of 15 eliminated). The Atlas*' weapons would take out double again the number of troopers, for a total of 28 troopers eliminated.*

BATTLE ARMOR

The following rules apply to battle armor infantry in combat. Unless stated otherwise, battle armor infantry follow all the standard applicable rules for weapons fire, to-hit procedures and so on as described in the *Combat* section (see p. 98).

Battle Armor Attacks

When the controlling player of an attacking battle armor unit announces a weapon attack, all troopers in that unit fire the same weapon at the same target. The number of weapon attacks a battle armor unit can make depends on the number of weapons it carries, with the controlling player making a separate to-hit roll for each type of weapon attack. For example, a Clan Elemental battle armor unit may make an SRM-2 attack and an attack with a small laser, flamer, machine gun, micro-pulse laser, ER micro laser or heavy machine gun, depending on which of the latter weapons the player chooses to deploy the unit with in the game. A Golem battle armor unit can make an SRM-5 attack and two different "Bearhunter" superheavy autocannon attacks; a Corona battle armor unit may only make a single medium pulse laser attack, because it does not mount any other weapons; and so on.

Players should use all range and line of sight restrictions, modifiers and so on as appropriate for each weapon. All weapon attacks against units in the same hex as the battle armor unit are considered to be at Range 1, except anti-personnel weapons, which are at Range 0.

Non-Missile Attacks: When a battle armor unit attacks with a weapon other than a missile, roll 2D6 and consult the appropriate column of the Cluster Hits Table, based on the number of troopers in the unit, to determine how many troopers scored a hit. A single-trooper unit always hits on a successful to-hit roll. Each trooper whose fire hits the target inflicts normal damage for the weapon.

Determine a hit location separately for each hit. Attacks with weapons other than missiles do not track ammunition expenditures.

Missile Attacks: When a battle armor unit makes a missile attack, first determine the number of missiles fired by multiplying the number of troopers in the unit by the size of the launcher mounted on each trooper. Then roll 2D6 and consult the Cluster Hits Table (see p. 116). If a column does not exist for the number of missiles fired, use the fewest columns to arrive at the appropriate number, without exceeding the number of missiles fired. For example, if a battle armor unit mounts nine missiles in a six-man squad, resulting in 54 missiles, the player rolls twice on the 27 column (27 x 2 = 54).

Determine a hit location separately for each missile hit. Mark off ammunition on the record sheet for each missile fired.

Anti-Personnel Weapons: If a battle armor unit carries anti-personnel weapons, follow all the rules for conventional infantry, using the Rifle, Ballistic column of the Generic Conventional Infantry Damage Table and the number of active troopers in the battle armor unit to determine range and assign damage. The standard rules presume the mounting of a single Auto-Rifle as the unit's anti-personnel weapon. At the players' option, the damage, ranges and to-hit numbers of alternative anti-personnel weapon types may be used as per *TechManual*, page 271. Regardless of the anti-personnel weapon type or how many anti-personnel weapons a battle armor unit mounts, the unit can only make one anti-personnel weapon attack in a turn, using only a single anti-personnel weapon per suit.

Vibro-Claw Manipulators: Battle armor units equipped with vibro-claws may make a melee-style attack against another infantry unit during the Physical Attack Phase, provided the target is located in the same hex. Calculate the to-hit number as if for a non-missile attack, with the number of hits rolled as normal on the Cluster Hits Table, based on the number of active troopers in the attacking unit.

For battle armor units equipped with a single vibro-claw manipulator, assign the number of hits as 1 point each; for units equipped with two vibro-claws, assign the hits as 2 points each. Against conventional infantry, the controlling player simply applies the damage.

Grenadier battle armor, Davion Heavy Guards (House Davion)

Secondary Targets: Unlike conventional infantry, battle armor units can attack multiple targets, with the standard modifiers as described in *Combat* (see p. 109); as battle armor units do not have arcs, they never apply the +2 modifier, only the +1 modifier. Different weapons can be targeted at different units, but all the troopers in the attacking unit fire the same weapon at the same target, using a single to-hit roll. For example, a Golem battle armor unit can fire at a target with its SRM-5, at another target with a set "Bearhunter" superheavy autocannon and a third target with its other set of "Bearhunter" AC.

A Golem battle armor unit (five-man Point) may make three attacks in a single Weapon Attack Phase (provided a target is within range of all three weapons, the modified to-hit number makes a weapon attack possible and so on). It can make a missile attack with its SRM-5 and two non-missile attacks with its two "Bearhunter" superheavy autocannons. During a Weapon Attack Phase, the controlling player can make three separate to-hit rolls, one for the missile and two for the two non-missile attacks. If all three attacks are successful, the controlling player would then roll two times on the 5 column of the Cluster Hits Table (provided the Point still has five active troopers) to determine the number of autocannon hits. Rolling a 4 and a 9 nets six total hits. The controlling player next rolls six different hit locations against the target (provided the target has different locations for sustaining damage).

Having finished with the two autocannon attacks, the controlling player would then determine the number of missiles in the missile attack (25, provided the Point still has five active troopers), then roll and consult the Cluster Hits Table. Rolling a 7 results in fourteen SRM hits, and so the controlling player would roll fourteen different SRM hit locations, applying a Damage Value grouping of 2 points each time (provided the target has different locations for sustaining damage). Finally, the controlling player marks off a single ammunition shot for the SRM-5 launcher, leaving one more shot for another turn.

If the unit in question is a four-man Kanazuchi battle armor squad, during the Weapon Attack Phase the controlling player can make four separate to-hit rolls: one for the medium lasers, one for each of the two SRM-2s and one for the anti-personnel weapons. (Even though the Kanazuchi battle suit has two anti-personnel weapon mounts, it can only make a single anti-personnel attack in a turn.) Providing all the attacks struck the target, the controlling player would consult the 4 column of the Cluster Hits Table (four being the number of troopers) to determine how many medium lasers hit. A roll result of 11 nets four medium laser hits, and so the controlling player would roll four different hit locations.

For both missile attacks, the controlling player rolls on the Cluster Hits Table—in this case, on the 8 column (2 SRMs per launcher x 4 troopers = 8). Results of 6 and 10 net eleven total SRM hits, and so the controlling player would roll eleven different hit locations against the target, applying a Damage Value grouping of 2 points each time (provided the target has different locations for sustaining damage). For the anti-personnel weapon, the controlling player rolls on the 4 column of the Cluster Hits Table and comes up with a 7. This means three troopers struck the target. Cross-referencing three troopers with the Rifle, Ballistic column of the Generic Conventional Infantry Damage Table results in a final Damage value of 2 to be assigned to a location (or simply assigned, if the target is a conventional infantry unit). Finally, the controlling player marks off a single ammunition shot for each trooper launcher, leaving one more shot for another turn.

If the unit in question is Afreet battle armor (five-man Point), during the Weapon Attack Phase the controlling player can make a to-hit roll for the light recoilless rifle, while during the Physical Attack Phase the controlling player could make a to-hit roll for the vibro-claws (the target of the vibro-claw attack must be an infantry unit located in the same hex as the Afreet unit). Providing both attacks hit, the controlling player first rolls on the 5 column of the Cluster Hits Table to determine how many recoilless rifles hit. He gets a result of 7, for a net three hits, and rolls three different locations for damage. If the target is a conventional infantry unit, the controlling player rolls 1D6 three times per the Burst-Fire Weapon Damage Vs. Conventional Infantry Table, keeping a running total of the damage, to arrive at the final damage value to assign to the target. For the vibro-claws, the controlling player rolls a 9 on the Cluster Hits Table, giving him a net 4 hits. The controlling player then rolls four different 2-point hits against a battle armor unit, or simply applies 8 points of damage to a conventional infantry unit. (Had the Afreet unit only mounted a single vibro-claw, a successful attack would have meant four 1-point hits.)

Attacks Against Battle Armor

When a unit attacks a battle armor unit, the attack targets the unit as a whole, though individual troopers take the damage. A single member of a battle armor unit cannot be the target of an attack; the trooper damaged by a successful attack is determined randomly. Use all standard modifiers. In addition, all non-infantry units must modify their to-hit numbers by +1 for attacks against battle armor units to account for the spread-out formation and tactics of battle armor units.

On a successful attack against a battle armor unit, roll 1D6 for each Damage Value grouping to determine which battle armored troopers are hit. Each grouping strikes a different, randomly determined trooper. Re-roll if the unit does not have that number of troopers or if the result indicates a trooper destroyed in the current or a previous phase. Any excess damage from a single damage grouping is wasted.

Armor Value: Each trooper of a battle armor unit has a damage capacity consisting of its Armor Value +1 (representing the soldier inside). A battle-armored trooper is destroyed only after taking damage equal to its full damage capacity. Even if all the "armor" has been destroyed from a trooper, leaving only the "+1" representing the soldier, that battle armor trooper still operates at full capacity.

Area-Effect Weapons: Area-Effect Weapons always apply their damage to every trooper in a battle armor unit.

Anti-'Mech Attacks

Most infantry units can make specialized anti-'Mech attacks, which involve closing with a 'Mech, climbing it and planting satchel charges in strategic, vulnerable locations. However, for such attacks to have any real hope of success, an infantry platoon must be composed of dedicated, highly skilled troops that have undergone significant training. Despite its near-suicidal aspect, this type of attack successfully executed can quickly turn the tide of battle.

Resolve anti-'Mech attacks in the Weapon Attack Phase of the turn.

Body-Mounted Missile Launchers: Inner Sphere battle armor units with body-mounted missile launchers cannot make anti-'Mech attacks until they jettison such launchers (the controlling player can announce he is ejecting the missile launchers at any time, marking them off on the appropriate record sheet).

Anti-´Mech Skill: Different types of infantry have different base Anti-'Mech Skills, and so players should review the Average Skills Table, p. 40, before making this kind of attack.

Prohibited Units: Mechanized infantry cannot make anti-'Mech attacks.

IndustrialMechs: Against IndustrialMechs, anti-´Mech attacks receive a –1 to-hit modifier.

ProtoMechs: ProtoMechs cannot be targeted by anti-´Mech attacks.

TAG: An infantry unit may not designate a target and make an Anti-'Mech Attack in the same turn.

Vehicles: Vehicles can be the target of a swarm attack, a type of anti-´Mech attack (see *Swarm Attacks*, at right).

LEG ATTACKS

Infantry units that begin a Weapon Attack Phase in the same hex and at the same elevation as the legs of an enemy 'Mech may choose to attack the 'Mech's legs instead of making a standard weapon attack. During leg attacks, infantry troopers climb the 'Mech's legs and plant explosive charges in the joints to damage the actuators.

The base to-hit number is the infantry unit's Anti-'Mech Skill Rating, modified by the number of troopers currently active in the unit (as shown on the Leg Attacks Table, p. 221). The more troopers, the greater the chance of success. Modify the infantry unit's base to-hit number as normal for target movement and terrain, also if the 'Mech is prone or immobile.

If the to-hit roll is successful, the attacker rolls on the front-column of the appropriate 'Mech Kick Location Table—either bipedal, or Four-legged—(see p. 147) and applies four points of damage to the rolled location.

In addition to the 4 points of damage, the attacker rolls 2D6 and consults the Determining Critical Hits Table. If the result is 7 or less, the leg only takes the 4 points of damage already determined. If the attack results in one or more critical hits, resolve those normally (this may result in two rolls on the Determining Critical Hits Table, one for the 4 points of damage if the attack hit the 'Mech's internal structure and one for the automatic roll made for a successful leg attack). A 'Mech may only be the target of a single leg attack in a given turn.

Aimed Shots: If the target unit is immobile, the infantry unit may make an Aimed Shot (see p. 110).

Vibro-Claw Manipulator: Battle armor units equipped with a single vibro-claw inflict 1 additional point of damage (for a total of 5 points) during a leg attack. Units equipped with two vibro-claws inflict 2 additional points of damage, for a total of 6 points.

SWARM ATTACKS

Infantry units that begin a Weapon Attack Phase in the same hex and at the same elevation(s) of an enemy 'Mech may choose to swarm the 'Mech, rather than use their weapons or attack its legs. Swarm attacks represent the boldest and most dangerous attacks that infantry can perform against a 'Mech. A unit making a normal swarm attack rushes a 'Mech, grapples and climbs it, and then inflicts damage against the MechWarrior or the upper parts of the 'Mech in the next turn. A unit can only be swarmed by one infantry unit, and only one swarm attack can be made against a target in a given turn.

The base to-hit number is the attacking unit's Anti-'Mech Skill Rating, modified by the number of troopers currently active in the unit (as shown on the Swarm Attacks Table). The more troopers, the greater the chance of success. Modify the infantry unit's base to-hit number as normal for target movement and terrain, and if the 'Mech is prone or immobile.

The swarm attack to-hit roll determines only if the infantry unit manages to gain secure footholds on the 'Mech. The infantry unit does not inflict damage on the 'Mech during either the Weapon or Physical attack phases of this turn.

A swarming unit cannot make attacks against any other target other than the unit it is swarming, or mechanized battle armor being carried by the unit it is swarming. In turn, a unit performing a swarming attack may not be the target of weapon attacks. A swarming unit may end a swarming attack during any subsequent Weapon Attack Phase. It is then placed in the hex containing the target 'Mech with no further effects.

Aimed Shots: As with leg attacks, if the target unit is immobile, the infantry unit may make an Aimed Shot (see p. 110).

Magnetic Claw Manipulator: Battle armor units equipped with magnetic claws receive a –1 modifier to any swarm attack to-hit roll.

Prohibited Attacks: Aerospace units, VTOLs and WiGEs cannot be targets of swarm attacks unless they land. In addition, a unit that has been successfully swarmed cannot be the target of another swarm attack until the current attacking unit ends the swarm, is removed or is destroyed. Lastly, swarming units are not valid targets and thus cannot be attacked either.

Stacking: While an infantry unit is swarming a target, it does not count against the stacking limit of the hex. However, if a swarmed 'Mech is in a hex containing two enemy units and is destroyed, the swarming infantry unit automatically violates the stacking rules if it survives. In this case, randomly determine which of the two non-swarming enemy units will be displaced using the *Domino Effect* rule (see *Domino Effect*, p. 152).

Mechanized Battle Armor: If the target unit is carrying a friendly battle armor unit using the *Mechanized Battle Armor* rules (see p. 227), the carrying unit can still be the target of a swarm attack, but the attacking player must apply additional to-hit modifiers based on the number of surviving troopers attacking, versus the number of surviving troopers mounted on the carrying unit. See the Swarm Attacks Modifier Table below; these modifiers are in addition to all other standard modifiers applied for such an attack.

Vehicles: Vehicles can be targets of a swarm attack; all standard modifiers as described above apply. The attacker also applies a –2 to-hit modifier, to reflect the inherently easier task of climbing a vehicle rather than scaling a moving ´Mech.

Karla has an anti-'Mech trained Rifle (Ballistic) Foot Platoon with eighteen remaining troopers and wants to swarm an OmniMech that is carrying a friendly Point of battle armor. The three remaining battle armor troopers are riding the 'Mech using the Mechanized Battle Armor rules. The 'Mech is in light woods and moved 5 hexes this turn.

The base to-hit number is 5 (the Anti-'Mech Skill Rating of Karla's infantry unit) +5 (Swarm Attack Modifier for number of active troopers), modified as follows: +1 (light woods), +2 (target moved 5 hexes), +3 (eighteen attacking conventional troopers versus three defending mechanized battle armor troopers). The modified to-hit number for the swarm attack is 16. Karla will need to wait until she has a stronger infantry unit to make the attack, or until the OmniMech is no longer protected by the mechanized battle armor.

Fighting Off Swarm Attacks

If an infantry unit successfully swarms a 'Mech, the 'Mech can try to remove the swarming unit by using its arms during the Physical Attack Phase of the turn, rather than making a physical attack. The 'Mech's controlling player can make up to two Piloting Skill Rolls (one for each arm), adding a +4 modifier as well as any modifiers for damage or construction normally applied to a punching attack (see *Punch Attacks*, p. 145). The 'Mech cannot make such an attempt with any arm that fired a weapon during the Weapon Attack Phase in the same turn, or with an arm that mounts any physical attack weapon (see p. 146).

A 'Mech that attempts to remove a swarming unit in this way may not make any other physical attack during the same turn. If the 'Mech announced a death from above or charging attack during the Movement Phase, then it cannot attempt to remove swarming infantry with its arms during the Physical Attack Phase of the same turn.

LEG ATTACKS TABLE

Active Troopers in Conventional Platoon	Battle Armor Troopers Active	Attack Modifier
22 or more	4–6	0
16–21	3	+2
10–15	2	+5
5–9	1	+7
1–4	—	No attack possible

SWARM ATTACKS TABLE

Active Troopers in Conventional Platoon	Battle Armor Troopers Active	Attack Modifier
22 or more	4–6	+2
16–21	1–3	+5
1–15	—	No attack possible

A successful Piloting Skill Roll forces the infantry unit off the 'Mech and back into the hex, and the infantry unit takes damage equal to a punch from that 'Mech. Unlike non-infantry weapon attacks against conventional infantry, the damage from a punch in this case is applied to the infantry unit as though from an infantry attack, meaning that the unit takes full damage.

SWARM ATTACK MODIFIERS TABLE

Attacking Enemy		Friendly Mechanized Battle Armor Troopers Active					
Active Troopers in Conventional Platoon	Battle Armor Troopers Active	1	2	3	4	5	6
NA	6	+0	+0	+0	+0	+1	+2
28–30	5	+0	+0	+0	+1	+2	+3
24–27	4	+0	+0	+1	+2	+3	+4
21–23	3	+0	+1	+2	+3	+4	+5
18–20	2	+1	+2	+3	+4	+5	+6
16–17 **	1	+2	+3	+4	+5	+6	+7

Battle Armor Equipment		Situation*	
Claws with magnets	–1	'Mech prone	–2
		'Mech or vehicle immobile	–4
		Vehicle	–2

*Modifiers are cumulatives

**This line is also used for friendly battle armor attempting to mount a friendly unit being swarmed by 15 or fewer conventional infantry.

If the Piloting Skill Roll is unsuccessful, the 'Mech damages itself in the attempt to get rid of the infantry and must take punching damage from the appropriate arm (rather than falling from the failed Piloting Skill Roll). The infantry troopers stay attached. Roll 1D6 and consult the Front column of the 'Mech Punch Location Table to determine the location of the damage. If a 'Mech makes two attempts to remove the infantry, one may succeed and the other may fail. If the player declares that his 'Mech will make two attempts, he must resolve both, even if the first is successful (this could result in the first attempt being successful, yet the second attempt failing and still damaging the 'Mech).

During the Movement Phase of the following turn, infantry units that have not been knocked off travel with the 'Mech. Jump-capable 'Mechs may attempt to shake off their attackers during the Movement Phase. If the 'Mech jumps, the controlling player makes a Piloting Skill Roll with a +4 modifier upon landing (in addition to any other Piloting Skill Rolls required by the jump). On a successful roll, the infantry unit falls off into the hex in which the 'Mech landed. The infantry unit cannot move or shoot for the rest of the turn, and each trooper takes 1 damage point for every Jump Movement Point the 'Mech used in that phase. The damage is applied to the infantry unit as if from an infantry attack. If the Piloting Skill Roll for shaking the infantry off fails, the infantry stays on and the 'Mech does not fall.

Falling/Dropping Prone: If a swarmed 'Mech falls, the swarming infantry unit falls off the 'Mech into that hex. As with infantry shaken off by a jumping 'Mech, the infantry unit cannot move or shoot for the rest of the turn. It also takes one hit consisting of 2D6 damage points, applied to the infantry unit as if from an infantry attack. A 'Mech may also intentionally drop prone (with much more force than a standard going prone move) to shake off its assailants, but doing so requires a successful Piloting Skill Roll. If the rolls fails, the 'Mech goes prone but doesn't dislodge the infantry. If the roll succeeds, the infantry fall off and take damage as though the 'Mech had fallen as described above; the 'Mech that drops prone takes damage as from an accidental fall as well, and the controlling player must make an additional Piloting Skill Roll to avoid pilot damage. If the fallen infantry unit violates the stacking limit of the hex, a domino effect will occur (see *Domino Effect*, p. 152). Any infantry unit prohibited from entering the terrain into which it is knocked off is destroyed.

Magnetic Claw Manipulator: Battle armor units equipped with magnetic claws add a +1 modifier to the target unit's Piloting Skill Roll for attempting to remove the battle armor.

Water: If a swarmed 'Mech enters Depth 2 or deeper water, or falls prone in Depth 1 or deeper water, the swarming infantry unit is destroyed unless it has UMU MP. Likewise, any swarming infantry unit that lacks UMU and is knocked off the target 'Mech in Depth 1 or deeper water hex is destroyed.

Aerospace Units: If an aerospace unit takes off, it automatically shakes off a swarming infantry unit. The infantry unit is placed in the first hex where the aerospace unit left the ground, and takes one hit consisting of 4D6 damage, applied to the infantry unit as if from an infantry attack.

Mechanized Battle Armor: A friendly battle armor unit may attempt to mount a swarmed unit in order to aid in fighting off the attacking enemy infantry. The battle armor unit must make a standard swarm attack, with all appropriate modifiers. This includes those from the Swarm Attack Modifiers Table for the number of active enemy troopers swarming the friendly carrying unit versus the number of active friendly battle armor troopers attempting to mount; this modifier is applied as a negative number to the target number. For example, if 21 enemy conventional infantry were swarming a 'Mech and a 4 trooper friendly battle armor unit attempted to mount the 'Mech in order to aid against the swarming attack, in addition to all the standard modifiers, a –3 modifier (the +3 from the table, turned into a negative modifier) would be applied to the target number. If the attack succeeds, the mechanized battle armor may attack the enemy infantry directly during the Weapon Attack Phase of the following turn, ignoring all target movement and terrain modifiers.

Vehicles: During the Movement Phase, a swarmed vehicle can perform erratic maneuvers to fight off the swarming unit. The vehicle must be capable of moving at flank speed; it is considered to be at flank speed for the turn, but can spend only its Cruising MP during the Movement Phase. All Driving Skill rolls receive a +1 modifier while the vehicle is performing erratic maneuvers. At the end of the vehicle's movement, its controlling player makes a Driving Skill roll with a +4 modifier (this includes the +1 modifier already noted); this modifier drops to +2 if the vehicle is using VTOL MP. If the roll is successful, the swarming infantry is shaken loose as if knocked off by a jumping 'Mech , and each trooper takes 1 damage point.

VTOLs and WiGEs: VTOL and WiGE units can fight off swarming infantry just like regular combat vehicles. Should they succeed, or be destroyed while they are swarmed, the swarming infantry is considered to be shaken loose as if knocked off by a jumping 'Mech, and each trooper takes 1 damage point for every Elevation above the terrain that the VTOL or WiGE unit is at. If the swarming infantry has Jump or VTOL movement, it takes no damage, but still cannot move or shoot for the remainder of the turn.

Attacks Against Swarmed Units

Though swarming infantry cannot be deliberately targeted by weapon attacks, attacks against a swarmed unit may strike the swarming infantry as well. When a swarmed 'Mech takes a hit on any torso location—or a vehicle takes one in any location—roll 1D6. On a result of 1–4, the infantry unit does not take damage, and the total value of the weapon damage is applied directly to the carrying unit's location; a result of 5–6 means the swarming infantry unit is hit.

SWARM ATTACKS HIT LOCATION TABLE

2D6 Roll	Bipedal Location	Four-legged Location
2	Head	Head
3	Rear Center Torso	Front Right Torso
4	Rear Right Torso	Rear Center Torso
5	Front Right Torso	Rear Right Torso
6	Right Arm	Front Right Torso
7	Front Center Torso	Front Center Torso
8	Left Arm	Front Left Torso
9	Front Left Torso	Rear Left Torso
10	Rear Left Torso	Rear Center Torso
11	Rear Center Torso	Front Left Torso
12	Head	Head

For battle armor, a randomly chosen trooper takes maximum damage before the entire swarmed unit takes damage. Any damage left after the trooper is destroyed is applied to the location hit. For conventional infantry, mark off damage as though the attack came from another infantry unit (see *Damage From Infantry Units*, p. 216).

Swarm Attack Damage

If the swarming infantry unit stays on the 'Mech, it may make normal arm-mounted weapon attacks during the Weapon Attack Phase of the turn after it successfully swarmed the 'Mech. Only weapons mounted in the arms of a battle armor unit can be used in swarm attacks.

All attacks automatically hit. The player rolls 2D6 and consults the appropriate Swarm Hit Location Table for a bipedal or four-legged 'Mech to determine the damage location. Swarm damage to vehicles uses a randomly determined side column of the Vehicle Hit Location Table. Swarm damage to grounded aerospace units uses a randomly determined side column of the appropriate column of the Aerospace Units Hit Location Table.

Damage from a swarm attack equals the attacking unit's total non-missile, arm-mounted weapon damage potential (not counting anti-personnel weapons). Battle armor units apply all damage to one hit location. For example, a full-strength Elemental battle armor Point equipped with small lasers inflicts a single 15-point grouping of damage on one location. A battle armor Point equipped with two small lasers would inflict 30 points of damage.

Infantry units can continue to make weapon attacks on the 'Mech in subsequent Weapon Attack Phases until the 'Mech is destroyed or manages to shake off the attacking unit, or the swarming unit chooses to end its swarming attack.

Critical Hits: A swarm attack may also result in one or more critical hits. In addition to determining the normal effects of its eligible weapons fire, the player rolls once on the Determining Critical Hits Table (see p. 124), even if no internal structure took damage in the attack. If internal structure does take damage, this may result in two or more critical hits.

Vibro-Claw Manipulator: A battle armor unit with one or more troopers equipped with a single vibro-claw adds 1 to its swarm attack damage; if the unit has one or more troopers equipped with two vibro-claws, instead add 2 to its swarm attack damage. This damage is in no way cumulative.

Conventional Infantry: A conventional infantry unit applies its standard damage of 2-point Damage Value groupings and applies each to a location by rolling on the Swarm Attacks Hit Location Table or the Hit Location Table for the appropriate unit type. Conventional infantry do not roll on the Determining Critical Hits table unless their attack damages the target's internal structure.

Mechanized Battle Armor: If a target 'Mech or vehicle is carrying mechanized battle armor, a swarming unit may choose to make standard attacks against the battle armor instead of damaging the 'Mech or vehicle. The attacker can use any or all of its weapons as though the battle armor unit were not mounted, ignoring all target movement and terrain modifiers.

INFANTRY CARRIERS

Infantry may ride inside any non-'Mech unit during the course of a game, provided the unit has dedicated cargo space. The carrying unit's capacity is limited to the tonnage of its cargo area. The Generic Conventional Infantry Units and Battle Armor Organization/Weight tables indicate how much tonnage each type of infantry unit occupies. Do not reduce these tonnages for units that have suffered casualties.

Charging and Death From Above Attacks: Even though dismounting infantry are placed after all other movement has occurred in a turn, 'Mechs can still declare charging and death from above attacks against infantry-carrying units once those units have resolved their movement in the turn.

Initiative and Stacking: Mounted infantry units do not count toward initiative. Likewise, a mounted infantry unit does not count toward stacking limits.

As infantry cannot move or fire in the turn they dismount, though each unit is placed on the board when they dismount, they are not counted towards initiative until the beginning of the next turn.

Mechanized Infantry: Mechanized infantry can only be carried by a Combat or Medium Support Vehicle over 100 tons or any Large Support Vehicle, small craft or Large Craft.

'Mechs: Though 'Mechs can mount and dismount some infantry, additional rules apply; see *Mechanized Battle Armor*, p. 227.

MOUNTING

To mount a carrying unit during a turn, an infantry unit must start its Ground Movement Phase in the same hex as the carrier. The infantry unit may mount only at the end of the carrier's

INFANTRY DESTROYED IF CARRYING UNIT DESTROYED TABLE

	Die Roll Result	
Carrying Unit Type	**Survived**	**Destroyed**
Vehicle	1–4	5–6
VTOL/WiGE*	1–3	4–6
Naval†		
Jumping MP	1‡	2–6
VTOL MP	1–2	3–6
UMU MP	1–3	4–6
Submarine†		
UMU MP	1	2–6
Aerospace Units*	1	2–6

*Only if the VTOL and WiGE vehicle or aerospace unit survives the crash; if the unit is destroyed while airborne, all carried units are destroyed.
†All other infantry types are automatically destroyed.
‡See *Jumping MP* under *Naval Carriers.*

movement. Carrying units do not suffer reductions in MP for hauling infantry. Infantry may not mount enemy units using these rules.

Mounted infantry may not fire weapons, spot for indirect fire or take any action other than dismounting from the carrier. Equipment that does not require an action to use (such as an ECM suite on a battle armor unit) does not function.

When a carrying unit is destroyed, there is a chance it will destroy any carried units as well. While such details are covered in the rules below, the Infantry Destroyed if Carrying Unit Destroyed Table summarizes the 1D6 rolls made to determine such results.

Large Support Vehicles: Infantry units can be in adjacent hexes to mount a Large Support Vehicle, but those hexes (and the infantry attempting to mount) must be at the same level as the vehicle.

Vehicles Carrying Infantry

Vehicles must spend 1 MP to mount each infantry unit. If a vehicle has 0 MP to expend in a turn, it can only mount a single infantry unit in that turn.

Damage from Movement: Any time a vehicle carrying infantry takes damage from a fall, skid, sideslipping, collision or displacement, roll 1D6 for each mounted infantry unit. On a result of 1–4, the infantry takes no damage; on a result of 5–6, the infantry unit takes a single point of damage (for a battle armor unit, randomly determine which trooper took the damage).

Critical Damage: Critical damage that occurs to an infantry carrying vehicle affects carried infantry in different ways. For a complete list of vehicle criticals and how they apply to carried infantry, see *Ground Combat Vehicle Critical Hit Effects*, p. 193, in the Combat Vehicles section (for aerospace units—i.e. conventional fighters, and Fixed Wing and Airship Support Vehicles—see *Critical Hit Effects*, p. 239 in the *Aerospace Units* section).

Stacking: If, at the end of the phase in which the carrying vehicle was destroyed, any surviving infantry units violate stacking rules, the controlling player must move those units into an adjacent hex using the following rules:

- Only the minimum number of infantry units are moved to ensure that the stacking rules are not violated in the hex where the carrying vehicle was destroyed.
- The adjacent hex that requires the least expenditure of MP to enter is used first, with the next lowest MP expenditure second, and so on.
- If an infantry unit cannot be moved into an adjacent hex because of prohibited movement, lack of available MP, or because it would violate the stacking rules, the unit is destroyed (though such a unit may use the *minimum movement* rule to enter a hex; see p. 49).

Infantry in this situation may move and fire normally in the turn after the vehicle is destroyed.

VTOL/WiGE Carriers: VTOLs and WiGE follow the same rules as other vehicles carrying infantry, with the following additions. Infantry units that do not have VTOL MP cannot mount a VTOL or WiGE vehicle unless it is landed. Infantry units with VTOL MP can mount a VTOL or WiGE at the start of their Ground Movement Phase, provided they are at the same elevation and in the same hex as the VTOL or WiGE vehicle.

If a VTOL or WiGE vehicle is destroyed in the air or in a crash, all infantry units mounted in it are also destroyed. If a VTOL or WiGE vehicle survives a crash, roll 1D6 for each mounted infantry unit. On a result of 1–3, the infantry unit survives and may move and fire normally in the turn after the crash; on a result of 4–6, the infantry is destroyed.

Naval Carriers: Naval vessels follow all the rules for vehicles carrying infantry, with the following additions. Naval vessels must spend 2 MP to mount each infantry unit, unless the infantry uses VTOL or Jumping MP to mount, in which case the naval vessel only expends 1 MP. Infantry units without UMU MP cannot mount a naval vessel unless the vessel is adjacent to the hex occupied by the infantry unit at the start of the infantry's Ground Movement Phase. In this case, the infantry unit moves to the hex occupied by the naval vessel and mounts.

Infantry units with UMU MP can mount a naval vessel at a cost of 1 MP, provided they are at the same depth and in the same hex as the naval vessel (either submerged or on the surface) at the start of their Ground Movement Phase. Submerged submarines must expend 3 MP to mount an infantry unit in this fashion.

If a naval vessel on the surface of a water hex is destroyed by anything except an ammunition or fuel tank critical hit, any carried infantry with VTOL, Jumping or UMU MP may survive (all other infantry is destroyed). Roll 1D6 for each type of mounted infantry unit.

- **Jumping MP:** On a result of 1, the unit survives, but only if it can dismount per the rules for naval vessels carrying infantry with Jumping MP (see *Dismounting*, below). Otherwise, it is destroyed. On a result of 2–6, the unit is destroyed outright.
- **VTOL MP:** On a result of 1–2, the unit survives and is placed in the hex previously occupied by the destroyed naval vessel, one level higher than the water's surface; on a result of 3–6, the unit is destroyed.
- **UMU MP:** On a result of 1–3, the unit survives and is placed on the surface in the hex previously occupied by the carrier. On a result of 4–6, the unit is destroyed.

If a submerged submarine is destroyed by anything but an ammunition or fuel tank critical hit, any carried infantry units with UMU MP may survive (any other infantry is destroyed). For each infantry unit with UMU MP, roll 1D6. On a result of 1, the unit survives and is placed in the same hex and at the same depth previously occupied by the destroyed carrier; on a result of 2–6, the unit is destroyed;.

All such infantry units must adhere to the stacking rules, as noted above.

Aerospace Carriers: Aerospace units (including Airships and Fixed-Wing Support Vehicles) need not expend any Thrust Points to mount an infantry unit, but the aerospace unit must be landed. The sole exceptions are Airship Support Vehicles and Infantry with VTOL MP, in which case use the rules above for VTOLs carrying infantry.

If an aerospace unit is destroyed in the air or in a crash, all infantry units mounted in it are also destroyed. If an aerospace unit survives a crash, roll 1D6 for each mounted infantry unit. On a result of 1, the infantry unit survives and may move and fire normally in the turn after the crash; on a result of 2–6, the infantry unit is destroyed.

DISMOUNTING

An infantry unit may dismount a carrier only during the Movement Phase, at the end of that carrier's move. A charging carrier cannot dismount infantry. The infantry dismounts in the same hex as the carrying unit. If the terrain is prohibited for that infantry type, or if dismounting would violate stacking rules, the infantry cannot dismount; also, no more than one infantry unit can dismount into a target hex in a turn. An infantry unit may not move or make attacks in the same turn that it dismounts.

Attacks made against the dismounted unit are made as if the unit had moved 0 hexes, rather than using the movement of the carrying unit.

If the infantry unit is not prohibited from entering a hex, but lacks sufficient MP to enter it, it can enter the hex using the *Minimum Movement* rule (see p. 49). Dismounting infantry may not violate the stacking limits.

Large Support Vehicles and DropShips: Infantry units carried by Large Support Vehicles and DropShips dismount into adjacent hexes. However, for Large Support Vehicles, the adjacent hex level must be equal to the level of the underlying hex the unit occupies; for DropShips, the adjacent hex must be within two levels of the level of the underlying hexes the unit occupies.

Dismounting From VTOLs

Infantry units with Jump MP may dismount from a VTOL that has not landed, regardless of the VTOL's elevation. The infantry unit is placed on the ground, in the hex occupied by the VTOL. Battle armor units that must eject their missile launchers (including detachable weapon packs) before they are jump-capable, and that have not yet done so in the course of the game, cannot dismount in this fashion; they cannot eject their missile launchers while mounted on a VTOL. Infantry units with VTOL MP may likewise dismount from a VTOL that has not landed; they are placed in the same hex occupied by the VTOL, at the same elevation.

Attacks against infantry with Jump or VTOL MP dismounting from an airborne VTOL are made as though the infantry moved 0 hexes, adding a +1 modifier for the jump.

Dismounting From Naval Carriers

Infantry units with only Ground MP cannot dismount from a naval vessel unless it is on the water's surface and is adjacent to a non-water hex at the same level as the surface. In this case, the infantry unit moves to the adjacent hex.

Infantry units with UMU MP may dismount from a naval vessel even if it is not adjacent to a non-water hex; they occupy the same hex and depth as the carrying unit.

Infantry units with VTOL MP may dismount from a naval vessel not adjacent to a land hex, though the carrying unit must be on the water's surface. They are placed in the same hex occupied by the naval vessel, one elevation level higher than the surface of the water.

Infantry units with Jumping MP may likewise dismount from a naval vessel not adjacent to a land hex, provided the infantry has sufficient Jumping MP to reach a land hex whose terrain the unit can enter (players should remember to account for differences in levels). The infantry unit moves to the hex which requires the fewest MP to enter. If multiple hexes fit this criterion, the controlling player may choose the destination hex. Battle armor units that must eject their missile launchers before they are jump-capable, and that have not yet done so, can eject them in order to dismount in this fashion. The controlling player announces he is ejecting the missile launchers and marks them off on the appropriate record sheet.

Additional modifiers do not apply to attacks against infantry with UMU MP dismounting in a water hex. Attacks against dismounting VTOL/Jumping infantry units that do not simply move to an adjacent hex are made as though the unit only moved 0 hexes, but with a +1 modifier for the jump.

Dismounting From Aerospace Carriers

Infantry units cannot dismount from aerospace units unless the aerospace carrier is landed. If an aerospace unit is landed, use the rules for vehicles, Large Support Vehicles or DropShips as appropriate.

The only exceptions are Aerospace Fighters, Conventional Fighters, and Fixed Wing and Airship Support Vehicles in conjunction with infantry that have Jumping or VTOL MP. The carrying unit must be flying at Altitude 1 (NOE). All infantry units dismounting from an airborne aerospace unit must be placed in any hex along the carrying unit's flight path in that turn (see p. 242). Jump-capable infantry units are placed on the ground (if the infantry unit must eject any missile launchers and/or detachable weapon packs to use its jumping capability, and has not yet done so, it cannot eject said equipment while still mounted on or in an aerospace unit; the airborne transport must first land before these units can dismount). Infantry units with VTOL MP that are dropped by an aerospace unit are placed at an elevation level of 8 (see p. 43).

Attacks against any infantry dismounting from an airborne aerospace unit are made as though the infantry moved 0 hexes, with a +1 modifier applied for infantry units that possess either Jump or VTOL MP.

In the Infantry Dismounting Diagram on page 226, the controlling player has several different units on the Archipelago #1 map, each with various infantry units he wants to dismount.

A modified Monitor naval vessel carrying a Point each of Elemental, Sylph, Gnome and Undine battle armor is in Hex A. The Sylph dismounts, and the controlling player notes that the Sylph is in Hex A at Level 1. The Elemental unit also looks to dismount; however, it cannot move into hexes 1 or 2, as the levels of those hexes are higher than the combined total of the Elemental battle armor's Jumping MP plus the level of the naval carrier. The Elemental unit can only enter Hex 3. Hex 3 is the nearest hex, so even though the Elemental Point normally would have enough Jumping MP to move to Hex 4, it ends the Movement Phase in Hex 3. The Undine dismounts and is placed on the water's surface in Hex A. The Gnome unit cannot dismount; it does not have UMU or VTOL MP, and with only 2 Jumping MP, it cannot enter Hex 3.

A cargo variant Anhur Transport VTOL is in Hex B at Level 5, carrying a Point each of Elemental and Sylph battle armor. The controlling player dismounts the Sylph, noting that it is in Hex B at Level 5. The Elemental Point can dismount from a flying VTOL because it has Jumping MP, but the Elemental unit is prohibited from entering the terrain in Hex B (infantry cannot enter a water hex). This means it cannot dismount this turn.

Finally, a King Karnov Support Vehicle is in Hex C, carrying eight Motorized Infantry Platoons. The controlling player dismounts two units into Hex 6 and one into Hex 7. If the King Karnov decides to remain in Hex C, in the following turn it can only dismount one more infantry unit into Hex 7 unless the three previously dismounted infantry units move first. Hex 6 already contains two friendly units, Hex 5 is water (and so prohibited terrain for infantry), and

A Dark Caste Bombardier *searches for the last remaining survivors of a decisive raid.*

Hexes 8, 9 and 10 are prohibited because entering them would require a level change.

If the King Karnov was destroyed upon landing in the hex, the controlling player would need to redistribute the infantry units at the end of the Movement Phase, in order to keep from violating the stacking rules. Hex 6 requires the least number of MP to enter, and so the controlling player moves two infantry units there first. He then moves two more infantry units into Hex 7, and he can leave two more infantry units in Hex C. This leaves him with two infantry units he cannot redistribute, either because they are prohibited from entering the hex or they would violate the stacking rules. These two units are destroyed, leaving him with six Motorized Infantry Platoons to move next turn.

INFANTRY DISMOUNTING TABLE

Carrying Unit Type	MP Spent Per Unit Dismounted
Ground vehicle	1 MP
VTOL	1 MP*
Surface naval vessel	2 MP†
Submarine	3 MP‡
Aerospace unit	0 MP§

*If an infantry unit does not have Jumping or VTOL MP, it cannot dismount from an airborne unit; a carrying VTOL expends 1 MP for dismounting infantry units using Jumping or VTOL MP.

†If the dismounting infantry unit uses Jumping or VTOL MP, the carrying unit only expends 1 MP (see *Dismounting From Naval Carriers*, p. 225).

‡Only if submerged and only if the infantry unit has UMU MP. If on the surface, the submarine uses the same rules as surface naval vessels.

§Cannot dismount units while airborne, except for Airship Support Vehicles; landed aerospace units dismount infantry using the rules for vehicles, Large Support Vehicles or DropShip, as appropriate.

• INFANTRY DISMOUNTING DIAGRAM •

MECHANIZED BATTLE ARMOR

Battle armor units train to work closely with OmniMechs and OmniVehicles in combat. Each OmniMech torso features hand-holds that allow up to six battle armor infantry troopers to attach themselves for transport; OmniVehicle hand-holds are located on the sides and rear.

While riding on an Omni, each battle armor trooper is placed on a specific location. This location never changes, regardless of troopers eliminated by damage, mounting and dismounting multiple times in a scenario and so on. On a Battle Armor Record Sheet, each trooper is numbered from 1 to 6. This number indicates where on the Omni unit each trooper rides during transport; see *Occupied Locations on OmniMechs and OmniVehicles,* below. A battle armor unit mounts and dismounts an Omni just like a conventional infantry unit mounting or dismounting a vehicle (see p. 223).

Attacks by Carrying Units: An OmniMech cannot use any torso-mounted weapons in a location occupied by a trooper (a weapon that occupies multiple locations cannot be used if any location it occupies is also occupied by a trooper); OmniVehicles cannot use any weapon in the Left Side, Right Side or Rear locations occupied by a trooper. An OmniVehicle can always use its turret weapons, regardless of whether a trooper occupies that location.

Carrying Limits: With the exception of Large Support Vehicles, a carrier may only transport a single battle armor unit at any time using these rules. Large Support Vehicles may carry two battle armor units at a time; the battle armor troopers from both units

occupy the locations shown on the Battle Armor Transport Position Table, below.

Magnetic Clamps: Mechanized battle armor units equipped with magnetic clamps can mount standard 'Mechs and vehicles (with special movement restrictions listed below) using the same rules as Omni units. Aerospace units, including Fixed-Wing and Airship Support Vehicles, cannot be mounted in this fashion.

Movement Restrictions: Whether or not the battle armor is equipped with magnetic clamps, no vehicle may expend UMU, VTOL, WiGE, or Jumping MP while carrying mechanized battle armor, and no 'Mech may expend UMU MP.

MP Reduction: Omni units suffer no MP reduction for carrying battle armor units. Standard units carrying battle armor equipped with magnetic clamps receive a –1 MP modifier to their Walking/Cruising MP. This modifier applies immediately; if a non-Omni carrier only has 1 MP left to spend in a Movement Phase, a battle armor unit cannot mount that carrier this turn. The *'Mech Lifting Capabilities* rules (see p. 261) do not affect this MP penalty.

Omni-Trailers: Each tractor and trailer is a separate vehicle for the purposes of externally carrying battle armor. A trailer hitch in use on the Rear of the tractor or trailer reduces the ability of that tractor or trailer to carry battle armor squads by two suits, from the maximum of six suits.

Support Vehicles: Omni Support Vehicles of any kind cannot carry mechanized battle armor.

Occupied Locations on OmniMechs and OmniVehicles

A six-trooper unit occupies all torso locations (front and back) of an OmniMech. A five-trooper unit occupies all torso locations except the front center torso, while a four-trooper unit occupies the front and back side torsos, leaving the front and back center torso free. A six-trooper unit places two troopers on each of the left, right and rear locations, while a five-trooper unit places two troopers on the left and right sides and a single trooper on the rear. A four-trooper unit places two troopers on the left and right sides (see the Battle Armor Transport Position Table below).

Dumping Ammunition: A 'Mech with battle armor troopers occupying any rear torso location (or a vehicle with battle armor troopers occupying the rear location) cannot dump its ammo.

Falling and Dropping Prone

When a unit carrying battle armor fails a Piloting Skill Roll and falls, follow the same rules found under *Falling/Dropping Prone*, page 222, in the *Swarm Attacks* section.

If a carrying 'Mech intentionally drops prone while carrying infantry, the infantry is not knocked off and takes no damage.

Skidding and Sideslipping

Skidding units that collide with a carrier do not knock off any carried infantry. In addition, carried infantry take no damage from a vehicle that skids or sideslips, unless the unit skids/sideslips into a building (see below).

Infantry units are knocked off if the 'Mech that is carrying them skids, however, because the 'Mech falls when it begins its skid.

Buildings

Whenever a unit carrying battle armor enters a building hex, roll 1D6. On a result of 1–3, the infantry unit takes one hit consisting of 1D6 damage points but stays on the carrying unit. On a result of 4–6, the infantry unit falls off into the building hex and takes 2D6 points of damage. In both instances, damage is applied as if from an infantry attack (2-point Damage Value groupings; no damage reduction). The infantry unit cannot move or shoot for the rest of the turn. If the infantry unit cannot enter the terrain in the hex in which it is knocked off, the unit is destroyed.

Accidental Entry: If a carrying unit enters a building hex accidentally—for example, during a skid—its infantry is knocked off and takes damage as if the controlling player had gotten 4–6 on the die roll described above.

Attack Damage to Troopers

Mechanized Battle Armor can only take damage when the unit carrying them takes damage. When a unit carrying battle armor takes a hit in a location where a surviving trooper is riding, roll 1D6. On a result of 1–4, the trooper does not take damage; the total damage value of the weapon used is applied directly to the location on the carrier. On a result of 5–6, the trooper takes damage before the carrying unit does; any damage left after the trooper is destroyed is applied to the location struck. Battle armor units riding on carriers cannot be targets of an attack; only a successful attack against the carrier can inflict damage on the battle armor.

When a location is destroyed, all troopers riding on that location (both front and rear for 'Mechs) are also destroyed. If the entire unit is destroyed, roll 1D6. On result of 1–2, the infantry unit survives (except for any troopers riding on a destroyed location); on a result of 3–6, the infantry unit is destroyed. The infantry unit is placed in the hex where the carrier was destroyed and may move and fire normally in the next turn; its target movement modifier for the current turn is equal to that of its destroyed carrier. If the carrier was destroyed in a hex that the infantry unit is prohibited from entering, the infantry is automatically destroyed.

BATTLE ARMOR TRANSPORT POSITION TABLE

Troop Number	'Mech Location	Vehicle Location	Large Support Vehicle Location*
1	Right Torso	Right Side	Right Side (Unit 1/Unit 2)
2	Left Torso	Right Side	Right Side (Unit 1/Unit 2)
3	Right Torso (rear)	Left Side	Left Side (Unit 1/Unit 2)
4	Left Torso (rear)	Left Side	Left Side (Unit 1/Unit 2)
5	Center Torso (rear)	Rear	Rear (Unit 1/Unit 2)
6	Center Torso	Rear	Rear (Unit 1/Unit 2)

*Unit 1 and Unit 2 represent two battle armor units

Area-Effect Attacks: When resolving an area-effect attack on a hex with a unit carrying battle armor, the battle armor does not take normal area effect damage, but suffers damage as described above instead (roll 1d6 if the location a battle armor trooper takes damage, etc.).

Multiple Troopers in a Single Location: When determining damage in a location with more than one trooper, roll 1D6 for each trooper in that location to determine if any receive damage before the carrier does. The controlling player determines which trooper he will roll for first.

Other Combat Weapons and Equipment

If an infantry unit's *Technical Readout* or record sheet game statistics indicate that it carries one of the following equipment types, the equipment may significantly affect game play. Players should consult the unit's statistics, then familiarize themselves with the appropriate equipment rules below before play begins.

Advanced Weapons and Equipment: If a unit mounts any weapons and/or equipment not found below or on the appropriate Weapons and Equipment Tables (see p. 303), then the weapon/equipment in question is either advanced (not appropriate for standard tournament play) and is covered in *Tactical Operations*, or it only affects construction and so has no direct impact on *BattleTech* game play. Any such weapons and/or equipment that is not considered advanced is covered in *TechManual*.

ACTIVE PROBE

This equipment operates according to the rules for the Active Probe suite (see p. 129).

ARMOR

The armor types listed below have the following game effects, generally noted on record sheets and in technical readouts. All modifiers are in addition to the standard target movement modifiers.

Basic Stealth Armor

Attacks against a unit equipped with basic stealth armor receive additional to-hit modifiers of +1 at medium range and +2 at long range.

Fire Resistant Armor

A unit with fire-resistant armor ignores the heat from heat-causing weapons (see *Weapons and Equipment*, p. 113). Standard damage caused by such weapons is halved, rounded down.

Improved Stealth Armor

Attacks against a unit equipped with improved stealth armor receive additional to-hit modifiers of +1 at short range, +2 at medium range and +3 at long range.

Mimetic Armor

Attacks against a mimetic-equipped unit receive an additional to-hit modifier based on the number of hexes moved by the target unit in the same turn as the attack: +3 for 0 hexes moved, +2 for 1 hex moved, +1 for 2 hexes and no modifier for 3+ hexes.

Prototype Stealth Armor

Attacks against a unit equipped with prototype stealth armor receive additional to-hit modifiers of +1 at medium range and +2 at long range.

Standard Stealth Armor

Attacks against a unit equipped with standard stealth armor receive additional to-hit modifiers of +1 at short range, +1 at medium range and +2 at long range.

BOMB RACK

An attack by a Bomb Rack may only be declared against the hex the unit occupies and only if the attacking battle armor unit is one elevation above the level of the underlying hex. The to-hit number is equal to the battle armor's Gunnery Skill Rating, with no other modifiers applied, including the –4 modifier for attacking a hex.

If the to-hit roll is successful, the attack is treated as a cluster bomb attack (see *Cluster*, p. 246, in the *Aerospace Units* section), with a Damage Value equal to the number of active troopers in the unit x 2, applied in 5-point groupings.

If the to-hit roll fails, the attack scatters one hex; use the *Dive-Bombing Scatter Diagram*, p. 245.

One-Shot: A Bomb Rack is a single shot weapon, meaning it can be used once and then cannot be used for the remainder of the game.

CAMO SYSTEM

Attacks against a unit mounting a camo system receive a to-hit modifier based on the number of hexes moved by the target unit in the same turn as the attack: +2 for 0 hexes moved, +1 for 1 hex moved and no modifier for 2+ hexes.

ECM SUITE

This equipment operates according to the rules for the ECM suite (see p. 134), except that it only affects the hex occupied by the ECM-equipped unit.

IMPROVED SENSORS

This equipment uses the same rules as the Beagle Active Probe (see p. 129), with the following exceptions: improved sensors have a 2-hex range.

MAGNETIC CLAMPS

A battle armor unit equipped with magnetic clamps can mount standard BattleMechs and vehicles as though the carrying units were Omni units (see *Mechanized Battle Armor,* p. 227).

MANIPULATORS

The following manipulators have the following game effects, generally noted on record sheets and in technical readouts.

Armored Gloves

Light and PA(L)/exoskeleton humanoid battle armor with two armored gloves may use rules for mechanized battle armor (see p. 227), conduct anti-'Mech attacks (see p. 220) and make anti-personnel weapon attacks (see *Battle Armor Attacks*, p. 217).

Basic Manipulator

Medium, light and PA(L)/exoskeleton humanoid battle armor with two basic manipulators may conduct anti-'Mech attacks; heavy, medium, light and PA(L)/exoskeleton humanoid battle armor with at least one basic manipulator may use mechanized battle armor rules.

Battle Claw/Heavy Battle Claw

Medium, light and PA(L)/exoskeleton humanoid battle armor with at least one battle claw or heavy battle claw may conduct anti-'Mech attacks; heavy, medium, light and PA(L)/exoskeleton humanoid battle armor with at least one such claw may use mechanized battle armor rules (see p. 227).

Cargo Lifter

Cargo lifters only affect game play if players are using *Cargo Carriers* rules from the *Creating Scenarios* section (see p. 261). Otherwise, the cargo lifters have no affect.

Vibro-Claw

Battle armor units equipped with vibro-claws inflict additional damage during swarm and leg attacks (see *Anti-'Mech Attacks*, p. 220). Battle armor units thus equipped can also make an additional melee attack against an infantry unit located in the same hex (see *Battle Armor Attacks*, p. 217).

Magnetic Claws

Battle armor units equipped with magnetic claws receive a –1 modifier to the to-hit roll for any swarm attack (see *Swarm Attacks*, p. 220). Battle armor units thus equipped add a +1 modifier to the Piloting Skill Roll made by the target unit attempting to remove the battle armor unit after a successful swarm attack (see *Fighting Off Swarm Attacks*, p. 221).

NARC

This equipment operates according to the rules for the Missile Beacon (see p. 138), with the following exceptions:

It may not use any submunitions.

Unlike standard weapons mounted by a battle armor unit, each trooper of a unit can fire a Narc individually rather than as a salvo, but the unit still cannot attack more than a single target in a turn with a Narc.

POP-UP MINE

If a unit equipped with a pop-up mine begins the Weapon Attack Phase in the same hex as 'Mech, vehicle or grounded fighter, it may launch one or more magnetic mines instead of making a standard weapon attack. Unlike missile attacks, the controlling player chooses how many troopers in a unit will fire mines and marks off the ammunition expenditure against each battle armor trooper. If a trooper is destroyed before using any mines, those mines are lost. Though battle armor troopers can carry more than one pop-up mine, each trooper can only launch one per turn.

The base to-hit number for a magnetic mine attack is 8, modified for target movement and terrain as normal. If the attack hits, roll on the Cluster Hits Table (corresponding to the appropriate number of troopers active in the unit who fired) to determine how many mines have become attached to the target. The mines automatically hit the center torso if the target is a 'Mech, the front if the target is a vehicle, or nose if the target is a grounded fighter: four points of damage are assigned per mine that struck the location.

In addition to those 4 damage points, the attacker rolls 2D6 for each pop-up mine that struck the target and consults the Determining Critical Hits Table. If the result is 7 or less, the location only takes the initial 4 points of damage. If the attack results in one or more critical hits, resolve those normally (this may mean making two rolls on the Determining Critical Hits Table, one for the 4 points of damage if the attack hits internal structure and one for the automatic roll made for a successful pop-up mine attack).

SPECIAL MISSILE MUNITIONS

Battle armor units mounting standard SRM or LRM launchers may make use of the following missile munitions. At the beginning of the scenario, provided the battle armor unit can carry multiple shots for a given standard missile launcher, the controlling player clearly marks which submunitions the battle armor unit will be carrying. The controlling player can mix and match standard and special missile munitions found below; the only limitation is the ammo capacity of the battle armor unit.

Infernos

Battle Armor units carrying infernos follow all the standard rules for that special munition (see Infernos, p. 141). Additionally, when ever a battle armor trooper that is not equipped with Fire Resistent armor and is carrying inferno missiles at the moment it is eliminated (regardless of how the damage is inflicted), the controlling player must immediately roll 2D6. On a result of 8 or more, the inferno detonates; all units within the hex are treated as though they were successfully struck by a number of inferno rounds equal to the number of inferno missiles the trooper carried when eliminated.

Weapon Type: Standard SRMs
Technology Base: Clan or Inner Sphere

Multi-Purpose Missiles

Multi-Purpose Missiles can either be fired as a torpedo (see Torpedoes, below), or it can also be launched as a standard attack by a battle armor unit that occupies a Depth 1 water hex against non-submerged unit. Determine LOS to the target as though the battle armor unit rose 1 level above the surface of the water hex it occupies; apply all standard modifiers. Enemy units cannot make attacks against a battle armor making such an attack unless the attacker is submerged and has a clear LOS to the battle armor unit.

Weapon Type: Standard LRMs
Technology Base: Clan

Torpedoes

Torpedoes use the same statistics as any standard SRM, LRM or MRM the battle armor unit mounts, but may only be fired from or into a water hex of Depth 1 or greater, and the attacker must trace LOS through water hexes of Depth 1 or great to the target.

Weapon Type: Standard LRMs/SRMs
Technology Base: Clan or Inner Sphere

SQUAD SUPPORT WEAPON

Only one trooper in a unit can use a squad support weapon and is considered to be Trooper #1 on the record sheet. Until that trooper is eliminated, the unit can attack with the squad support weapon in addition to its other weapons each turn.

This is the one exception to battle armor troopers in the same unit always mounting identical weapons.

TAG, LIGHT

This equipment operates according to the same rules as TAG (see p. 142), except that the range is 3/6/9.

ANGELS ON OUR SHOULDERS

Jason Schmetzer

ORBITAL SPACE
THULE
GHOST BEAR DOMINION
15 SEPTEMBER 3060

Star Commander Marko rolled his *Xerxes* to port, bringing the white-streaked brown orb of Thule into view through his cockpit canopy. He and his Star hung two hundred kilometers above the Fresdon Desert. He craned his neck, looking. Not even his genetically perfect eyes could pierce the veil of distance and see the battle raging below. His fingers twisted the controls in frustration. Maybe Snow Ravens could deal with waiting better. He knew the equations as well as any Raven; he knew he had to wait for the window.

"Star Commander," his wingman said, "thirty seconds to de-orbit burn."

Marko rolled his fighter back to its previous orientation. He checked his tactical display, noting the precise separation of the other nine *Xerxes* in his Star. Each was where it belonged. Lucien was on his wing, and the others staggered behind for almost a kilometer. Marko nodded, checked the timer and toggled the Star channel on his comm systems.

"Twenty-five seconds, Red Bears," he said. "Right now our Elementals are holding against *stravag* bandits from the Inner Sphere. Right now, on the hallowed plains where we claimed this world ten years ago, Ghost Bear warriors are fighting and dying." He squeezed his control yoke again and swallowed. "Not against scum. Not any longer." He sent a pre-arranged signal on another channel. "We are the only support in range. We are the Red Bears."

"It is time."

As one the ten *Xerxes*, awash in the actinic white glare of Thule's sun, fired thrusters and flipped end for end, until they were flying tail-first and canopy-down. Marko waited for the last few seconds to tick off the chronometer that glowed on his heads-up display. The 1 flickered and died. Marko jammed his throttle forward, igniting the fusion-fired torch at the rear of his fighter.

The Star staggered, slowed and fell, flaming spears of righteous fury from the sky.

Heat shuddered from the ground in waves, distorting the view of the approaching BattleMechs until they looked like wavering shapes from a Nova Cat's vision. Elemental Star Captain Drew Kabrinski of the Fifty-fourth Provisional Garrison Cluster lowered himself a few centimeters and looked around him. Beta Point was still huddled around the fallen *Commando*. The three remaining troopers of Gamma Point huddled with them, their backpack missile launchers empty. The blasted corpse of the bandit *Valkyrie* was still smoking, providing enough cover for the

Elementals of Delta and Epsilon Points to hide. The rest of the pirate scout lance had fled, but Drew didn't doubt they'd be returning with the rest of their *stravag* company.

"Less than a minute, Star Captain," his Point second said. Timothy had the rest of Alpha Point concealed behind them. They were the vanguard, the only Point not hidden amid the shattered BattleMechs. They would stall the bandits' advance openly, and the rest of the Star could fall on them from ambush.

"We cannot hold them all," Timothy said.

Drew grinned in his helmet, safe from the other's view. "We are Ghost Bears, Timothy," he said. He beckoned with his small-laser arm. "We, all of us, are a pack. We will hunt, and these *dezgra* pirates will feel the power of our jaws and claws." He lowered his arm and his voice. "It will be a battle worth remembering. Perhaps I'll include it in my Great Work."

Timothy's armor stared at him, then bobbed its helmet. "*Aff*, Star Captain." The Star thought little of his chosen Work, but not all warriors took the same path to enlightenment. History was not well thought of in the Clan. He did not mind; the Work was his, not theirs.

Drew looked back at the approaching 'Mechs. He saw the range counting down, watched it fall beneath a kilometer. An amber signal burned to life in the upper-left edge of his display, and his grin widened. Worthy, indeed.

"Four minutes," he said. "We hold them for four minutes."

The interference cleared from Marko's display as the fiery cocoon of ionization fell away. He heard the shrill scream of air outside his canopy as his Star fell through the ever-thickening atmosphere. The *Xerxes* began to respond as he manipulated his rudder pedals, and the brown desert below him took on definition. He saw a tiny speck of black that his brain recognized as a pall of smoke. His lips drew back from his teeth as he kept the throttle forward, driving the 85-ton aerospace fighter faster down the gravity well.

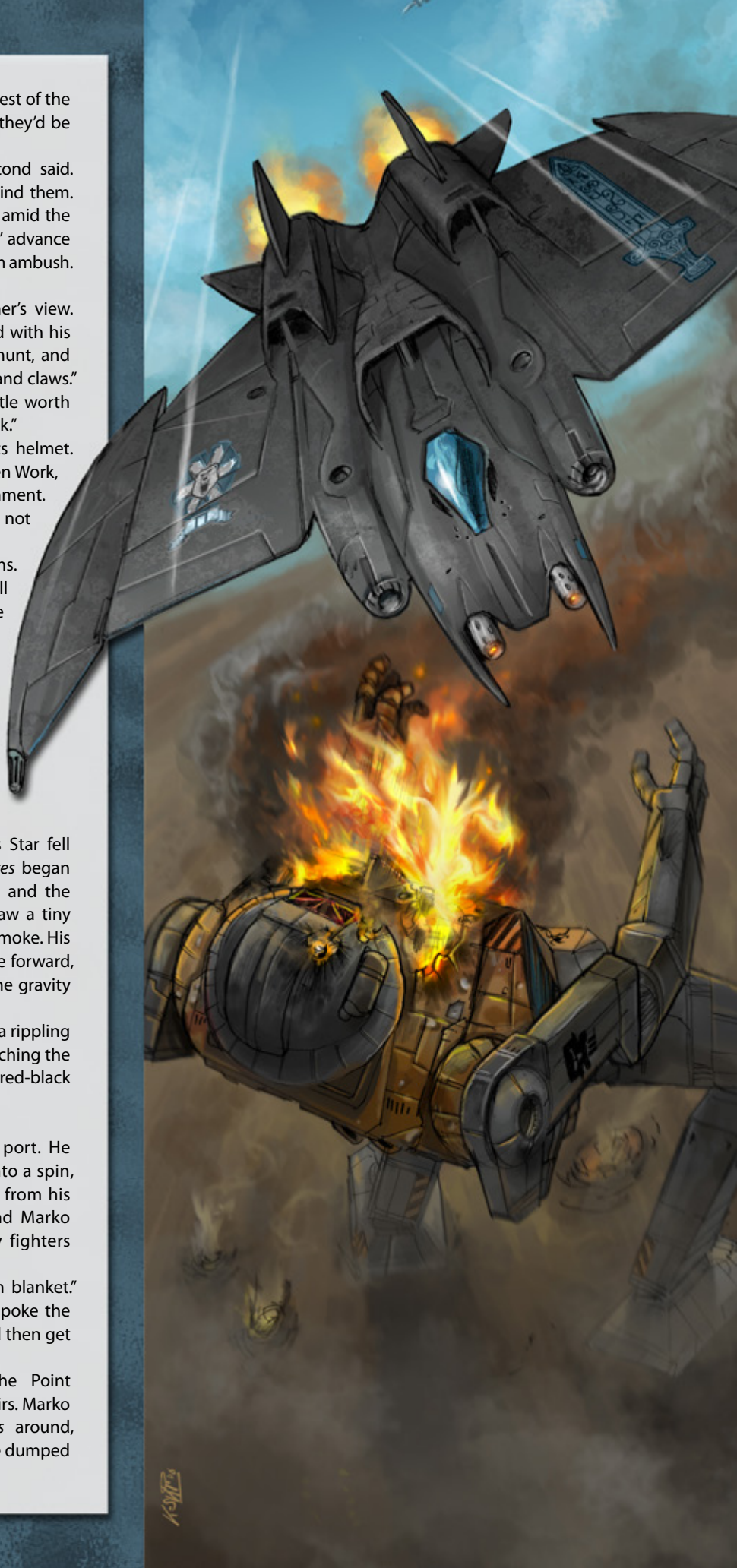
"Star Commander!" Lucien shouted, but static and a rippling boom cut off his words. Marko craned his neck, searching the sky for his wingman's aircraft, but saw only the gray-red-black mussel shape of a falling explosion.

"Fighters!" one of the other pilots called.

"*Savashri*!" Marko spat, and jerked his yoke to port. He kicked his starboard rudder and put the fighter into a spin, trying to evade the weapons lock that screamed from his computers. The sky lit with more explosions, and Marko saw a white-painted hull flash by as the enemy fighters climbed past them.

"They caught us while we were in the ionization blanket." Marko knew his pilots knew that already, but he spoke the words nonetheless. "Deal with these interlopers and then get dirtside. Our people are counting on us."

Acknowledgments rang in his helmet as the Point Commanders peeled away from the formation in pairs. Marko manipulated his controls and flipped his *Xerxes* around, venting plasma exhaust toward the surface while he dumped



velocity. The *g* meter rose, while the weight pressing on Marko's chest climbed. The *Xerxes* fought its away around gravity and hurled itself after the offending enemy aerospace fighter. Lucien would have done the same for him, Marko knew. This *surat* was his, and his alone.

The warbook computer flashed through wireframe schematics in the lower right corner of his HUD. Marko waited until the computer froze on one fighter model, then frowned. A *Rapier*. It was rare to see a vintage fighter like that in the inventories of the Inner Sphere. He pulled the *Xerxes* into a bank and followed the enemy fighter around.

"Star Commander!" Point Commander Devin shouted. "I have a positive ID on markings. These are ComStar fighters! What is ComStar doing supporting bandits?"

"It. Does. Not. Matter." Marko ground out the words as he pushed his throttle to its limits. Acceleration crushed him against his command couch, but he held the turn. The *Rapier* bucked in the thin air, a few kilometers in front of him. Tones sounded in Marko's helmet as the targeting computers sought a firing solution. The powerful extended-range large lasers in the *Xerxes*' nose locked on first, blaring their strident note in his ears. Marko squeezed his triggers.

Twin ruby flashes of laser light linked the two fighters for a few milliseconds. Marko's lasers burned armor from the *Rapier*'s aft section and right wing. Quick-cooling shards of melted armor pelted the *Xerxes* as Marko followed his prey. He was a Ghost Bear, and he had the scent of his enemy.

The hunt was on.

Drew Kabrinski ducked his head as he fired the short-range missiles mounted in the shoulders of his battle armor. The pair of fat-bodied munitions spiraled in, both of them true on target, and struck the bandit *Sentinel* on the right arm. He allowed himself a grin as he straightened and triggered his jump jets, trying to get clear of the return-fire zone.

The remaining BattleMechs were moving cautiously, trying to smoke out the Elemental ambush they knew had to be waiting. The enemy commander was smart, but not that smart. Their target had to be something in the depot at the edge of the Fresdon Desert, but the bandit was allowing himself to be slowed by a group of armored infantry.

"If I were him," Drew whispered as he landed, ninety meters from where he'd been standing, "I would ignore us and move to the objective."

"Then let us be glad you are not a bandit, Star Captain," Timothy said. His battlesuit landed a dozen meters or so away from Drew's. "Or else we would be chasing them, instead of evading them."

Drew sidestepped a barrage of cannon fire from the *Sentinel* and glanced around the shattered stump of a BattleMech's forearm behind which he'd taken cover. "He will figure it out soon enough," he said. "Unless we can delay him, the Star Colonel will not have enough time to get the rest of the Cluster in place to cut them off."

Drew leaned at the waist as far as the cumbersome armor would allow and aimed carefully. The scars on the long barrel of the KWI autocannon were plain, and he sighted on them. The *Sentinel* moved, trying to get a shot around the armored bulk of the mangled forearm.

Drew let out half a breath and squeezed the trigger. The *Sentinel*'s autocannon exploded as the battlesuit's laser reached through the damage from the SRMs and detonated ammunition waiting in the feed line.

"Delay them we can," Timothy said, taking advantage of the momentary confusion to burn his own scar on the *Sentinel*'s armor. "But for how long?"

Drew looked to the sky, past the chronometer that stood almost at zero, and wondered the same thing.

They hung like a string of pearls on Marko's tactical display: himself, the *Rapier* he was pursuing, and the two *Xerxes* of Epsilon Point that the *Rapier* was itself pursuing. The Ghost Bear pilots were running, flying pure evasion routines, not because they were scared, but to keep the *Rapier* occupied while their Star Commander ripped its wings away.

"Almost there," he ground out, and squeezed.

The massive autocannons slung beneath each wing hurled a fusillade of high-explosive slugs that tracked straight up the *Rapier*'s exhaust bell. The plasma exhaust, scintillatingly visible in the thin air, flickered and filled with smoke. Marko ground his teeth and pulled on his yoke, bringing the heavy fighter around. He waited, his hawk's eyes watching while his ears counted the tones, until the shrill solid whine of a lock reverberated through his helmet. He pulled the trigger again.

This time his large lasers tore into the savaged *Rapier*'s tail, eating away at armor and the structure beneath. The *Rapier*'s port wing tore loose and fell, sending the 85-ton fighter into a death spin that would last for almost a hundred kilometers. The other intruding fighters had already been dealt with.

Compliments rang on the Star channel, but Marko ignored them. He allowed himself one victory roll and then flipped and dove for the surface. The rest of the Star fell in behind him, and together the nine remaining fighters embraced gravity.

They were late.

Drew grunted as he hit the *Sentinel*, the shock of the impact almost smacking his head against the screens displayed in his helmet. He managed to dig his battle claw into a rent on the *Sentinel*'s armor and hold on. A series of clangs and double-click signals on the radio told him his entire Point had managed to attach itself to the 45-ton 'Mech.

"Target the gyro," he ordered, and suited action to word. Bringing his laser around, he triggered the beam. The armor began to smoke and run like water beneath the laser's caress. Drew narrowed his eyes against the glare.

"Beta Point is bingo," the Point Commander reported. They'd used up all their missiles.

"Gamma as well," Drew heard.

"Keep moving," Drew ordered. "Harassment protocols, maximum stress. I want them kept here."

The *Sentinel* began to run, trying to jostle the Elementals loose. Drew released his claw just long enough to bury it in the still-glowing weal his laser had made before securing himself again. He clenched his fist, forcing the claw to do the same, and held on. The chronometer on his HUD had passed zero some time ago. He began to feel frustrated, fearing that all his Elementals had won would be tossed away because an aerospace pilot couldn't read a chronometer.

The flaming wreck of an aerospace fighter crashed to the ground three hundred meters behind the *Sentinel*, very near where it had been when the Point had mounted. Drew stared at it, ignoring the short-range missile fire from a nearby bandit *Javelin*, then turned his visor toward the sky.

Like great white arrows, contrails billowing behind them, a cluster of fighters dove for the ground.

"Get ready," he called on the Star channel.

At sixty kilometers, Marko's heads-up display pinged and painted green and red icons on the ground below. Marko had to adjust the magnification before he could distinguish between the green clusters—depleted Points of Elementals, he knew—and the red icons of pirate BattleMechs. He sent targeting data to the rest of the Point and adjusted his descent, flaring out and angling for a strafing run.

"Shock barrage," he ordered. "Show the *surats* we are here."

The Star fell into a staggered column, with Beta Point leading and Marko in the second position. The Beta Point Commander selected a targeting zone between the bulk of the 'Mechs and the largest concentration of Elementals. A red target indicator appeared on Marko's HUD. Beta Point fired. Marko fired. The rest of the Star, stretched out behind them, fired.

From the ground it looked as though a flickering red wall of laser light divided the battlefield. Volley after volley of carefully targeted cannon shells exploded into the desert sands, raising massive clouds of dust and smoke. Some of the other Clans might call such a display wasteful, but Marko knew the truth that all Ghost Bears knew. Fear was a powerful weapon, not to be wasted. From the brief scan his sensors had made, Marko saw the battle had paused as the bandits eyed the line the fighters had drawn. They must know they had already crossed it.

"The Elementals have held," he said, speaking to his pilots. "Now it is our turn."

He spotted a concentration of enemy BattleMechs a safe hundred meters away from the nearest Elemental Point. "Target," he said, and tapped in the data. "Epsilon, Gamma, move to the east. Delta, Beta, from the west." He selected a lone 'Mech, a thirty-ton *Javelin* near a *Sentinel* crawling with Elementals, as his own target.

"Engage," he said, and jerked back on his yoke. The *Xerxes* leapt into a long climb. Marko held the stick back and let the fighter turn over. It fell again into the gentle caress of Thule's gravity, and Marko adjusted his targeting. The *Javelin* was firing at the Elementals on the *Sentinel*.

"You threaten Ghost Bears," he whispered, too low for his microphone to pick up. "Now we threaten back."

The single laser he fired missed low, melting a huge glistening patch of sand into glass before it shattered. His cannons hit dead-on, striking the lightweight 'Mech in the chest and obliterating it. He held back his other laser, not wanting to push his heat curve too high this close to the ground. Already he could feel the difference in his controls as the *Xerxes* drank heat from the thick air near the sands. He banked, letting his sensors pick through the data, and nodded at the few red icons remaining.

The other Points were diving and rising in a macabre dance too swift for the untrained to follow. The lone lance of 'Mechs were the raiders' heavier elements, and they stood up under the *Xerxes*' heavy guns. At first. As the Points stooped again and again, however, the 'Mechs turned back the way they'd come and ran, ignoring the fighters and dredging every last erg of strength from their myomers as they fled.

Marko let them go. He reduced his throttle and began a slow orbit of the battlefield. "Epsilon," he said, "high-altitude pursuit. Keep an eye on the rest of those 'Mechs. Maybe we can catch their DropShip, too." He watched the two fighters peel away from the orbiting cloud, then looked back at the ground. Only one red icon remained.

The *Sentinel*.

Drew watched the other BattleMechs retreat from over the *Sentinel*'s shoulder with satisfaction. It irked him to allow bandits to escape, but he knew the Ghost Bear fighters would tail the 'Mechs back to their DropShips. He turned his attention back to his own task, and climbed the last meter to the *Sentinel*'s cockpit hatch.

His claw made short work of the entry locks, and he kicked the hatch inward with one battlesuit boot. He had just enough room to stick his right-arm laser in and fire.

And fire.

And fire again.

The *Sentinel* collapsed, a marionette with cut strings. Drew withdrew his laser and leaped, firing his jets for as long as they would burn. Timothy and the Point Commanders were waiting for him when he landed.

"We could not have defeated them without the fighters, *quiaff*?" Timothy asked.

Drew reached back and unsealed his helmet. The hot, dry air stank with burnt metal and overheated coolant, but it was fresh. "*Aff*."

"Then we were fodder for the fighter pilots?" said the Beta Point Commander.

"*Neg*," Drew answered. "We did our part. The bandits died here, and not closer to the depot." He looked up as a single *Xerxes* heavy fighter screamed overhead. It dipped its wings in salute and then ripped the air as it climbed toward orbit. "The angels did the rest."

"Angels?"

"An ancient saying." Drew turned his back to the downed *Sentinel*. "From before humankind left Terra. Warriors on the ground would refer to their supporting fighters as 'angels on our shoulders.'" Drew raised his battle claw toward the dwindling fighter in salute. "Guardians from on high."

Aerospace fighters from Clan Ghost Bear's Beta Galaxy begin an attack run against forces of Clan Nova Cat during the Combine-Ghost Bear War.

As with movement, combat involving aerospace units is complex when compared to ground unit combat rules. Different systems apply depending on whether a unit is operating in space, in atmosphere against other aerospace units or in atmosphere against ground units. Rules for aerospace combat in atmosphere are a subset of the standard rules for combat in microgravity (space). The following rules apply to combat in space and also provide the basis for all other aerospace combat.

Some of the rules for aerospace combat against ground units appear in the *Combat* section; this section fully fleshes out those rules for aerospace units in game play.

SCALE

Aerospace units encompass a vast range of sizes, from ten-ton fighters to million-ton WarShips. Using the same scale for such units is impractical, so weapons and armor are divided into two categories—standard and capital. When standard-scale weapons attack standard-scale armor, or capital-scale weapons attack capital-scale armor, the effects follow the standard rules: one point of damage destroys one box of armor. With weapons and armor from different categories, several additional effects come into play (see *Damage*, p. 238).

While *Total Warfare* does not cover WarShips and similar Large Craft that mount capital-scale armor as well as additional capital-scale weapons, the rules in this section make the integration of such vessels simple and easy. These rules also define such units to eliminate potential confusion when players are looking at record sheets or technical readout statistics (such as *Technical Readout: 3057, Revised*) and wondering why such large units appear to have so little armor in comparison to DropShips and fighters. (WarShips and similar Large Craft are covered in detail in *Strategic Operations*.)

LARGE CRAFT WEAPON BAYS

Many Large Craft carry dozens of weapons, and so it is impractical to make to-hit rolls for each individual laser, autocannon, PPC and missile launcher. Instead, Large Craft use a system that places similar weapons in a group, for which the controlling player makes a single to-hit roll and hit location roll. This system speeds up play involving heavily armed Large Craft. Such weapon groups are known as "bays," with each bay containing a number of weapons of the same class. For example, different types of lasers appear in the same bay.

In the game description of a Large Craft (on a record sheet or in a technical readout), each row in the Weapons Table represents a bay of one or more weapons in the same class. A weapons bay is fired as though it were a single weapon, generating heat and inflicting damage in the same manner even though it may actually consist of many individual weapons.

AEROSPACE UNITS VS. GROUND UNITS

Though *Total Warfare* integrates aerospace and ground units as much as possible for ease of play, important differences exist between the two because of inherent differences of design and use. These are not simply small differences of modifiers between units (as between different types of ground units), but core differences in game mechanics that affect all aerospace units and are distinct from similar rules governing ground units. The following short list provides a quick thumbnail reference guide to these differences.

Players should not consider this list a substitute for reading the rules in this section, but instead as a way to lay the groundwork of important differences from previous sections, from which the rules in this section can easily build.

- Aerospace units have an extreme range bracket
- Weapon Damage Values are fixed
- Weapon range brackets are standardized and applied to all weapons equally
- The angle of attack from attacker to target may inflict a to-hit modifier
- Large Craft group their weapons into bays and make a single to-hit and location roll
- Damage to warriors creates to-hit modifiers
- Any successful to-hit roll that is a natural 12 may cause critical damage
- Multiple inflicted Damage Values of 20 (20, 40, 60 and so on) are cumulative for Control rolls

SPACE COMBAT

Aerospace units use many of the standard rules for attack declaration, firing arcs, multiple targets, to-hit modifiers and so on, as described in the *Combat* section, along with the expansions and exceptions given in the paragraphs below.

Attack Value: Aerospace units use the term Attack Value instead of Damage Value for weapons (see *Damage Value*, p. 43).

LINE OF SIGHT

Line of sight (LOS) is easy to determine in space. Other units do not block it, and space has no terrain altitudes or intervening terrain (meaning few obstacles exist in space). Only the clouds generated when using the *Screen Launchers* rule (see p. 251) block LOS. Measure a line from the center of the attacker's hex to the center of the target's hex to determine if LOS passes through these obstructions (as described on p. 99).

FIRING ARCS

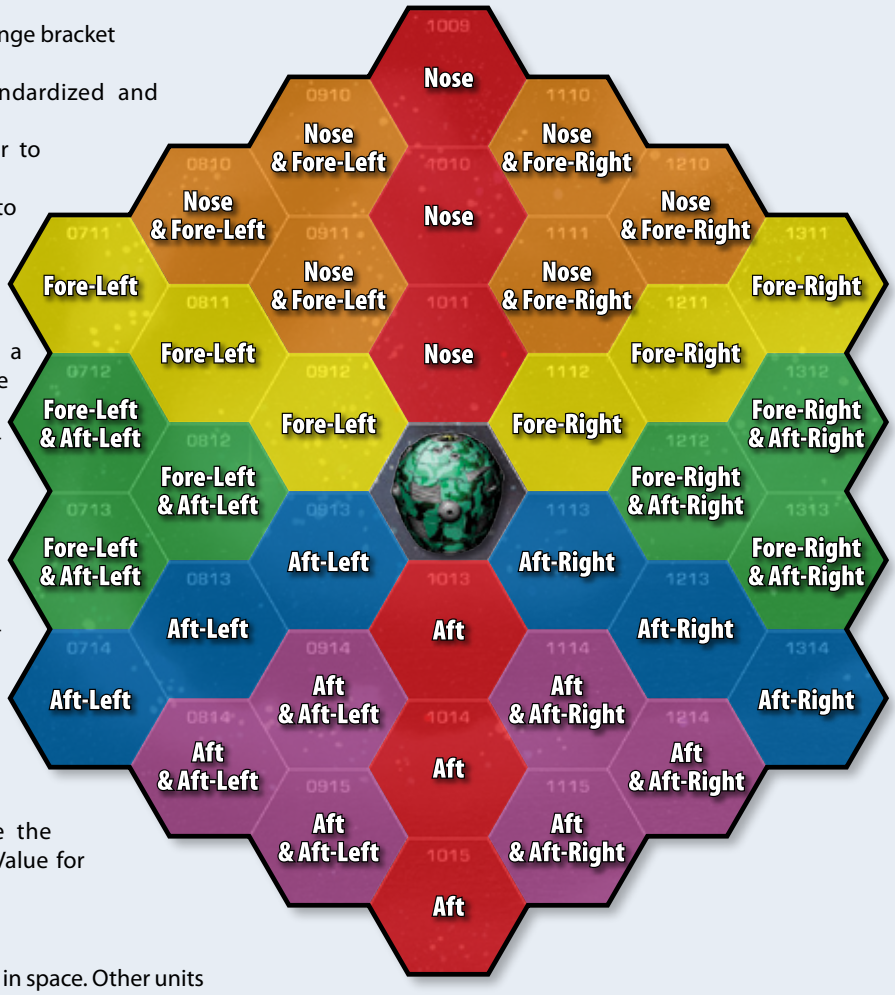
Aerospace units use slightly different firing arcs, depending on the unit type.

Aerodyne Units

Fighters, aerodyne DropShips and aerodyne small craft use four weapon arcs—nose, aft, right wing and left wing (see Aerodyne Firing Arcs Diagram, p. 236)

AEROSPACE WEAPON RANGE TABLE

Range Bracket	Hexes (Standard)	Hexes (Capital)
Short	0–6	0–12
Medium	7–12	13–24
Long	13–20	25–40
Extreme	21–25	41–50



• SPHEROID FIRING ARCS DIAGRAM •

Spheroid Units

Spheroid DropShips and small craft have the least restricted firing arcs: nose, aft, fore-right, fore-left, aft-right and aft-left. (see Spheroid Firing Arcs Diagram, above)

FIRING WEAPONS

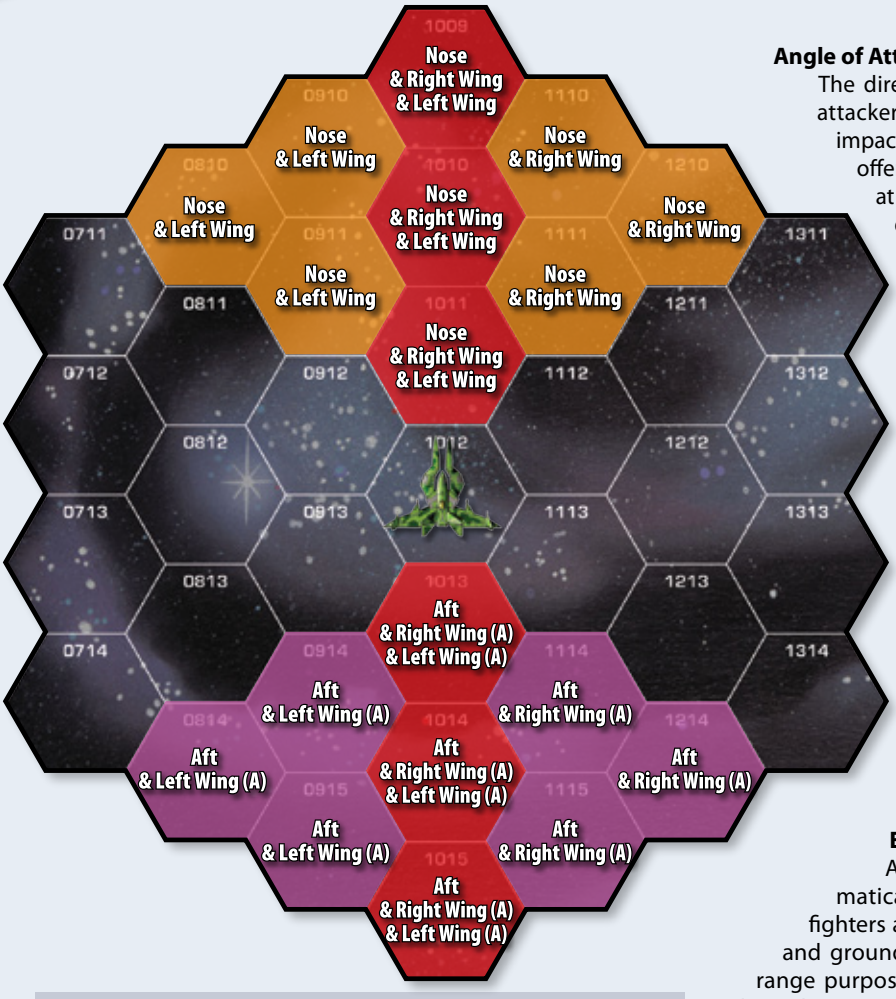
Aerospace units use the same rules as ground units for firing weapons, with the expansions and exceptions noted below and on the Aerospace Attack Modifiers Table.

Multiple Targets Modifier

DropShips and JumpShips never suffer this modifier.

Range Modifier

Aerospace units employ a modified version of the ground-unit rules to determine range to the target and range modifiers. Unlike ground units, where every weapon has its own short, medium or long range, aerospace units use standardized ranges that apply to all weapons equally. The four range brackets for all aerospace weapons are Short, Medium, Long and Extreme, as shown on the Aerospace Weapon Range Table.



• AERODYNE FIRING ARCS DIAGRAM •

For example, any standard-scale weapon that has a maximum range of Medium can hit a target within twelve hexes of the firing unit, but cannot strike a target thirteen or more hexes away.

As noted under *Scale* (see p. 234), range works differently depending on whether a standard-scale or capital-scale weapon is being fired (also noted on the Aerospace Weapon Range Table). In the above example, no standard-scale weapon with a maximum range of Medium can hit a target thirteen or more hexes away from the attacker; a capital-scale weapon with a maximum range of Medium cannot strike a target more than 24 hexes away.

The Weapons and Equipment tables for aerospace units (beginning on p. 303) list the maximum range for each weapon system. (On record sheets and in technical readout stat blocks for aerospace units, weapon ranges are denoted by listing the weapon's Attack Value out to the weapon's range; for example, a weapon with a maximum range of Medium and an Attack Value of 5 would list a 5 in the Short Range Value (SRV) column and a 5 in the Medium Range Value (MRV) column.)

As with ground units, once a player has determined the range bracket for an attack, he or she can assign the appropriate to-hit modifier, as shown on the Aerospace Attack Modifiers Table. A shot at short range requires no to-hit modifier. A medium-range shot has a +2 to-hit modifier, a shot at long range has a +4 to-hit modifier and an extreme-range shot has a +6 to-hit modifier.

Angle of Attack

The direction of the target's movement relative to the attacker—the angle of attack—can have a significant impact on the accuracy of a shot. Firing at a target's aft offers the least amount of relative motion, while firing at the target's side as it flies past offers the greatest difficulty. To determine the angle of attack, find the attack direction and use the appropriate modifier as shown on the Aerospace Attack Modifiers Table.

Targets in the Same Hex: If two units in the same hex wish to attack one another, players should first determine what unit types are attacking. Treat the unit with the higher Initiative as one hex back along its direction of travel.

Per the *Movement Subphases* rule (see p. 76), for the purposes of attack angles, fighters are considered to have a higher Initiative than small craft, which have a higher Initiative than DropShips. If the two units in the same hex are identical (two DropShips, two aerospace fighters or two small craft), then treat the unit with the higher Current Velocity as one hex back along its direction of travel. If two units of the same type also have the same velocity, roll 2D6 and treat the unit with the higher result as one hex back along its direction of travel. Re-roll any ties.

Effects of Atmosphere

Atmospheric distortion, clouds and winds dramatically reduce the ranges of weapons carried by fighters and DropShips. To reflect this, each atmosphere and ground hex on a space map counts as six hexes for range purposes. If this conversion results in a shot passing through one attack range and into the next, use the longer range.

The space/atmosphere interface also reduces the effective ranges of weapons and counts as three hexes for purposes of determining range. Standard-scale weapons can fire into or out of but not through an interface hex. A unit must occupy an interface hex in order to fire at units in space and in the atmosphere. These range modifications are in addition to the to-hit penalty for firing through atmospheric hexes as shown on the Aerospace Attack Modifiers Table (see p. 237).

Only capital-scale weapons can pass through a space/atmosphere interface hex, though the range modifiers still apply.

Weapons and Equipment

As with ground units (see *Weapons and Equipment* in the *Combat* section, p. 113), once a player has determined the to-hit modifiers for target and attacker movement and so on, he or she then determines if the weapon has additional special effects. Players should also consult *Other Combat Weapons and Equipment* at the end of this section (see p. 251) to determine if any other equipment the unit carries might affect the weapon being fired, or any weapon attacks against the unit.

Cluster Weapons: Aerospace units use cluster weapons differently than non-aerospace units. Instead of variable damage rolled on the Cluster Hits Table, aerospace units use the average Damage Value of a cluster weapon to arrive at the specific weapon's Attack Value. (The Attack Values for all weapons that can be used by aerospace units appear on the appropriate Weapons and Equipment Tables, beginning on p. 303.)

AEROSPACE ATTACK MODIFIERS TABLE

Range	Modifier
Short	+0
Medium	+2
Long	+4
Extreme	+6
Target/Intervening Conditions	
Angle of Attack	
Attack against aft	+0
Attack against nose	+1
Attack against side	+2
Attacker is an OmniFighter flying at altitude 1 (NOE) attacking an air target	+1
Attacker is non-OmniFighter flying at altitude 1 (NOE) attacking an air target	+2
Secondary target in forward arc	+1
Secondary target in side or rear arc	+2
Target is at 0 Velocity	–2
Target conducting air-to-ground attack this turn	–3
Weapon is capital-scale vs. unit less than 500 tons	+5†
Firing through atmospheric hex*	+2 per hex
Firing into or out of screen hex	+2
Target is evading	Variable (see p. 77)

Range	Modifier
Attacker Conditions	
Attacker exceeded Safe Thrust this turn	+2
Attacker is out-of-control	+2
Attacker has pilot/crew damage	+1 per box crossed
Attacker has CIC or FCS critical damage	+2 per box crossed
Attacker has sensors critical damage	+1 per box crossed, or +5 if sensors destroyed
Attacker is evading	Variable (see p. 77)
Special Weapons and Equipment	
Barracuda missile (not tele-operated)	–2§

*This applies to atmospheric hexes on the high-altitude map, not to hexes on a low-altitude map, or when using Aerospace Units on Ground Mapsheets rules.

†Modifier does not apply to capital missiles, which are designed to track small targets.

§Modifier does not apply if Barracuda missiles are fired in conjunction with other capital missiles (see *Large Craft Weapon Bays*, p. 234).

AEROSPACE UNITS HIT LOCATION TABLE

FIGHTERS				
2D6 Roll	Nose	Aft	Side	Above/Below
2	Nose/Weapon	Aft/Weapon	Nose/Weapon	Nose/Weapon
3	Nose/Sensors	Aft/Heat Sink	Wing/Gear	Wing/Gear
4	Right Wing/Heat Sink	Right Wing/Fuel	Nose/Sensors	Nose/Sensors
5	Right Wing/Weapon	Right Wing/Weapon	Nose/Crew	Nose/Crew
6	Nose/Avionics	Aft/Engine	Wing/Weapon	Wing/Weapon
7	Nose/Control	Aft/Control	Wing/Avionics	Nose/Avionics
8	Nose/FCS	Aft/Engine	Wing/Bomb	Wing/Weapon
9	Left Wing/Weapon	Left Wing/Weapon	Aft/Control	Aft/Control
10	Left Wing/Heat Sink	Left Wing/Fuel	Aft/Engine	Aft/Engine
11	Nose/Gear	Aft/Heat Sink	Wing/Gear	Wing/Gear
12	Nose/Weapon	Aft/Weapon	Aft/Weapon	Aft/Weapon

DROPSHIPS/SMALL CRAFT				
2D6 Roll	Nose	Aft	Side	Above/Below
2	Nose/Crew	Aft/Life Support	Nose/Weapon	Nose/Weapon
3	Nose/Avionics	Aft/Control	Nose/FCS	Nose/FCS
4	Right Side/Weapon	Right Side/Weapon	Nose/Sensors	Nose/Sensors
5	Right Side/Thruster	Right Side/Door	Side/Thruster	Side/Thruster
6	Nose/FCS	Aft/Engine	Side/Cargo	Side/Cargo
7	Nose/Weapon	Aft/Weapon	Side/Weapon	Side/Weapon
8	Nose/Control	Aft/Docking Collar	Side/Door	Side/Door
9	Left Side/Thruster	Left Side/Door	Side/Thruster	Side/Thruster
10	Left Side/Weapon	Left Side/Weapon	Aft/Avionics	Aft/Avionics
11	Nose/Sensors	Aft/Gear	Aft/Engine	Aft/Engine
12	Nose/K-F Boom	Aft/Fuel	Aft/Weapon	Aft/Weapon

ECM and Active Probes: Electronic countermeasures have no effect on combat between aerospace units, but they still affect other types of units.

The area of effect of ECM mounted on an aerospace unit only affects ground units (and vice versa) when the Aerospace Units on Ground Mapsheet rules are in use (see p. 91), the affected unit is within range, and the aerospace unit occupies NoE altitude. However, the unit mounting ECM always receives the benefits of ECM, even if the attack comes from beyond NoE altitude.

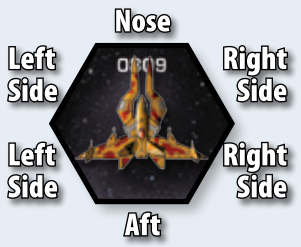
NARC and TAG: Neither TAG nor NARC play a role in aerospace combat, and they confer no advantage to the user when targeting his opponents. Aerospace units may use such equipment against non-aerospace units.

Rapid-Fire Weapons: Rapid-fire weapons always fire at their maximum rate, and so players must check for jamming every time they use such weapons (see p. 114).

Special Munitions: Aerospace units may not use special munitions, with the exception of Artemis-equipped missiles and LB-X autocannons (in which they always use Cluster ammunition).

Attack Direction

The diagram shows the Nose, Side and Rear attack directions for all aerospace units.



• AEROSPACE ATTACK DIRECTION DIAGRAM •

Determining Hit Location

Aerospace units take hits to only four locations: nose, right side, left side and aft. When an aerospace unit takes a hit from a weapon or bay, roll 2D6 and consult the appropriate section of the Aerospace Units Hit Location Table to determine the location that took damage, using the appropriate column based on the attack direction. Each entry on the table has two parts. The first indicates the armor facing from which damage is subtracted. The second is used for determining critical hits (see p. 237).

Above/Below: The Above/Below column is only used in specific situations (see *Air-to-Air Attacks*, p. 241). When determining the side or wing affected by an above/below shot, roll 1D6. On a result of 1–3, the right side or wing is affected; on a 4–6, the left.

Cluster Weapons: Determining hit locations for cluster weapons works differently with aerospace units than with other unit types. The Attack Value of all cluster weapons except Plasma weapons and Ultra Autocannons (or all cluster weapon bays except Ultra Autocannon bays) is divided into 5-point Attack Value groupings, with any remaining damage assigned to its own grouping. The attacking player then makes a separate hit location roll for each Attack Value grouping. Ultra Autocannon divide their published Attack Value in half and apply each half as one of two separate clusters. Plasma weapons function as non-cluster weapons against heat-tracking units, applying heat normally. Against targets that do not track heat, Plasma Rifles add 2D6 to their 10 point Attack Value and Plasma Cannons roll 3D6 for an Attack Value, and both weapons apply all damage in this manner as five-point clusters.

A Marik Transgressor *fires three large lasers and two medium lasers at the nose of a Davion* Corsair. *Two large lasers and one medium laser strike the target. The attacker elects to determine the hit location of the two large lasers, followed by the medium laser. The first 2D6 roll results in a 6, a nose hit for 8 points of damage, while the second results in a 10, inflicting 8 points of damage to the left wing. The final roll, for the medium laser, results in an 11, another nose hit.*

DAMAGE

Aerospace units use the same rules for resolving damage as non-aerospace units, with the following expansions and exceptions.

Scale

Before resolving the damage, determine whether the weapon used is a standard-scale, or capital-scale weapon. Capital-scale weapons inflict 10 boxes (i.e. points) of damage for every point of their Attack Value against standard-scale armor.

Note that all aerospace units covered in *Total Warfare* only mount standard-scale armor, but for reference, attacks by standard-scale weapons against capital-scale armor and structure are totaled then divided by 10 and rounded normally (.5 rounded up) for each location once all to-hit rolls have been made from a single attacker.

Structural Integrity (SI) Damage

All damage to a unit's SI value is halved (round down). For example, a large laser (Attack Value 8) strikes the wing of a fighter. Only 3 armor boxes remain on the wing, and so 2 points (half the remaining 5 damage points, rounded down) are subtracted from the fighter's SI.

Capital-scale weapons inflict ten times as much damage (rounded down) against a unit's Structural Integrity.

Critical Hits

Aerospace units can sustain critical damage in one of the four ways described below. If more than one of these conditions applies, the attacking player must roll for each occurrence. For example, if a single strike exceeds the Damage Threshold, causes SI damage and is a natural 12, the player must roll three times for critical hits.

To determine if a unit takes a critical hit, roll 2D6 whenever one of the four conditions below is met.

For attacks against units mounting standard-scale armor, on a result of 8 or higher the appropriate critical hit for that location takes effect, as shown on the Hit Location Table (see p. 237).

Clan Snow Raven Carrier*-class DropShips prepare to deploy fighters.*

Damage Thresholds: Each armor facing has a Damage Threshold equal to 10 percent of its full armor value, rounded up. If the damage from a single hit exceeds this threshold, critical damage can result. (On Large Craft, a single hit means the damage from all the weapons in a bay.) Damage Thresholds are fixed values; they do not change regardless of how much armor damage a location receives during a game.

SI Damage: If a hit to a location inflicts 1 or more points of damage to the SI, critical damage can result.

Lucky Hits: Any successful to-hit roll that is also a natural 12 (a 6 on each die) also may cause critical damage. If an attack targets multiple locations, such as with a cluster weapon, only the first Attack Value grouping assigned to a location can cause critical damage with a lucky hit.

Capital Missiles: Every hit with a capital missile or missile bay that strikes armor may inflict a critical hit, even if the attack did not damage SI or meet any other standard critical hit requirement. After marking off the armor damage for the attack, roll 2D6 and compare the result to the Capital Missile Critical Hit Table based on what type of capital missile was used.

A player makes only one critical roll per missile bay. If a bay contains multiple missile types (for example, a Barracuda and a Killer Whale), use the highest modifier (11+ for the Barracuda in the previous example). The chance of damage by an AR-10 launcher depends on the missiles it fires in the current turn.

CAPITAL MISSILE CRITICAL HIT TABLE

Missile	Critical Hit Chance
Barracuda	11+
White Shark	9+
Killer Whale	10+
Kraken	8+

Point of Jagatai, *Alpha Galaxy (Clan Snow Raven)*

The nose armor of a Slayer is 94, giving it a Damage Threshold of 10 in that location (94 ÷ 10 = 9.4, rounded up to 10). Consequently, any single hit inflicting more than 10 points of damage may result in a critical hit. In stark contrast, a Texas-class battleship has a nose Armor Value of 234, and so has a Damage Threshold of 24 points of capital-scale damage (or 234 points of standard-scale damage).

Jon's Slayer gets hit on the nose by a standard PPC that inflicts 10 points of damage, equaling but not exceeding the nose's Damage Threshold. This means there is no risk of critical damage from that hit unless the to-hit roll result was a natural 12. In the following turn, a gauss rifle attack strikes the nose (hit location result of 6). The 15 damage points inflicted by the gauss rifle exceed the Damage Threshold, so a critical hit may result. Jon's opponent rolls 2D6 and gets an 8, sufficient for a critical hit to occur. The critical damage associated with the hit location roll of 6 is an avionics hit, and so one avionics box is crossed off on the Slayer's record sheet. If the gauss rifle attack had removed the last of the nose armor with enough damage points left over to affect the Slayer's SI, the attacking player would roll another possible critical hit, also damaging the avionics if successful.

A Killer Whale hits the nose of Michael's Union-X, inflicting 4 points of capital damage (40 points of standard damage) to Location 7 (Nose/Weapon). Because this exceeds the Damage Threshold value of the Union-X's nose armor, the hit inflicts critical damage on a to-hit roll result of 8 or better. Also, because the attack came from a capital missile, a second critical hit may occur—this time on a result 10 or better. Michael's opponent rolls for the first possible critical hit and gets a 9. He rolls for the second and gets an 11. The Union-X DropShip sustains two critical hits to its weapons.

Critical Hit Effects

A hit that inflicts critical damage has the following effects per the hit location roll made for the attack (see Hit Location Table, p. 237).

Avionics: The flight computer is damaged. The first two hits each impose a +1 penalty on all Control rolls. The third avionics critical hit destroys the system and imposes a +5 penalty to Control Rolls. Each avionics hit also forces the unit to make a Control Roll.

Bomb: One bomb is rendered useless; it does not explode nor causes damage. If the unit carries no bombs, the critical hit has no effect. The controlling player determines which bomb the critical hit affects. Bomb damage makes re-entry operations more difficult (see *Space/Atmosphere Interface*, p. 78).

Cargo: Part of the unit's cargo sustains damage, determined randomly between general cargo bays and unit bays.

To determine the percentage of cargo destroyed, divide the amount of damage that caused the critical hit by twice the vessel's SI. Multiply that number by 100, rounding fractions up. For DropShips and small craft, use the standard-scale damage value in this calculation.

When a cargo hit occurs, roll 1D6. On a result of 1–3, general cargo suffers damage (if present). On a result of 4–6, unit bays (if present) are affected. Round any fractions up.

If a PPC (Damage Value 10) inflicts a cargo critical hit against a Mercer-class DropShip and the vessel has an SI of 30, 17 percent of the cargo is destroyed ([10 ÷ 60] x 100 = 16.6, rounded up to 17). The Mercer carries ten 'Mechs and 586 tons of general cargo. The PPC hit destroys either 100 tons of general cargo (17 percent x 586 tons = 99.62 tons, rounded up) or two 'Mechs (17 percent x 10 'Mechs = 1.7 'Mechs, rounded up to 2).

CIC: The Combat Information Center is damaged. Apply a +2 to-hit modifier for each CIC critical hit. The third CIC critical hit destroys the system and prevents the unit from making any weapon attacks.

Control: The crew must make a Control Roll. If the roll fails, the unit goes out-of-control (see p. 93).

Crew: If a crew location takes a critical hit, cross off one pilot/crew status box. Each unit can sustain five pilot/crew hits. The sixth hit kills the pilot or disables the crew. See *Aerospace Pilots*, p. 41, for additional effects.

Docking Collar: A critical hit against the docking collar damages the collar so that the ship cannot dock with a JumpShip or WarShip.

Door: A randomly determined cargo/vehicle door is damaged and cannot be used for the rest of the scenario (see *Carrying Units*, p. 89 in the *Aerospace Movement* section). Additionally, door damage makes re-entry operations more difficult (see *Space/Atmosphere Interface*, p. 78).

Engine: Against a fighter, each engine hit reduces the unit's Safe Thrust by 2 (meaning that the controlling player must also recalculate the Maximum Thrust, multiplying the new Safe Thrust by 1.5 and rounding up). Each engine hit also generates 2 points of heat. If the Safe Thrust value is reduced to 0, the unit cannot spend thrust and the heat penalty remains in effect. Three engine critical hits destroy the fighter's engine, permanently shutting down the unit (see *Shutdown Effects*, p. 161).

Against other types of aerospace units, each engine critical hit reduces the unit's Safe Thrust by 1 (meaning that the controlling player must also recalculate the Maximum Thrust, as described above). If the unit suffers six engine critical hits, the engine is destroyed.

FCS: The Fire Control System is damaged. Apply a +2 to-hit modifier to all weapon attacks for each FCS critical hit. The third FCS critical hit destroys the system and prevents the unit from making any weapon attacks.

Fuel: Every time a fuel tank critical hit occurs, roll 2D6. On a result of 10 or more, the fuel tank explodes and the unit is destroyed.

Gear: The landing gear is damaged. Apply a +5 modifier to all Control rolls when attempting to land. Subsequent gear critical hits have no additional effect.

Heat Sink: For a standard-scale attack, this critical hit destroys a heat sink, reducing the amount of heat the craft can dissipate by 1 (or by 2 if the unit mounts double heat sinks). This critical hit destroys 10 heat sinks if the attacker uses a capital-scale weapon.

K-F Boom: The DropShip's K-F boom is damaged and the craft cannot be carried through hyperspace.

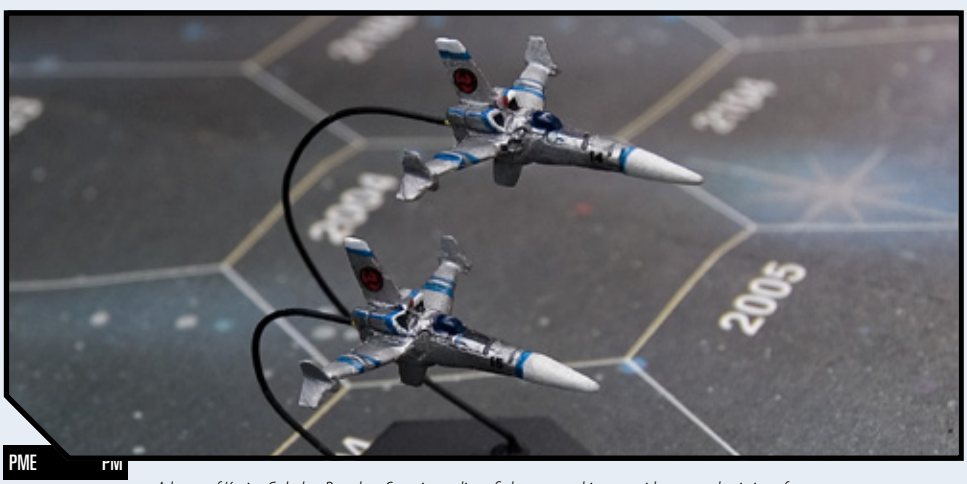
Life Support: The life support system fails. Apply a +2 modifier to all Control rolls. Subsequent life support critical hits have no additional effect.

Sensors: The unit's sensors are damaged. Apply a +1 to-hit modifier for each sensor box crossed off. The sensors can suffer two hits and remain operational. The third sensor hit destroys the system. Units with destroyed sensors can still make weapon attacks, but must apply a +5 to-hit modifier.

Thruster: The attitude control thrusters on the indicated side are damaged, increasing by 1 the cost to turn in the direction opposite the thruster's location. For example, hits to the left-side thruster increase the cost of turns to the right. Units can suffer three hits to the thrusters on each side. The fourth hit renders the thrusters inoperative and prevents turns in that direction (see the Half-roll maneuver, p. 85).

Weapon: One weapon (or one bay on Large Craft) mounted in the damaged location suffers major damage and ceases to function. The attacking player then rolls 1D6. On a result of 1–3, the player controlling the target unit chooses which weapon in that location stops working. On a 4–6, the attacking player chooses which weapon stops working. If the location has no weapons, the critical hit has no effect. The unit cannot fire that weapon (or bay on Large Craft) for the remainder of the game.

If a weapon is destroyed that can explode (such as a Gauss rifle, see p. 135), it is treated as an ammunition explosion for the location where the weapon is mounted (see *Ammunition Explosions*, p. 161).



A lance of Kurita Galedon Regulars Corsair *medium fighters patrol just outside atmospheric interface.*

Collisions and Ramming

The following rules provide a system for incorporating ramming attacks and for resolving accidental collisions that occur when aerospace units go out-of-control (see p. 93). Resolve accidental collisions immediately, regardless of the phase in which they occur.

Ramming Attacks

To make a ramming attack, a unit must end its movement in the same hex as the target and declare a ramming attack. Like a charge attack (see p. 148), the target must already have moved in the turn (or be incapable of manuevering), and a unit executing a ramming attack cannot itself be rammed in that turn. A ramming unit cannot fire weapons in the turn it is ramming, though it can be fired upon.

The aerospace pilot must next convince himself that a ramming attack is the only option. Roll 2D6. If the result is 11 or 12, the warrior has steeled himself for the task and the unit can ram the target.

Before it suffers a ramming attack, the target has already executed its standard movement between hexes. However, it can still attempt to evade the oncoming unit by moving around in the hex. For example, a fighter can jink back and forth in an attempt to get out of the ramming unit's way. Deliberate rams are resolved at the end of the Weapon Attack Phase. In order to successfully ram another unit, the attacker must roll 2D6 and compare the result to the Ramming Attacks Table below. Calculate the base to-hit number, then apply any appropriate modifiers from the table for the final to-hit number.

If the ramming unit is destroyed, the attack fails.

Ramming Attacks Table

Base To-Hit Number: 6 + (target Piloting Skill – attacker Piloting Skill)	
Modifiers	
Attacker existing damage:	
Sensor damage	+1
Avionics damage	+1 per box
Target is:	
Fighter or small craft	+4
DropShip	+2
Cannot spend thrust	–2
Attacker is:	
Fighter or small craft	–2
DropShip	–1

Damage from Collisions

To determine damage from a collision or ramming attack, roll 1D6. On a result of 1–5, the two units collide and suffer full damage as indicated below. A result of 6 indicates a glancing collision that causes half the normal damage.

The ramming or colliding unit suffers damage on its nose. The target suffers damage on the armor facing that corresponds to the hexside from which the attacker entered its hex. Each unit causes damage to the other equal to its own mass divided by 10, multiplied by the net velocity of the impact.

The net velocity of the impact is the attacker's velocity modified by the position and movement of the target (see *Facing*, p. 77). If the target is moving directly toward the ramming unit, add its velocity. If it is moving toward the attacker diagonally, add half its velocity, rounded down. If it is moving directly away from the ramming unit, subtract its velocity. If it is moving diagonally away from the ramming unit, subtract half its velocity (rounded down). If the net velocity is less than 1, treat it as 1.

Apply this damage (always standard-scale) in a single strike to one location for both attacker and target, determined by rolling 2D6 on the relevant Hit Location Table. If the damage is more than twice the full armor value of the indicated location, the unit is automatically destroyed. Otherwise, apply the damage and determine any critical hits normally.

Atmospheric Combat

Aerospace units that operate in an atmosphere can take part in air-to-air dogfights or air-to-ground combat.

Air-to-Air Attacks

Atmospheric combat uses the same rules as space encounters, with the following exceptions.

Units at the same altitude can fire at each other using the standard rules. Units at different altitudes can fire at each other, but they add one hex to the range for each different level of altitude. For example, two fighters are ten hexes apart. One is at Altitude 3 and the other is at Altitude 5. The effective distance between the two units is 12 hexes (10 + [5 – 3]). Units cannot aim into the area immediately above or below their own hexes.

A difference in altitude creates a "dead zone" around each unit. If the attacker and target are one altitude apart, the target must be at least two hexes away (the attacker cannot fire at a target in an adjacent hex). If the attacker and target are two altitudes apart, the target must be three hexes away, and so on. If units are within two altitudes of each other, use the appropriate column of the Hit Location Table (see p. 237) based on the attack direction. Otherwise, use the Above/Below column.

Aircraft flying at Altitude 1 (NOE) rely on their terrain-following radar to hug the ground and constantly jink to make use of available terrain as cover. As a result, all units flying at Altitude 1 (NOE) suffer a +2 to-hit modifier when making attacks against air targets.

Units engaged in ground-attack missions cannot easily dodge incoming attacks. Apply a –3 to-hit modifier for all attacks by airborne aerospace units against such targets.

OmniFighters: Because of their superior integration of FCS and navigation computers, OmniFighters only suffer a +1 to-hit modifier for flying at Altitude 1 (NOE) and attacking air targets.

Low-Altitude Map

If players choose to use the printed side of a *BattleTech* mapsheet for low-altitude movement, then they must also take terrain into account. Use the rules for *Intervening Terrain*, page 100.

• LOW-ALTITUDE AIR-TO-AIR ATTACKS DIAGRAM •

In the diagram above, during the Weapon Attack Phase an aerospace fighter in Hex A on the Large Mountain #1 map (which is being used as a low-altitude map) wants to attack the aerospace fighter in Hex B. The fighter in Hex A is at Altitude 10, while the fighter in Hex B is at Altitude 7.

First, the attacking player looks at the firing arcs on p. 236 for an aerospace fighter and determines that the target is in his nose and right-wing arcs.

Next, the attacking player draws a line from the center of Hex A to the center of Hex B, and discovers that the line crosses exactly between a pair of hexes (hexes labeled 1 on the diagram). This means the player who controls the fighter in Hex B (the target) can choose the hexside through which the attack passes. The defending player chooses to have the attack pass through Hex C, since Hex C is a Level 10 hex. This equals Altitude 10 on the low-altitude map, which in turn equals the altitude of the aerospace fighter in Hex A. Hex C therefore contains intervening terrain, meaning that the attacker cannot make a shot.

If the fighter in Hex A were at Altitude 11, it could make the shot because it would be higher than the intervening terrain. Of course, if it moved higher than Altitude 10, it would leave the low-altitude map and enter Row 1 of the atmosphere on the high-altitude map (see p. 79).

Aerospace Units on Ground Mapsheets

If players are using the *Aerospace Units on Ground Mapsheets* rules (p. 91) and an airborne aerospace unit launches an attack against another airborne aerospace unit, keep in mind that the ranges for such weapon attacks must be multiplied by 16 to fall into line with the necessary changes of scale. For example, the standard-scale short range bracket would extend to 96 hexes, while the standard-scale medium range bracket would extend to 192 hexes, and so on. Likewise, players would need to multiply the capital-scale ranges by 16.

Airborne Aerospace Units vs. Other Airborne Units

Airborne aerospace units may only execute air-to-air attacks against other airborne aerospace units. Against all other targets (including airborne non-aerospace units such as WiGE and VTOL vehicles, and other units expending VTOL MPs), airborne aerospace units may only execute air-to-ground attacks (see *Air-to-Ground Attacks*, below)

AIR-TO-GROUND ATTACKS

Though more fragile than ground-based units, aerospace units can carry a massive array of weapons that allows them to cripple or destroy ground units from the relative safety of the sky. Even a handful of aerospace units can provide a devastating advantage when supporting ground combat.

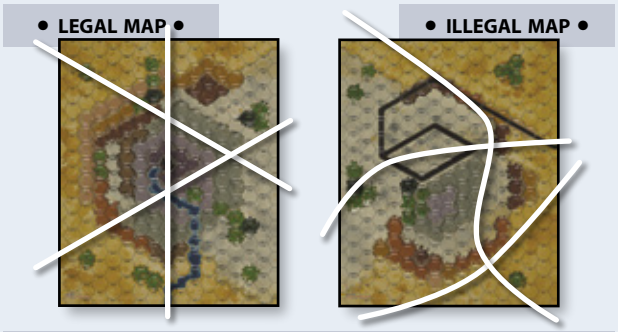
When an aerospace unit ends its movement in an atmospheric hex of a high-altitude map (or any hex of a low-altitude map) containing a ground mapsheet, it can attack targets on that ground mapsheet. When an aerospace unit is declaring its weapon attacks, the player must first nominate an attack path, a row of hexes over which the fighter will pass. This row must form a straight line and must be parallel to the final facing of the aerospace fighter; it represents the fighter's flight path across the ground mapsheet (see diagrams on p. 243). Aerospace units using the *Aerospace Units on Ground Mapsheets* rules use their actual flight path (the hexes they moved through during that turn's Movement (Aerospace) Phase; see p. 37) to determine the line of hexes, rather than designating an attack path.

Aerospace units can only make one air-to-ground attack per turn, and cannot make any air-to-air attacks in the same turn. Air-to-ground attacks must be declared during the Movement (Aerospace) Phase, including any change in altitude and skill rolls that occur as a result.

Types of Attack: Conventional and aerospace fighters and fixed-wing support vehicles equipped with hardpoints can make all the attacks described below. Spheroid DropShips/small craft may only make strike attacks. Aerodyne DropShips/small craft and fixed-wing support vehicles without hardpoints may only make strike and strafing attacks.

Non-Aerospace Airborne Units: Airborne aerospace units make strafing and striking attacks against airborne non-aerospace units (WiGE and VTOL vehicles, or other units expending VTOL MP, such as battle armor) just like any other ground target. Such units cannot be subject to dive-bombing or level bombing attacks, however, with the exception of bombs that strike a building or water hex (in such a case, bombs potentially attack an area vertically as well as horizontally; see *Area Effect Weapons*, p. 172).

Firing Arcs: Fighters, aerodyne small craft and aerodyne DropShips may only use the weapons in their nose and front wing locations. Spheroid small craft and DropShips may only use the weapons in their aft-left, aft-right and aft locations; hovering (VSTOL-equipped) fighters and small craft may use the weapons in their nose and front wing locations.



• ATTACK/FLIGHT PATH DIAGRAM •

• STRAFING DIAGRAM •

Base To-Hit Number

The base to-hit number for all air-to-ground attacks is equal to the attacking unit's Gunnery Skill Rating (see *Skills*, p. 39).

Modified To-Hit Number

The modified to-hit number equals the base to-hit number plus the modifier for the specific air-to-ground attack as noted on the Air-To-Ground Attack Modifiers Table. All other standard modifiers used in weapon attacks—such as those for target movement, terrain, damage to the aerospace unit and so on—also apply, unless specifically stated otherwise. Modifiers for being prone and for partial cover never apply.

As with standard weapon attacks, if the modified to-hit number is greater than 12, the air-to-ground attack automatically misses. If a player determines that his unit's declared air-to-ground attack will automatically miss, he can choose not to make the attack and avoid wasting ammunition or bombs.

If the modified to-hit number is 2 or less, the air-to-ground attack automatically hits.

Rapid-Fire Weapons: As noted under *Weapons and Equipment*, rapid-fire weapons always fire at their maximum rate, and so players must check for jamming every time they fire such weapons (see p. 114).

AIR-TO-GROUND ATTACK MODIFIER TABLE

Attack Type	Modifier
Strafing	+4*
Striking	+2‡
Bombing	+2†

*Aerospace units flying at Altitude 1 (NOE) also suffer a +2 to-hit modifier as described in Movement (see p. 80).

†Terrain and target movement modifiers (including the –4 modifier for an immobile target) do not apply to any type of bombing attack; fighters can make altitude-bombing attacks from any altitude, but suffer a to-hit modifier equal to their altitude (see *Altitude-Bombing*, p. 246).

‡As noted under Weapons and Equipment, rapid-fire weapons always fire at their maximum rate, and so players must check for jamming every time they fire these weapons (see p. 114).

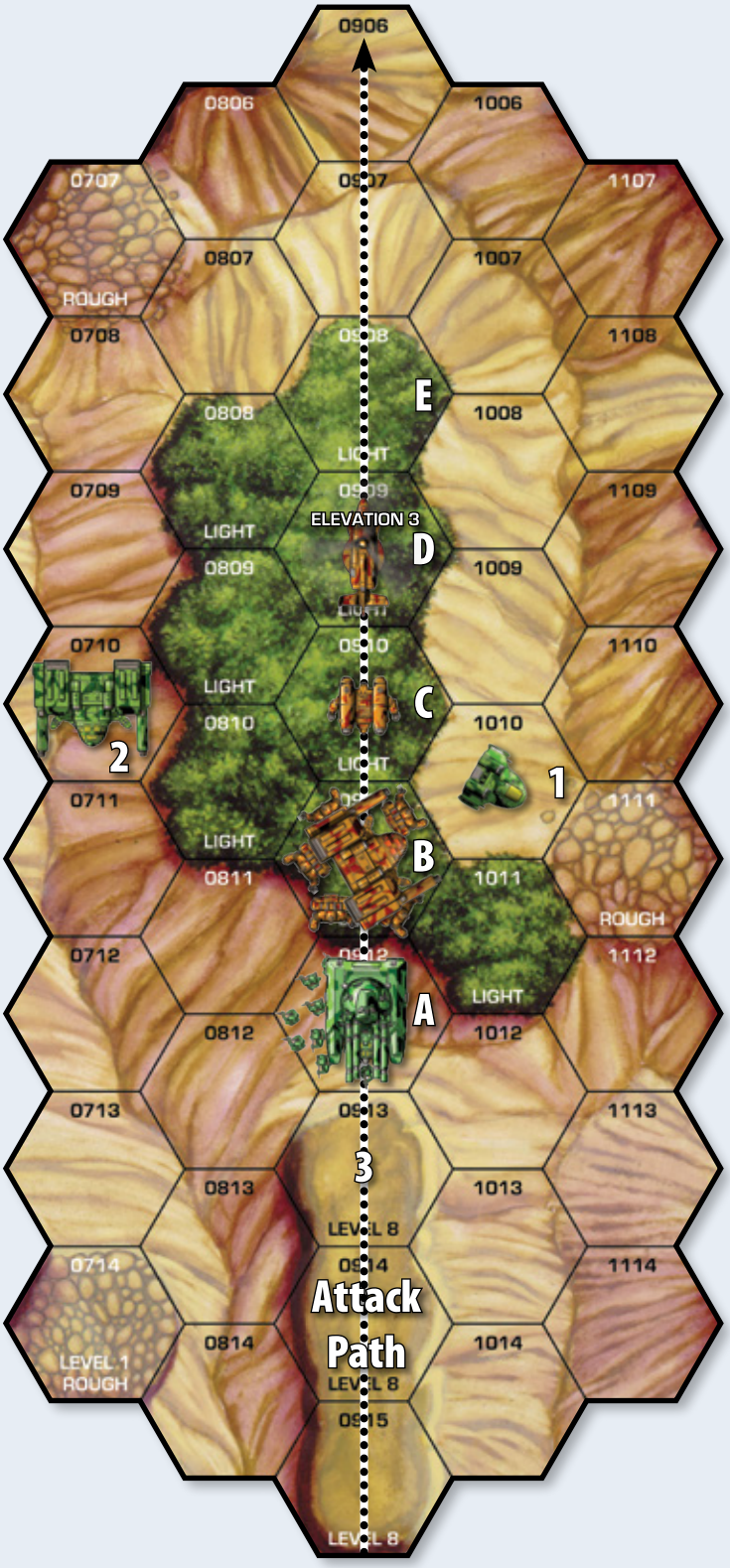
Strafing

Units flying within three altitudes of the ground on a low-altitude map (or within three altitudes of the ground if the unit is flying directly on a ground playing area; see *Aerospace Units on Ground Mapsheets*, p. 91) can make strafing attacks against ground targets. Lacking the precision of a striking attack, a strafing attack sprays a large area with weapons fire, making it less likely to hit a specific target but potentially damaging numerous targets.

A unit making this type of attack chooses from one to five consecutive hexes along the attack path. These hexes must lie in a straight line. The unit may fire one, some, or all of its non-ammo-dependent direct-fire energy and pulse weapons when strafing. The player must roll for every target, hostile or friendly, in all of the chosen hexes. See *Modified To-Hit Number*, at left, to determine the target number for a strafing attack.

The attacking player makes separate to-hit rolls for each weapon against each target. No matter how many targets are attacked, each weapon only fires once for the purposes of heat and ammunition tracking. Apply weapon hits using the standard rules for the appropriate unit type. Use the column of the appropriate Hit Location Table that corresponds to the attack direction, based on the direction from which the fighter entered the target's hex, rather than the fighter's position at the end of the Movement Phase.

Most strafing attacks must take into account only the terrain in the target's hex. However, units flying at Altitude 1 (NOE) find it harder to establish a clear line of sight and so must also take into account the terrain in the hex adjacent to the target and along the flight path in the direction that the attacking unit entered the target's hex. If the hex in front of the target is two or more levels higher than the level of the target unit, the target is in a dead zone and cannot be attacked.



• AIR-TO-GROUND ATTACKS DIAGRAM •

In the Air-To-Ground Attack diagram at left, a primary Shiva *fighter (Gunnery Skill 4) ended its movement at Altitude 3 in a hex on the low-altitude map that corresponds with the Canyon map (the ground mapsheet). The enemy player has numerous units holed up in the canyon, tearing up the controlling player's ground troops: a vehicle (moved 3 hexes) and a conventional infantry unit (moved 1 hex) in Hex A; a battle armor unit (jumped 3 hexes) and a 'Mech (moved 5 hexes) in Hex B; a ProtoMech (jumped 5 hexes) in Hex C; an airborne VTOL at Elevation 3 (moved 5 hexes) in Hex D; an airborne WiGE vehicle at Elevation 1 (moved 7 hexes) in Hex 1; and another 'Mech (moved 4 hexes) in Hex 2. The controlling player has brought in the aerospace fighter to try to soften things up.*

Regardless of whether the controlling player decides to launch a strafing, striking or bombing attack, he must first select an attack path across the ground mapsheet. He chooses his attack path (as noted on the diagram) so that he can fire on as many enemy units as possible.

If the controlling player were using the Aerospace Units on Ground Mapsheets *rules (see p. 91), then the fighter's actual flight path—the specific hexes the fighter traversed across the Canyon map during the Movement (Aerospace) Phase—would need to coincide exactly with the selected attack path in the diagram for the fighter to make the same attacks.*

The controlling player chooses to have his fighter make a strafing attack, and so he selects five continuous hexes (in this case, A, B, C, D and E). He also chooses to exploit the Shiva's *four large pulse lasers. He must make a separate to-hit roll for every target in the five nominated hexes.*

The modified to-hit numbers for all four pulse lasers against the various units are as follows:

Against the vehicle in Hex A: 7 (4 (base to-hit number) + 4 (strafing attack modifier) + 1 (vehicle movement) –2 (pulse weapon modifier) = 7). If the attacks succeeds, the player makes the hit location roll against the front side of the vehicle.

Against the conventional infantry in Hex A: 6 (4 (base to-hit number) +4 (strafing attack modifier) –2 (pulse weapon modifier) = 6. Infantry have no arcs, and so the attack direction does not matter for applying damage. However, conventional infantry take damage from non-infantry units in a unique way, which would result in only three troopers eliminated per pulse weapon (doubled to six troopers because the unit is in a clear hex) that strikes (see Attacks Against Conventional Infantry, *p. 215).*

Against the battle armor in Hex B: 10 (4 (base to-hit number) + 4 (strafing attack modifier) +2 (battle armor's movement), +1 (attacks against battle armor modifier) +1 (light woods), – 2 (pulse weapon modifier) = 10). Infantry have no arcs, and so the attack direction does not matter when applying damage.

Against the 'Mech in Hex B: 9 (4 (base to-hit number) + 4 (strafing attack modifier) +2 ('Mech's movement) +1 (light woods) –2 (pulse weapon modifier) = 9). If the attack succeeds, the player makes a hit location roll against the right side of the 'Mech.

Against the ProtoMech in Hex C: 10 (4 (base to-hit number) +4 (strafing attack modifier) + 3 (ProtoMech's movement) +1 (light woods) –2 (pulse weapon modifier) = 10. As hits against a ProtoMech are not affected by attack direction, the attacking player would simply roll any successful hits on the ProtoMech Hit Location Table.

For the VTOL in Hex D: 9 (4 (base to-hit number), +4 (strafing attack modifier) +2 (VTOL movement) +1 (airborne target) -2 (pulse weapon modifier)). If the attack succeeds, the player makes the hit location rolls against the rear of the VTOL.

Had the Shiva *had been at Altitude 1 (NOE) when making the strafing attack, the attack would have missed the vehicle in Hex A, as the adjacent Hex 3 would have blocked LOS.*

Striking

An attacker flying at Altitude 5 or lower can make a precision strike on a single ground unit or ground hex (a building, woods and so on). The target must lie along the flight path. A strike attack reduces the attacker's altitude by one, applied before any attacks are resolved that turn. Units flying at Altitude 1 (NOE) cannot make strike attacks.

The unit may fire one, some or all of its weapons at the target, except for bombs (which cannot be used in a striking attack). See *Modified To-Hit Number*, page 243, to determine the target number for a striking attack.

The attacker must make separate to-hit rolls for each weapon. Apply weapon hits using the standard rules for the appropriate unit type. Use the column of the appropriate Hit Location Table that corresponds to the attack direction, based on the direction from which the fighter entered the target's hex, rather than its position at the end of the Movement Phase.

Variable Damage Weapons: Striking attacks made with these weapons always treat the attack range as short.

In the strafing example above, the controlling player of the Shiva *could have decided to make a striking attack instead. In this case, the controlling player nominates the 'Mech in Hex B as the target of the attack, which allows him to bring the* Shiva's *LB 20-X autocannon, SRM-6, and small laser to bear.*

First, the controlling player adjusts the Shiva's *altitude from 3 to 2 on the fighter's record sheet. The modified to-hit number against the 'Mech is 7 for the four pulse lasers and 9 for all other weapons (4 (base to-hit number) + 2 (striking attack) +2 ('Mech's movement) +1 (light woods) –2 (pulse weapon modifier only) = 7 and 9). If the attack succeeds, the attacker makes the hit location roll against the right side of the 'Mech. The controlling player also remembers that cluster weapons work differently for aerospace units than for non-aerospace units. He splits the Attack Value of 12 for the LB 20-X autocannon and the Attack Value of 8 for the SRM-6 into 5-point Damage Value groupings (5, 5 and 2 for the autocannon, 5 and 3 for the SRM-6), then makes a damage location roll against the 'Mech's right side for each damage grouping (in place of a roll on the Cluster Hits Table for each weapon).*

• ALTITUDE BOMBING SCATTER DIAGRAM •

• DIVE BOMBING SCATTER DIAGRAM •

Bombing

Most fighters are equipped to carry bombs, though capacity varies depending on the unit's size and engine power. Each unit can carry one bomb for every 5 tons of mass, but each increment of 5 bombs (or part thereof) carried reduces the unit's Safe Thrust by 1. For example, a 20-ton unit can carry four bombs (20 ÷ 5), but doing so reduces its Safe Thrust by 1. A 30-ton unit can carry six bombs (30 ÷ 5), but reduces its Safe Thrust by 2. Recalculate Maximum Thrust based on the adjusted Safe Thrust; multiply the new Safe Thrust by 1.5, rounding up. All such ordnance uses the Nose arc for firing purposes.

A unit can make a bombing attack or a weapons attack in a single turn. Bombs can be delivered by dive-bombing or altitude-bombing. Dive-bombing is more accurate, but requires the attacker to lose altitude and exposes him to return fire. Altitude-bombing is less precise, but allows attacks against a strip of ground, much like a strafing run. See *Modified To-Hit Number*, page 243, to determine the target number for a bombing attack.

Dive-Bombing: A unit at Altitude 5 or lower can make a dive-bombing attack against a single hex on the flight path, though doing so requires the fighter to dive two altitudes. This altitude drop is applied before any attacks are resolved that turn. The fighter can drop one, some or all of its bombs in the attack.

Roll once for each bomb being dropped in the attack. For each attack that succeeds, the bomb impacts and explodes in the target hex. If an attack fails, the bomb scatters before exploding. To determine the direction of the scatter, roll 1D6 and consult the Dive-Bombing Scatter Diagram below. The bomb scatters in that direction, impacting a number of hexes from its intended target hex equal to the attack roll's margin of failure. (For example, if the attack roll failed by 3 points, the missed bomb will strike 3 hexes away from its intended target.)

Altitude-Bombing: Altitude-bombing works similarly to strafing, allowing a fighter to attack a continuous row of hexes along the flight path. Altitude-bombing can attack up to ten hexes, but the fighter must drop at least one bomb and no more than two bombs in each hex. All targeted hexes must be adjacent. If the unit carries several types of bombs, the pilot chooses which are targeted at which hexes. Finally, a to-hit modifier is applied, which is equal to the Altitude of the aerospace unit.

Roll once for each bomb being dropped in the attack. If a roll succeeds, that bomb lands in the designated hex. If the roll fails, the bomb scatters before exploding. To determine the direction of the scatter, roll 1D6 for each bomb dropped and consult the Altitude-Bombing Scatter Diagram on page 245. The bomb scatters in that direction, impacting a number of hexes from its intended target hex equal to the attack roll's margin of failure. (For example, if the attack roll failed by 3 points, the missed bomb will strike 3 hexes away from its intended target.)

Area-Effect Weapons: All bombs are area-effect weapons (see *Weapons and Equipment*, p. 113).

The various types of bombs available are described below. Players must designate the bomb types their fighters are carrying before play begins, writing their choices clearly on each fighter's record sheet.

Divide damage inflicted by bombs into 5-point Damage Value groupings. Targets in the impact hex take damage in the front or the back. Roll 1D6. On a result of 1–3, the attack hits the front; on a result of 4–6, it hits the back. Some munitions also attack units in surrounding hexes. Treat such attacks as originating in the impact hex when determining attack direction. All external ordnance uses the Nose Arc for firing purposes.

- **High Explosive (HE):** Each HE bomb causes 10 points of damage to all units in the target hex.
- **Cluster:** A cluster bomb inflicts 5 points of damage on targets in the impact hex and in the adjacent six hexes.
- **Laser-Guided (LG):** Laser-guided bombs act exactly like HE bombs, except when targeted against a unit designated by a friendly TAG (see below). Against such units, apply a –2 to-hit modifier.
- **Rocket Launchers:** Inner Sphere forces may carry rocket launchers on their wing pylons. One Rocket Launcher 10 occupies the same space as one bomb.
- **TAG:** Not a weapon in its own right, TAG (see p. 142) can be used to designate targets for weapons like laser-guided bombs or semi-guided LRMs. TAG units can be built into a unit's fuselage in the same way as a weapon or carried as an external pod. A pod-mounted TAG occupies the same space as one bomb. To designate a target, the fighter must be at Altitude 5 or lower. Like a strike attack, the target must lie along the flight path. The base to-hit number for the system is the warrior's Gunnery Skill +2. The designating aerospace unit cannot make any other attacks while attempting to designate a target. A grounded fighter's TAG uses the same firing arc as a weapon in the same location (see p. 236), as well as the standard TAG rules. A pod-mounted TAG on a grounded aerospace fighter uses the nose firing arc.

Clan Ghost Bear aerospace fighters provide close ground support for Beta Galaxy ground forces.

In the strafing example on page 244, the controlling player of the Shiva *could have decided to make a bombing attack in place of a strafing attack (provided the fighter has bombs loaded).*

As an 85-ton aircraft, the Shiva *can carry up to 17 bombs (one per 5 tons of mass) but doing so would reduce its Safe Thrust by 4 (1 for every 5 bombs, rounded up), bringing it all the way down to 1. The* Shiva *is currently carrying ten cluster bombs, reducing its Safe Thrust by 2 for an effective Safe Thrust of 3 and a Maximum Thrust of 5.*

The controlling player nominates Hex B for its dive-bombing attack and opts to drop half his bomb load (5 bombs) against the target hex. In this case, we'll assume the Shiva *was at an altitude of 4. First, the player adjusts the* Shiva*'s altitude by 2 (from 4 to 2), because it is making a dive-bombing attack. The player then makes a to-hit roll against the modified To-Hit Number 6 (4 (base to-hit number) + 2 (dive-bombing attack modifier) = 6) for each bomb. Unfortunately, all his rolls are less than 6 and so the bombs miss their target. For each bomb, he must now roll the direction and distance of deviation. If he's lucky, they may still land in another hex containing an enemy unit, or—since they are cluster bombs—adjacent to an enemy unit's hex.*

If all the bombs had struck Hex B, the player would apply the following damage.

Against the 'Mech, the player rolls a 3, so the attack strikes the front; the Shiva*'s player would roll 5 different hit locations for each of the five bombs (each with a 5-point Damage Value) against the 'Mech's front.*

Against the battle armor infantry, attack direction does not matter. However, unlike standard weapon attacks against battle armor units, area-affect weapons inflict damage on every trooper in the unit. This means that a total Damage Value of 25 points is assigned to each trooper in the battle armor unit: 5 (number of bombs) x 5 (each bomb's Damage Value) = 25. This damage eliminates the unit.

Now that the bomb damage has been assigned in Hex B, the Shiva*'s controlling player moves to each adjacent hex. With no specific order in mind, he starts with the ProtoMech in Hex C. Once again, regardless of the attack direction, a ProtoMech only has a single hit location table. However, unlike standard weapons, which can get a Near Miss result on a roll of 3 or 11, area-effect weapons always damage a ProtoMech. The* Shiva*'s player rolls five times for the location of each 5-point bomb, all on the Special ProtoMech Hit Location Table (see p. 185).*

The player then moves to the WiGE in Hex 1. This unit is airborne, and so the bombs have no effect; aerospace units cannot make air-to-ground attacks against airborne units.

Finally, the player moves to Hex A, where he first deals damage to the vehicle. He rolls five times, once for the location of each 5-point bomb, all on the front of the vehicle.

The player moves on to the final unit to take damage, the conventional infantry in Hex A. As with the battle armor in Hex B, this infantry unit has no arcs and so the attack direction does not matter. Unlike other non-infantry unit attacks, area-effect weapons double their damage to conventional infantry units. The infantry is also in the open, which doubles the damage again. This means that the total Damage Value of 25 points becomes 100, eliminating the unit.

AE weapons inflict double their damage against woods for clearing purposes (see Clearing Woods*, p. 112); 50 points of damage is applied to the Terrain Factor of the light woods in Hexes B and C, as well as 0810 and 1011, which reduces each to rough terrain.*

Finally, the player adjusts the Shiva*'s altitude from 3 to 1 (NOE) on its record sheet.*

Dumping Bombs

Units usually drop bombs only in the Weapon Attack Phase. Some circumstances, such as engine critical hits, can require the unit to jettison bombs in order to remain aloft. To carry out an emergency bomb dump, the player specifies the number of bombs to be dumped and makes a Control Roll, with all applicable modifiers.

A successful roll indicates that the desired bombs are dumped. A failed roll indicates all bombs remaining on the craft are dumped. Dumped bombs do not inflict damage when they land. Players can also carry out non-emergency bomb dumps using the rules for *Dumping Ammunition* (see p. 104). The fighter cannot exceed Safe Thrust during the turn in which it is dumping its bombs. No ammunition explosion results if a fighter dumping its bomb load is hit in the aft location.

GROUND-TO-AIR ATTACKS

The rules for ground units attacking airborne aerospace units are covered in the appropriate areas of the *Combat* section (see pp. 98 and 110). However, because the use of weapons by aerospace units can differ significantly from the use of those same weapons by non-aerospace units, an example of a non-aerospace unit attack against an airborne aerospace unit is appropriate.

In the strafing example on p. 244, the controlling player of the ground units wishes to attack the aerospace fighter. The Shiva *is at Altitude 3 in a hex on the low-altitude map that corresponds with the Canyon map (the ground mapsheet).*

First, all of the units on the ground mapsheet have line of sight to the Shiva*. (They would have LOS whether the fighter was at Altitude 1 all the way up to Altitude 8; at Altitude 9 or higher, the units on the ground mapsheet could not attack the* Shiva*. See* Line of Sight *under* Airborne Aerospace Units Vs. Airborne Non-Aerospace Units*, p. 99 of the* Combat *section.)*

Next, the ground units' player must take his units' firing arcs into consideration. The Shiva *is operating on a low altitude map, and so the line of sight is drawn from the attacking hexes to the closest point on the* Shiva*'s flightline to determine appropriate arcs as follows (see* Firing Arcs *under* Non-Aerospace Units to Airborne Aerospace Units*, p. 110 of* Combat*):*

1. *Firing arcs do not apply to the infantry in hexes A and B.*
2. *The vehicle in Hex A can only fire its front-mounted weapons, or turret-mounted weapons if the unit*

had a turret and rotated it appropriately during weapon declaration.

3. *The fighter is in the right side arc of the 'Mech in Hex B. The 'Mech may torso-twist to fire its front arc weapons on the fighter.*
4. *The fighter is in the ProtoMech's rear arc, and so the ProtoMech can only fire on the fighter if it mounts a main gun or arm-mounted weapons.*
5. *The VTOL in Hex D can only fire its rear-mounted weapons.*
6. *The WiGE in Hex 1 can only fire right-side mounted weapons.*
7. *Because the closest point on the* Shiva*'s flightline is equidistant to the 'Mech in Hex 2's front and left arm arcs, the player controlling the player may choose what arc applies. The player controlling the 'Mech in Hex 2 may elect to torso-twist towards the* Shiva*'s flightline, thus ensuring they may use the weapons in their front firing arc.*

As the Shiva *is operating on a low-altitude map, the range of the fighter is drawn from the attacking unit's hex to the nearest hex on the* Shiva*'s flightline, minimum 0. In addition, for each altitude, all attacking non-aerospace units add 2 hexes to the range (see* Non-Aerospace Units Attacking Airborne Aerospace Units*, p. 107). With that in mind, the ranges for each unit are as follows:*

1. *The vehicle in Hex A, the 'Mech in Hex B, the ProtoMech in Hex C, and the VTOL in Hex D would all attack the* Shiva *as though the range were 6 (all are on the flightline, plus 2 hexes of range per altitude).*
2. *The range from the WiGE in Hex 1 is 7 (1 hex from the flightline, plus 2 hexes of range per altitude).*
3. *The range from the 'Mech in Hex 2 is 8 (2 hexes from the flightline, plus 2 hexes of range per altitude).*
4. *The two infantry units cannot make attacks against airborne aerospace units.*

A McGee's Cutthroats' Rifleman *attempts to shoot down an over-flying spotter plane.*

If the Shiva *had been at Altitude 1 (NOE), the WiGE in Hex 1 would have applied a +1 to-hit modifier, while the 'Mech in Hex 2 would have applied a +2 to-hit modifier for terrain.*

Finally, the player must consider the angle of attack (see Angle of Attack, p. 236). The units in hexes A, B, C and D are attacking the aerospace fighter's nose and so apply a +1 modifier for angle of attack. The WiGE in Hex 1 is attacking the fighter's right side and 'Mech in Hex 2 is attacking the left side, and so both apply a +2 to-hit modifier.

With the above information determined, the controlling player of the 'Mech in Hex B (a Legacy*) determines the exact to-hit numbers for his weapons. The base range is 0 hexes, +2 hexes for each of the three altitudes for a net range of 6 hexes.*

This is medium range for the Legacy*'s ER medium lasers and its single Streak SRM-4. The 'Mech's twin Ultra AC/10s (which the controlling player opts to fire at double rate) are at short range. The ER small laser has a maximum range of 5 and thus cannot be used against the* Shiva*. The* Legacy *walked this turn, increasing the to-hit target number modifier at short range to 5 and at medium range to 7.*

The player rolls a 6 and an 11 for the ER medium lasers (one hit, one miss), an 8 for the SRM-4 (which inflicts four 2-point hits) and a 6 and 7 for the Ultra AC/10. He rolls 2D6 twice to see how many AC rounds struck the target and gets a 6 and a 10, which he compares to the appropriate column of the Cluster Hits Table. One round from the first autocannon and both rounds from the second struck the Shiva*, inflicting 43 total points of damage.*

Because the attacking unit is launching an assault from the ground against an airborne aerospace unit, the player uses the Above/Below column of the Aerospace Units Hit Location Table (see p. 237). The ER medium laser hits the fighter's aft and does 5 points of damage, exceeding the Damage Threshold of 4 and possibly inflicting critical damage to the engine, while the SRM rounds strike the right wing, left wing and aft (x2) for 2 points each (no chance of a critical hit). Two AC rounds strike the right wing for 10 damage points each and one AC round to the nose for 10 points, all exceeding the Damage Thresholds in those locations. The wing hits offer two possible critical hits—a gear hit and a weapon hit—while the nose hit may have done critical damage to sensors.

The player rolls 2D6 for each possible critical hit. He gets 9 for the engine roll (critical), 7 for the gear (no critical), 11 for the wing weapons (taking out one of the pulse lasers) and 7 for the sensor (no critical). The damage takes effect immediately; not enough to destroy the aircraft but enough to place it in great danger.

The Shiva*'s player must make a Control Roll against a Modified Target Number of 8 (5 (Base To-Hit Number) +2 (+1for each 20 points of damage sustained), +2 (atmospheric flight), –1 (aerospace fighter)). He rolls a 5—a failure—and the fighter goes out of control. Next, he rolls 1D6 to determine the number of altitudes lost and gets a 2. The aircraft drops to Altitude 1 (NOE), surviving—for now—to continue the fight.*

ATTACKS BY AND AGAINST SPHEROID DROPSHIPS IN ATMOSPHERE

Spheroid DropShips and spheroid small craft, at low altitude, use the same Firing and Attack Diagrams that Grounded Spheroid Aerospace units use (see p. 250). A spheroid unit may spend 1 MP of thrust to reverse their left and right side facing.

ATMOSPHERIC CONTROL MODIFIERS TABLE

Condition	Control Roll
Per 20 points of damage	+1
Unit is spheroid DropShip	+1
Unit is aerodyne DropShip	0
Unit is fighter or small craft	–1

The player may elect to change the facing of the craft a full 180 degrees or any fraction there of, but the cost of such movement is always 1 MP, no matter how much the craft rotates, up to 180 degrees.

For any attack that strikes a spheroid from a firing unit at the same altitude, roll 1D6. On a result of 1, the attack strikes the Nose; on a result of 2-5, the attack strikes the Side; and on a result of 6, the attack strikes the Aft. For any attack from a firing unit at a higher altitude that strikes a spheroid, roll 1D6. On a result of 1-3, the attack strikes the Nose; on a result of 4-6 the attack strikes the Side. For any attack from a firing unit at a lower altitude that strikes a spheroid, roll 1D6. On a result of 1-3, the attack strikes the Aft; on a result of 4-6 the attack strikes the Side.

For attacks by a spheroid unit, if the target unit is at the same altitude as the spheroid, it may fire the Fore Side and Aft Side weapons, facing the target. If the target is higher then the spheroid unit, then it may fire the Nose and appropriate Fore Side weapons, at the target. For units at a lower altitude, the spheroid may fire the Aft and appropriate Aft Side weapons, at the target.

Spheroid craft may target units in their "dead zone" (see *Air-To-Air Attacks*, p. 241). For targets at a higher altitude, the spheroid may fire its Nose weapons at the target. For targets at a lower altitude, the spheroid may fire its Aft weapons at the target.

DAMAGE TO AEROSPACE UNITS IN ATMOSPHERE

An aerospace unit in atmosphere must make a Control Roll in the End Phase of every turn in which it suffers damage (see p. 93). All appropriate target modifiers shown on the Control Rolls Table (including the +2 modifier for Atmospheric Operations), and the Atmospheric Control Modifiers Table above, apply to this roll. A unit that goes out-of-control on the low altitude map automatically loses 1D6 altitudes and may crash if this causes it to enter a hex with an altitude higher than its own (see *Crashes*, p. 81).

ATTACKS BY GROUNDED AEROSPACE UNITS

A grounded DropShip can provide a phenomenal amount of firepower for the force employing it; these units often serve as the focal point of a fixed defense. The following rules allow the use of such powerhouses on the battlefield.

Fighters: Fighters have the same firing arcs and attack directions for incoming fire on the ground map as they do on the space map; all weapon attacks by grounded fighters apply a +2 to-hit modifier.

Line of Sight

Unlike airborne aerospace units, grounded aerospace units rise above the level of the underlying hex(es) they occupy, which is used when determining the LOS from an attacking grounded aerospace unit to the target (see Unit Heights Table, p. 99).

Unlike other units, a grounded DropShip determines LOS from one of the six adjacent hexes it occupies to the target; which ever hex provides the best LOS circumstances. For example, in the LOS diagram on p. 100, the height of the woods in both Hexes 1 and 2 equal the height of both the DropShip and the 'Mech in Hex E (Level 8) and so both hexes potentially intervene. If the controlling player of that DropShip draws LOS from Hex 1115 to Hex E, it passes through both hexes 1 and 2 and so both woods hexes intervene. However, if the player draws LOS from Hex 1014 to Hex B, only the woods in Hex 1 intervenes.

Attacks from the DropShip's nose arc (see Firing Weapons below) against airborne aerospace units, however, draw LOS from the central occupied hex.

Firing Arcs

Aerodyne DropShips and Small craft have the same orientation on a ground map as on a space map and so their firing arcs do not change when grounded; simply use the Aerodyne Firing Arcs Diagram on p. 236, blocking out a central hex and six adjacent hexes to determine the ground-based firing arcs, in particular which hexes the unit cannot fire into. Aerodyne DropShips and Small craft cannot fire at targets in the hex they occupy, nor can they fire at airborne aerospace units.

Spheroid DropShips and Small craft land aft-first and so use distinct firing arcs as shown on the Grounded Spheroid DropShip Firing Arcs diagram on page 250:

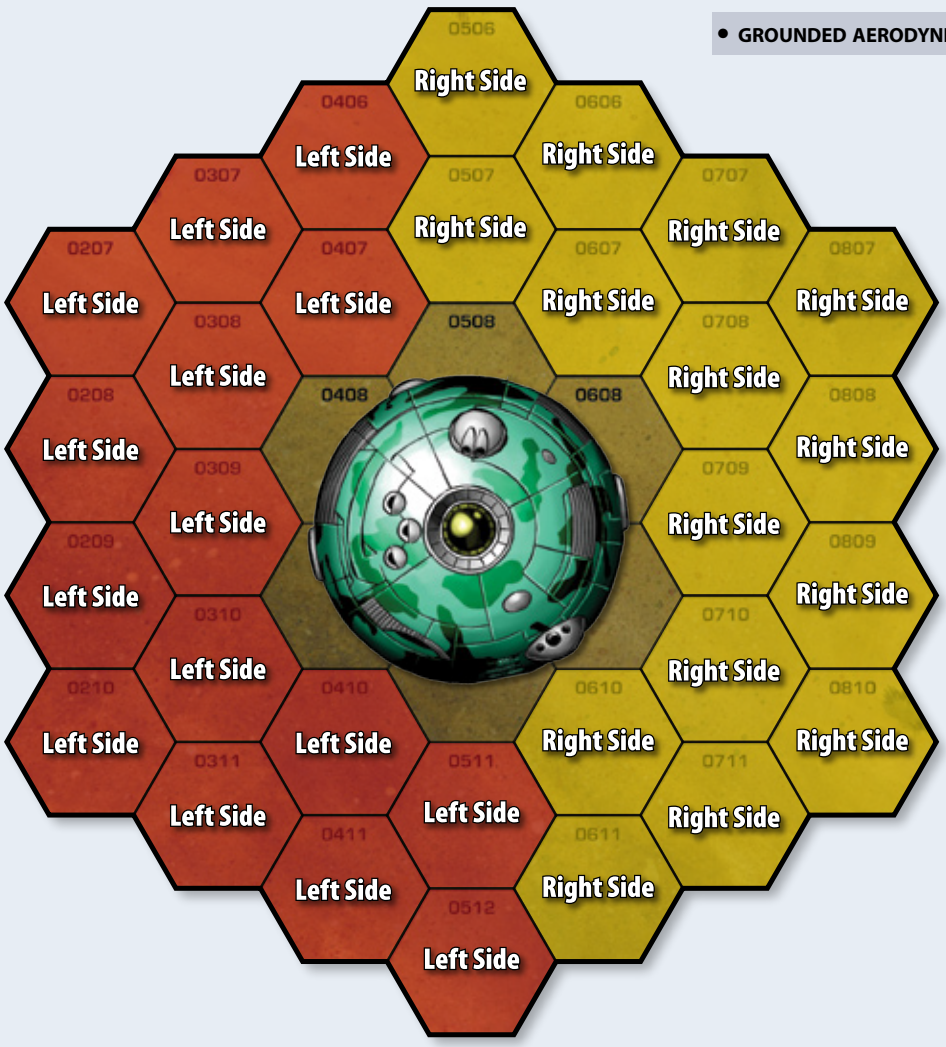
- **Left Side Arc:** All fore-left and aft-left weapons fire into the Left Side Arc.
- **Right Side Arc:** All fore-right and aft-right weapons fire into the Right Side Arc.
- **Nose-Mounted Weapons:** Nose-mounted weapons can only target airborne aerospace units (see Firing Weapons below).
- **Aft-Mounted Weapons:** Aft-mounted weapons can only target units in the same hexes the spheroid DropShip or Small craft occupies; it can target any of the 7 hexes it occupies with any aft-mounted weapons (see Firing Weapons below).

Note: The controlling player decides on the orientation of a grounded spheroid DropShip's or Small craft firing arcs after the unit has landed (see *Landing,* p. 87), crashed (if it crashes and survives, treat the spheroid DropShip or Small craft as though it landed aft-first) or when placing it on the battlefield if part of a scenario set-up. Firing arcs remain unchanged once determined until the DropShip or Small Craft lifts off.

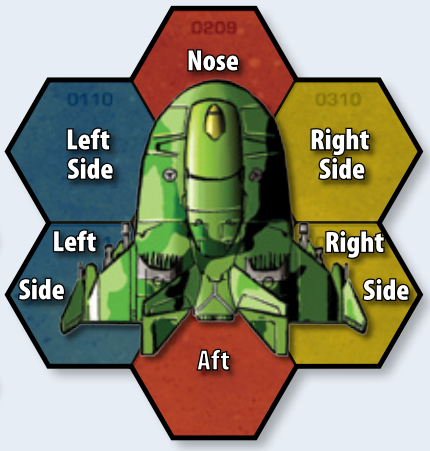
Firing Weapons

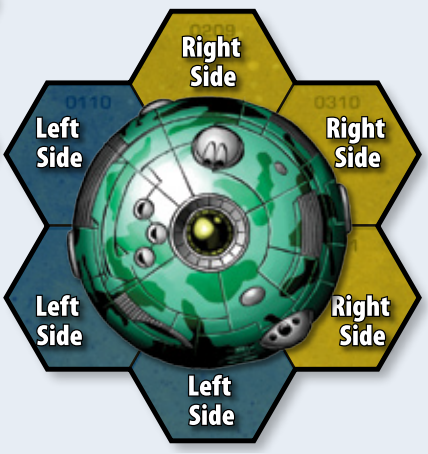
Attacks by DropShips are carried out with the exceptions noted above concerning firing arcs for grounded spheroid DropShips. Resolve each individual weapon as a separate attack, using ranges and damage values as found on pages 303-304.

Grounded DropShips apply a –2 to-hit modifier against all non-aerospace targets (this includes grounded aerospace units).



• GROUNDED SPHEROID DROPSHIP FIRING ARCS DIAGRAM •





• GROUNDED AERODYNE DROPSHIP ATTACK DIRECTION DIAGRAM •

• GROUNDED SPHEROID DROPSHIP ATTACK DIRECTION DIAGRAM •

Multiple Targets: Grounded spheroid DropShips are the only units that can attack both airborne aerospace units—using nose-mounted weapons—while simultaneously attacking non-aerospace units (this includes grounded aerospace units—with the weapons in their other arcs.

Attack Direction

Attacks against a grounded aerodyne DropShip use the Grounded Aerodyne DropShip Attack Direction diagram above.

Attacks against a grounded spheroid DropShips use the Grounded Spheroid DropShip Attack Direction diagram above. As with Firing arcs, the controlling player decides on the orientation of the DropShips left and right side for attack direction once the unit has landed, crashed or been placed in a scenario; attack direction remains unchanged once determined until the DropShip lifts off.

LOS: Line of Sight from an attacking unit to a grounded DropShip is drawn to one of the six adjacent hexes the DropShip occupies, not the central hex.

Immobile Target: As noted on page 110, grounded DropShips are considered immobile targets.

Damage

Damage to grounded aerospace units is resolved exactly like damage to airborne aerospace units.

DropShip Combat

DropShips take damage in the same way on the ground map as on the space map. The angle of attack determines the facing struck by incoming fire and the attack must exceed the Damage Threshold to cause critical damage. Aerodyne DropShips use the same facings as on the space map, while attacks against spheroid DropShips always strike the side.

Attacks by DropShips are carried out in the same manner as on the space map.

OTHER COMBAT WEAPONS AND EQUIPMENT

If a unit's technical readout or record sheet game statistics indicate it carries one of the following equipment types, it may significantly affect game play. Players should consult the unit's game statistics and familiarize themselves with the appropriate equipment rules below before play begins.

Advanced Weapons and Equipment: If a unit mounts any weapons and/or equipment not found here, or on the appropriate Weapons and Equipment tables (see p. 303), then the weapon/equipment in question is either advanced (not appropriate for standard tournament play) and is covered in *Tactical Operations*, or it has no direct impact on *BattleTech* game play, only affecting construction. Such weapons and/or equipment that are not considered advanced will be described in *TechManual*.

SCREEN LAUNCHERS

Screen launchers may only be used in a space map hex (a non-atmospheric or atmospheric-interface hex). A single launcher can fire one canister per turn. Each canister may be targeted against any hex in the appropriate firing arc and within range, except for the firing unit's own hex. No to-hit roll is required. Once the canister is detonated, designate (with a makeshift counter, written on a piece of paper and so on) that the target hex is occupied by the chaff of a screen launcher.

Any unit (including tele-operated missiles) in the target hex at the time of a canister's detonation suffers 15 points of standard-scale damage, rolled on the Nose column of the Hit Location Table, page 237. If multiple screen launcher canisters detonate in a hex, each one causes damage.

Hexes containing screen launcher chaff block line of sight, though units can fire into or out of a hex containing a screen launcher. Modify the to-hit number by +2 for attacks into or out of a hex containing a screen launcher. Multiple screen launchers in a hex have no impact on shots simply passing through the hex (each canister blocks LOS), but additional screen launchers in a hex influence shots into or out of that hex. Each screen launcher after the first adds +1 to the to-hit penalty. For example, two screen launchers give a +3 penalty, +2 for the first and +1 for the second, while four screen launchers give a +5 penalty (+2 for the first and +1 for each additional canister).

In the End Phase of each turn, roll 2D6 for each hex on the space map that contains screen launcher chaff. On a result of 7 or greater, the hex is cleared of chaff, regardless of how many screen launcher canisters may have detonated in it. On any other result, the screen launcher chaff remains in the hex.

TELE-OPERATED MISSILES

Tele-operated missiles may only be fired from, and targeted at, units that occupy a space map hex. Whenever a tele-operated missile is launched, place a makeshift counter representing the missile in the attacker's hex, with the same heading and velocity as the firing unit.

Tele-operated missiles move like fighters, executing their movement after small craft and before fighters. Use the standard rules for facing changes and acceleration; tele-operated missiles have no G-force or SI movement restrictions.

Missiles cannot decelerate but also do not have a maximum Thrust Value. Instead, thrust is limited only by the amount of fuel available. For example, a missile with 30 Fuel Points can spend up to 30 Thrust Points. If the missile spends all of its Fuel Points, it can no longer maneuver or accelerate. The tele-operated missiles currently available have the following Fuel Points: Kraken-T, 25; White Shark-T, 40; Killer Whale-T, 30; Barracuda-T, 30.

A clear line of sight must be maintained between the firing unit and the missile to facilitate the transmission of control data. All objects that block LOS or inflict to-hit penalties prevent the operator's commands from reaching the missile. Consequently, missiles without LOS to the operator may not maneuver or accelerate. Instead, the missile continues on its last heading and velocity. Likewise, if the firing unit is destroyed, the missile cannot be controlled and continues on its last heading and velocity.

Tele-operated missiles cannot attack fighters, but are treated as fighters when attacked. The Armor Value of a tele-operated missile is equal to the amount of capital-scale damage it may inflict. Missiles remain fully functional and are not destroyed until all of their armor is destroyed.

If a missile ends the Aerospace Movement Phase in the same hex as an enemy unit—even if it is currently out of the operator's LOS—the missile's targeting computer assumes control and attempts to hit the "target" unit. Tele-operated missiles use a Base To-Hit Number of 2. Modify this number by +1 for each point of capital-scale damage taken by the missile (i.e. each armor point lost) during the turn in which it attacks, and for each point of thrust spent during that same turn. A missile with no Fuel Points suffers an additional +6 to-hit modifier. If the firing unit has suffered critical hits that affect to-hit numbers (such as FCS and CIC), these modifiers also affect this to-hit number.

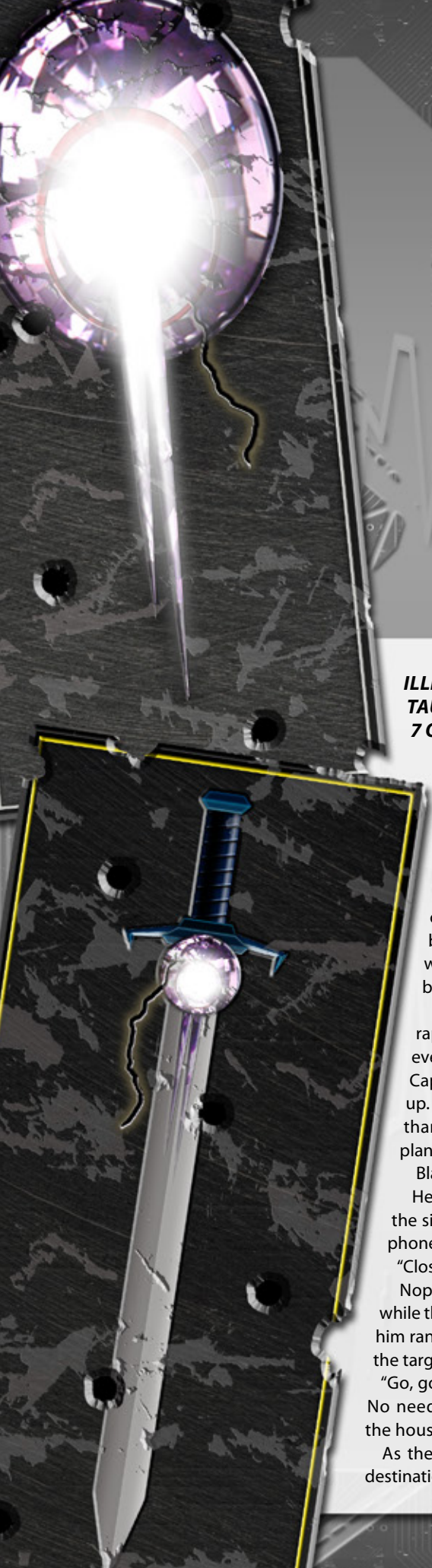
A missile that misses its target remains on the space map and can continue to maneuver until it hits a target, runs out of fuel, is destroyed, enters an atmospheric-interface hex (which destroys it) or leaves the playing area.

Each tele-operated missile launcher can only control one missile at a time. If a second tele-operated missile is launched before the first is either destroyed, runs out of fuel or leaves the playing area, that first missile can no longer be controlled and continues on its last heading and velocity; if it ends any movement phase in a target's hex, it can still attempt an attack.

Tele-operated launchers may not fire standard (non-tele-operated) capital ammunition.

THE CIRCLE

Dan C. Duval



ILLIUSHIN
TAURIAN CONCORDAT
7 OCTOBER 3067

No windows glowed in the target house as Subaltern Alan Noppadoi waved two fingers to the left, then to the right, sending agents to cover the dwelling on either side. Backup waited on the next block to catch any runners. The houses on this block faced almost onto the sidewalk, with narrow strips of bushes or vines between them and concrete.

He wasn't an old man at forty-two, but rapidly running out of time if he wanted to ever be more than a subaltern of security. Capturing these Blakist spies was his way up. So far that year, they had collected more than twenty of them, across the various planets that made up the Concordat.

Blakists. Supposed allies.

He hooked a finger over the whisker on the side of his headset and pulled the microphone down to his cheek.

"Close in. Slow. Quiet."

Noppadoi started walking across the street, while the five agents that had remained behind him ran past him, heading for the front door of the target house.

"Go, go, go," he murmured. No need to shout. No need to warn whomever else might be in the house.

As the two flanking teams came up on their destination, they turned in between the houses, lifting their SMGs into shooting position. Standard procedure: the weapon points where the shooter is looking.

The door of the house was three steps up from the sidewalk. The team crossing the street raised their weapons from under their jackets, all but the lead man. He'd stayed with Noppadoi. He moved swiftly forward, then leaped and hit the door with both feet. It flew open with a crash as the man fell to the stoop and rolled out of the way, into the bushes by the steps. The other four men rushed through the door, one after the other.

Noppadoi continued his stroll, barely reaching the steps before the kicker was on his feet, following the rest of the team in. Noppadoi stepped through the doorway and stopped, turning to face the outside. He drew his service pistol, clicked the safety off and waited.

Behind him, he heard the insertion team moving through the house, announcing each room as clear before they started up the stairs. They made no effort at quiet. Quiet had ceased to be part of the plan.

Above him and to his right, Noppadoi heard the near-silent scrape of a window opening, plastic on plastic.

He waited. Then he stepped back outside and hopped off the stoop to his right, just in time to stick the muzzle of the pistol into the face of the man who had jumped from the window above.

Proof that his anonymous source was reliable—at least enough that his score of captured agents kept growing. As long as he could count on that, Noppadoi didn't give a damn who his source really was.

"Live or die," Noppadoi said to the man squatting on the ground. "It makes no difference to me."

The man didn't look like he came from the Concordat. He looked more like a Magistracy dog. Regardless, as easy to shoot him as not. Behind them, the house rumbled and shook as the insertion team cleared the upstairs, then clattered back downstairs. Agents took the man into custody, cuffing his hands behind him.

Grinding his molar down on the transmit key, Noppadoi said, "Bring up the cart. Insertion team, hold the perimeter until relieved."

His Number Two, Coronet Jaruwan, stopped at his side. "Should be lots of intel in there. Lots of papers upstairs."

"Good." Noppadoi nodded toward the captive. "What we really need is in his head. We'll get it."

Jaruwan grunted. "Then we recondition him, like the rest?"

Noppadoi nodded. "Make him think he's a double for FedCom, then drop him in the Confederation."

Jaruwan grinned. "Break up this stupid alliance with Liao."

Report him as a FedCom spy rather than whatever he might actually be, Noppadoi thought. *Stir up Shraplen's paranoia some more. Move me another step up the chain.*

SAMANTHA
TAURUS
TAURIAN CONCORDAT

Protector Grover Shraplen did not look happy, the demi-precentor thought. From the information given him by his superiors at ComStar, Zwick assumed much of Shraplen's ill humor stemmed from the mere fact of this intelligence briefing. He also knew that much of it sprang from his presence, as a representative of ComStar, in Shraplen's inner sanctum. The Word of Blake had succeeded brilliantly in turning Grover Shraplen to their cause.

Zwick prayed that whatever powers watched over humanity would not let Shraplen know how desperate things were for ComStar these days. Desperate enough that Zwick had to get to Shraplen any way he could.

What the Taurians called the Secure Room was empty except for a conference table and eight chairs. The masonry walls hid a set of tubes that surrounded the room, where air bubbled through water, creating a white-noise screen around the entire space. Even the door contained the tubes, in a closed loop. With a Faraday cage and a double-core induction electricity supply, no more secure place existed anywhere on Taurus.

Brellan Stark, Air Marshal Senior Grade, was giving this briefing. Tall, gaunt and stiff, his informal attire did not hide a military bearing. Stark was one of the last partisans ComStar could count on in the Concordat. Given Shraplen's feelings about Taurian Military Intelligence, getting to him through them was indeed an act of desperation.

"I have asked, ah…" Stark turned slightly in his chair to indicate the ComStar officer in the corner. "…*Mister* Zwick to join us.

We have information on Blakist agents in the Concordat." Stark cleared his throat. "Brought to us from our friends in ComStar."

Shraplen raised a hand, cutting Stark off. "I assume that Subaltern Noppadoi is still capturing Blakist spies, then reporting them to us as FedCom."

"Yes. Yes, exactly," Stark said, visibly shaken at being interrupted.

Zwick felt his insides twist. A bad situation to start with, it was getting worse by the moment. "You know these agents all claim to be from the Magistracy or from the Capellan Confederation?" he said. He must remain calm. Cool. "That's a lie. They are spies from the Word of Blake. They claim to be your friends and yet they send these agents, these provocateurs, to your worlds. The Blakists are not your friends."

"Is Noppadoi getting them all?" Shraplen snapped.

Stark paled. Zwick merely shrugged. "Our intelligence says probably not."

Shraplen nodded.

"And we know Noppadoi supports Marshal Kithrong," Stark said, attempting to regain some respect from Shraplen. "We can arrest him most anytime, or transfer him elsewhere."

Shraplen shook his head. "No. For the time being, he's where we can watch him closely. We know who his subordinates are. We can collect them anytime we want." Raising a water glass, Shraplen took a long drink. "And I will be long dead," he said, "before Noppadoi commands anything larger than a twenty-man security squad."

Shraplen did not care, Zwick realized, that the Word of Blake was sending operatives into the Concordat. Shraplen cared more about a single ambitious intelligence officer than about whatever the Blakists might do. *ComStar is doomed in the Concordat,* he thought. *There is no hope*.

At least, not as long as men like Shraplen ruled in this realm.

But if they were swept out of the way …

NEW ABILENE
MAGISTRACY OF CANOPUS

The old rancho stood at the top of the tallest of several ridges that marched down from the Stearns Mountains to the wide, empty plains below. Tiny dots on those plains were cattle, feeding on the last grass.

The rancho itself was stone, with a red-tile roof, sprawling for nearly fifty meters along the ridge top. All of the rooms on the single floor faced either up toward the mountains or down across the ridges. The main room spanned the whole house, giving views of both. Inauspicious as the local headquarters of the Blakists' True Believers faction, but also inconspicuous. The Magistracy was not yet under Blakist control, and so inconspicuous was best.

At the picture window facing the plains, Demi-Precentor Santiago Przbtesky watched the tiny dots in the grasslands. Their pattern changed slowly, but it did change. *Everything changes*. He must remember that.

"Have you passed that report on to Precentor Blane, yet?" Przbtesky said.

"It has been done," his aide replied.

A mere adept, the boy already knew much too much. Przbtesky knew he would have to dispose of him and find someone else. He'd gotten rather fond of the youth—but as the old saying went, two people may keep a secret if one of them is dead.

"This Noppadoi," Przbtesky said, "has taken many Toyama agents. You are sure he has not captured any of ours?"

"As of the last reports from the Concordat, our network remains in place, while we feed the Toyama agents to Noppadoi as fast as they arrive." The young man spoke almost without emotion. A good trait. A pity.

And if that little farce worked, using Capellan and Canopian citizens as agents to divert attention away from the Word, so much the better.

The Magistracy was not ready for the Blakists to do much more than attempt to steer them. When the time came, though, True Believers would take charge in the Magistracy and the Concordat, not the fools of the Toyama faction.

It could be no other way.

LANTAU ISLAND
SIAN
CAPELLAN CONFEDERATION

"*Jiang-jun* Chi'n." Chancellor Sun-Tzu Liao glided into the study. His long, painted robe hid the movement of his feet, its long sleeves concealing his hands. "I thank the deputy commander of the Maskirovka for coming all this way for our discussions."

Chi'n bowed at the waist until his upper body was parallel to the floor. The motion almost made him drop the contents of the thick leather folder under his arm. Without straightening up, he said, "I am honored to serve, Chancellor." He tried to ease the papers back into the folder.

Years before, Chi'n had been here, in the main room of the Chancellor's retreat. Then, overstuffed chairs and long plush couches had filled the chamber. Now it held a single enameled chair, the wood of the seat curving up to make armrests, with a single embroidered pad for comfort. No other furniture broke up the expanse of thick carpeting on the floor. Sun-Tzu Liao's guests had to sit on the floor. Or kneel.

Sun-Tzu sat carefully in the chair, his robe rising enough to reveal red slippers woven of goose quills, imported from Terra. One hand slid out of a sleeve, motioning Chi'n down.

His knees too old and stiff to kneel, Chi'n sank slowly to the floor, cross-legged. He waited, carefully not looking the Chancellor in the face.

"Proceed," Sun-Tzu said.

"Yes, Chancellor. For the past year or so, we have intercepted agents from the Concordat, Blakist agents who believe they are also in the pay of the FedCom. Obviously conditioned." He started shuffling through the pages in his folder.

Sun-Tzu held up a hand. "Don't bother. Your verbal report is sufficient. You are still transferring these agents to the Combine, yes?" At Chi'n's nod, he added, "And you have made sure that an agent known to the Combine performs the actual insertion for us?"

Chi'n smiled. "Of course. In the Outworlds Alliance. He is sufficiently incompetent that they can easily trace it back to us."

Chancellor Liao nodded gravely. "Excellent. Blakists who are double agents for the FedCom, but obviously tampered with, set upon our good friends in the Combine ISF. Their intelligence people will make themselves insane trying to determine what we are doing, simply because we are doing nothing." He gave a hollow laugh. "It even saves us the cost of executing these Blakist agents." He almost spat the last words.

Chi'n cleared his throat. He had been dreading this moment ever since he had found out. Nothing for it but to dive in. And

hope. "During our interrogations, we determined that many of these agents are from the Confederation. Our people."

Sun-Tzu Liao did not move, not even a flick of an eyelid. When he spoke, his voice was slow and deliberate. "What concern what traitors do? They are traitors. These, in the end, will serve the purposes of their homeland."

The Chancellor clapped his hands loudly, once. A servant hurried into the room. "Would you care to take tea, Chi'n," Sun-Tzu asked, "before we get to the real business of the day?"

7 OCT 3067
TO: PRESIDENT MITCHELL AVELLAR, OUTWORLDS ALLIANCE
FROM: COORDINATOR STEVEN WOODWARD, OAI
RE: YOUR MEMO OF 2 OCT 3067

As ComStar Precentor Grieg has pointed out, the Capellan Confederation has been feeding agents into the Draconis Combine through the Alliance, by way of a merchant named Allois Bauer, who operates from Quatre Belle.

Regarding your concerns about an Alliance citizen being involved with this smuggling of agents, Bauer uses a Marian trader, Lucius Shute, who owns a merchant vessel and makes a common run from Alpheratz to Galedon V in the Combine. Shute sometimes makes unscheduled stops at Quatre Belle and, in the Combine, at Sinope. Apparently the agent transfers take place at these unscheduled stops.

Our people have confirmed this information and sealed off those sources, making it unlikely that Combine assets will connect the Alliance to these people. We cannot yet determine how long this pipeline has been in operation, though it appears to have been running for at least twelve months.

The Precentor also tells us this operation originates with the Word of Blake, but I have not yet confirmed that. I will add progress on this case to your regular briefings.

HOUSE OF THE SCARLET HAND
LUTHIEN
DRACONIS COMBINE

Louis Yamashi rocked his head in his hands. What could it mean?

It was long past sunset. Only the desk lamp provided light to Yamashi's small office, much too small and plain for a *tai-sa* in the Internal Security Force. But small meant nothing got lost here. Unless immediately needed, it got moved out of the office.

Near the lamp and a porcelain cup containing some very cold tea, a single file occupied the desk. A very thick file. It contained dossiers on nearly sixty men and women the ISF had come across, a few at a time over the past several years, all with the exact same conditioning: Blakist spies on top, with the conditioned belief that they also served the Federated Suns. Yet the conditioning was so obvious and these people so badly trained to fit into Combine society—not to mention that they were so obviously gaijin.

Half of them were certainly Capellan. So easily traced back to House Liao and the Confederation. Maybe too easily. What other hands might there be in this, targeting the Capellans?

The agents themselves had all been quietly disposed of. But Yamashi's opposites in the Confederation *had* to know that these agents would be picked up almost immediately and that such sloppy conditioning would be noticed almost as quickly.

Why? Why? Why?

A knock sounded at the door. "Come," Yamashi called.

Chu-sa Moshima entered, his uniform bright and crisp, in contrast to the rumpled tunic Yamashi wore. He bowed. "Yamashi-sama. The Coordinator's office has requested a report on the matter you were assigned."

His face still in his hands, Yamashi shook his head slowly. "I am no further along than last week, Moshima. Or last month. It just does not make sense."

Moshima looked at the small finger of Yamashi's right hand. The last joint was missing, the finger ending in a smooth cap of skin. According to the stories, that was Yamashi's apology for missing the machinations of the Black Dragon Society, years ago when Yamashi was a junior officer in the ISF. Many ISF senior intelligence officers were missing the same finger joint.

Unconsciously, Moshima held his hands in front of him, his left hand rubbing the small finger of his right.

DARWIN DESERT
BALTAZAR III
CIRCINUS FEDERATION

Sand scoured the single window of the training room, high on the long wall opposite the sole door. At a table in the front, between door and window, a demi-precentor stood, knuckles on the tabletop. His height made him stoop to allow his hands to reach the table. The stoop revealed hiking boots below the hem of his dress robes.

Behind him and to his left, near the door, two adepts stood in somewhat cheaper robes, hands folded, trying hard to not look proud and self-satisfied. In front of them, in two rows of four chairs, robed acolytes sat, waiting for the demi-precentor to speak. Five more rows of chairs sat empty. All of the acolytes had been recruited from the Capellan Confederation or the Magistracy of Canopus.

"First of all," the demi-precentor said, "I want to congratulate you on completing the course. As you can see"—he waved at the empty chairs behind them—"most of those who started did not finish. You are the best, the ones who will carry our glorious vision into the Concordat.

"You have been trained in Concordat culture, in its history, in the locals' manner of speaking, until you can pass for Concordat citizens. Soon you will be assigned to your stations, given your first missions. Do not expect these to concern more than minor matters, but every mission advances our holy cause, and so you must succeed.

"You will have heard that other factions of the Word are also operating in the Concordat. Remember that we are all trying to bring the great Blake's vision to fruition. If you encounter fellow agents, do not associate with them, but do not interfere with them, either. Let them do their work and they will let you do yours.

"Remember that in the Concordat, there are those who wish to cast us out. These are the people we must combat. You must discover their identities, reveal their plans and thereby help us thwart them.

"Some will be ComStar agents. Winnow these out above all others.

"I remind that you that, in the unlikely event of capture, you are agents of your home nation, not of the Word. The Great Work has only begun, but with your help, we, the followers of Conrad Toyama, will lead the way to a future for humanity that will outshine any previous civilization.

"My heart goes with you."

A Goshawk 3 from Clan Steel Viper's Beta Galaxy is cornered by a Word of Blake Level II from the First Division.

This section is not part of the standard rules of *BattleTech* as presented in previous sections of *Total Warfare*, and so *Creating Scenarios* should not be considered part of standard/tournament play. Instead, this section provides additional rules and tables that players can use to quickly generate *BattleTech* scenarios—for pickup games or as part of larger campaigns—once they have a grasp of the game rules Using the *Creating Scenarios* system, players can generate relatively balanced scenarios in short order. By combining the various scenario types with mixes of units and mapsheets, players can create a nearly infinite number of different scenarios. See *Campaign Operations* for ideas and guidelines on how to expand beyond scenarios and pickup games to full blown campaigns.

Battle Value System: The Battle Value (BV) system provides a numerical rating (a "point system") that represents the damage capabilities and survival potential of every *BattleTech* unit. BV can be combined with the *Creating Scenarios* section to generate an even more balanced scenario, increasing every player's enjoyment of the game.

Unless otherwise stated the Battle Value of the skills of the warrior should be included with the Battle Value of the unit.

While the Battle Value system appears in *TechManual*, most technical readouts and record sheets provide the BV of the unit in question. If a BV is not readily available in either a technical readout or on the unit's record sheet, players can find a comprehensive BV database at www.masterunitlist.info. Note that the Battle Value system as featured in *TechManual* is a revised version. Technical readouts and record sheet compilations published prior to *TechManual* use a now-obsolete Battle Value system.

GENERAL RULES

Unless otherwise noted in the specific rules for each scenario type, the following rules apply to all *BattleTech* scenarios created with this system.

NUMBER OF PLAYERS

The mission-generation rules are written for two-player scenarios. If more than two individuals are playing, simply divide all the players into two opposing teams. Players can use these rules to set up games involving three or more sides, but such games tend to get complicated and the players must determine how to apply the rules in various situations.

SET-UP

First, choose a scenario type (see p. 258). Next, select the mapsheets (see p. 262). Then determine the force composition (see p. 264), and finally both players roll 2D6 to begin. The player with the higher result chooses his home map edge—the edge of the map where his units will enter. The opposite edge becomes the opposing player's home map edge. A player's units can safely exit the map only through that player's home edge.

Roll Initiative for the first turn per standard rules. All units start play off the map, unless a specific scenario states otherwise. A player's units may enter the map on any hex along the player's home edge, regardless of terrain, provided the unit can legally enter that hex. Each unit must enter the map on a full hex nearest the home edge, and that hex counts as its first hex of movement.

Aerospace Units

If players choose to use aerospace units—whether on their own or in conjunction with ground units—they need to set up a separate mapsheet that represents either the low-altitude map, high-altitude map or space map. The rules above for map edges and movement onto the map also apply to aerospace units. However, before an aerospace unit enters the map, the controlling player must announce its starting velocity.

Whether the aerospace units begin on a space map or atmospheric map is left up to the players. Both sides must agree before play can begin.

MOVEMENT AND RETREAT

Scenario maps are fixed once play begins. No new maps will be added to the play area during the game. Unless otherwise noted, units that exit the map at any edge other than their home edge are considered destroyed. Units that exit the map through their home edge have retreated—they remain out of play for the remainder of the scenario and cannot return. Retreated units do not count as destroyed when determining victory. Units may exit the map intentionally or unintentionally (such as a skid), or may be forced off by an opposing unit—for example through a push, charge or death-from-above attack.

Half-hexes along the edge of the map—even those with hex numbers in them—are not considered part of the map. A unit that enters one of these half-hexes for any reason is considered to have exited the map.

ENDING THE GAME

Generally, a scenario ends when all of one player's units have been destroyed or have retreated off the map. At that point, the opposing player wins. Depending on the specific scenario type, however, a player may need to achieve additional or alternative goals to claim victory.

DETERMINING VICTORY

Victory in each scenario goes to the side that survives at the end, or to the side that fulfills specific victory conditions. Most scenarios include different levels of victory as well: decisive, substantial or marginal. A given player may win a decisive, substantial or marginal victory depending on how well he meets the victory conditions.

Depending on the scenario being played, victory levels may be determined in various ways. Players can also score Victory Points by achieving certain goals in a scenario (see *Types of Scenarios*, following).

Beyond the absolute win/lose victory conditions listed with each scenario type, players may include additional victory conditions. While this requires a little more work on the players' part, additional victory conditions can make a scenario more varied and challenging when replayed. For example, the standard win/lose victory condition for the Standup Fight is simply to eliminate all opposing forces. However, players might stipulate that if Player A eliminates all of Player B's forces but loses more than half his own forces in the process, Player A achieves a substantial rather than a decisive victory. Whatever additional victory conditions are used, all players must agree to their use in a given scenario before play begins.

Battle Value: Players using the Battle Value system can also use an alternate method of determining who wins and the level of victory. Both players start with 0 Victory Points. For every enemy unit destroyed, add twice its point value to your total (include the points for the pilot, if any). For each of your units destroyed, deduct the point value of the unit (plus the pilot) from your score. At the end of the scenario, the side with the most points wins. If the difference between the two players' scores is greater than the number of points used to purchase forces for the winning side, the victory is decisive. Otherwise, it is marginal. If the players' scores are tied at the end of the scenario, the game is considered a draw.

Players A and B are playing a scenario in which the fighting forces consist of four 'Mechs on each side. All of the 'Mechs are worth 1,000 BV points each, for a total of 4,000 points per side. The scenario ends with Player A destroying

MASTER UNIT LIST

The **BattleTech Master Unit List** (**MUL**), can be accessed at **www.MasterUnitList.info**. This ever-growing and free to use database enables players to build setting-accurate forces by identifying the 'Mechs, vehicles, fighters, and infantry elements covered by the last thirty-five years of *Technical Readouts* and other sources.

Players can browse unit types simply by clicking "Units," and entering information into the various filter tabs. These filters, and the results returned by a search, include:

- Basic data: weight ranges, *BattleTech* Battle Values from *Total Warfare*, the unit's year of in-universe introduction, and costs in C-bills—the dominant unit of currency used in the *BattleTech* setting;
- Technology bases: including Inner Sphere, Clan, Mixed, and Primitive;
- *BattleTech* rules level: introductory, standard, advanced, and experimental;
- Unit Type: e.g. BattleMech, ProtoMech, Combat Vehicle, and so forth;
- Source: the original *BattleTech* book or product the unit appears in, as well as the Record Sheet product containing its record sheet;
- Faction: Lyran, Federated Suns, Draconis Combine, and more;
- Unit Sub-Types: VTOL, OmniMech, etc.;
- Production and Availability Eras: from the Age of War through the Dark Age setting.

By clicking on the name of a listed unit, the user can view more stats for it, including links to images of the unit courtesy of CamoSpecs Online, and online ordering options to obtain the appropriate miniature via Iron Wind Metals.

Armed with this tool, players can access the broad selection of playable units and begin building custom armies suitable for any era or faction in the official *BattleTech* canon.

all four of Player B's 'Mechs. Player B has only destroyed two of Player A's Mechs. Player A scores twice the point value of each enemy 'Mech he destroyed (2 x 1,000 = 2,000 points each). Because he destroyed all four of his opponent's 'Mechs, he scores 8,000 points (2,000 x 4 = 8,000). However, his opponent destroyed two of his 'Mechs, so Player A must deduct their point value from his score. Two 'Mechs at 1,000 points each equals 2,000 points, reducing Player A's final score to 6,000.

The two 'Mechs that Player B managed to destroy give him 4,000 points (2 x 1,000 = 2,000, 2,000 x 2 = 4,000). However, Player B lost all four of his own units. Subtracting 1,000 points each for the four destroyed 'Mechs leaves Player B with zero points.

Player A wins this scenario. Because the difference between the players' scores is greater than the 4,000 points each player used to purchase his forces, the victory is decisive. If Player B had managed to destroy three of Player A's units, Player A would have won only a marginal victory.

FORCED WITHDRAWAL

Most military forces will not fight to the last man. Instead, once they have taken appreciable amounts of damage, they will begin to retreat. The forced withdrawal rules help simulate this situation. Players are free to play any of the scenarios without the forced withdrawal rules; the scenarios are enjoyable to play as described under *Types of Scenarios* (at right). However, the forced withdrawal rules add variety for enjoyable replay, heighten the human element and bind players to the warriors represented by the playing pieces in a game.

Under forced withdrawal, crippled units must retreat from the battlefield when damage has rendered them useless or they are in imminent danger of being destroyed (see *Crippling Damage*, below). A unit making a forced withdrawal must move toward its home map edge as designated by a scenario. However, a unit need not spend Running, Flanking or Maximum Thrust MP; it can also move backward if the controlling player wishes. Also, a unit equipped with MASC need not engage that system when forced to withdraw.

Withdrawing units may still attack an enemy unit that closes within range of a weapon or physical attack. The following guidelines cover the many circumstances that may occur. Within these guidelines, the gamemaster's decision is final. If no gamemaster is present and players cannot come to a consensus, simply roll 1D6 to determine a resolution and get back to play. All players should agree to the use of the forced withdrawal rules in a given scenario before play begins.

CRIPPLING DAMAGE

Any unit that suffers crippling damage must withdraw from the map board. (Clan units must follow Clan honor rules if they are being used; see *Clan Honor*, p. 273.) Crippling damage is defined as follows:

- A 'Mech is considered crippled when a side torso location is destroyed; the 'Mech takes two engine critical hits; one gyro and one engine critical hit; or loses the use of its sensors. Internal structure damage in either three or more limbs or two or more torso locations (the torso internal structure damage does not count towards crippling damage if that location still has front armor), or four or more pilot hits, also render a 'Mech crippled, as does the loss of all the 'Mech's weapons to damage or ammunition depletion. If all of a 'Mech's weapons are destroyed and it can no longer move, the 'Mech is considered destroyed.
- With the exception of infantry, all of a unit's weapons are considered destroyed if it loses all weapons with a range greater than five hexes and if it can no longer cause more than 5 points of combined weapons damage. If the unit did not start with the ability to do 5 or more damage, or the ability to do damage at a range greater than five hexes, the unit is never considered to have all its weapons destroyed.
- A ProtoMech is considered crippled if all its weapons are lost to damage or ammunition depletion, or if the pilot suffers four or more hits. A ProtoMech Point will not begin to withdraw until three or more of its component ProtoMechs are crippled or destroyed, in which case the entire Point must withdraw.
- A vehicle is considered crippled if it loses all its armor in a single location or if all its weapons are destroyed.
- An aerospace unit is considered crippled if it suffers a critical hit to its engine or fuel tank; if all its weapons are destroyed; if it loses more than half its original Structural Integrity; or if its pilot/crew suffers four or more hits.
- A conventional infantry platoon is considered crippled if it loses 75 percent (round down) or more of its troopers.
- A battle armor unit (Point or squad) is considered crippled if it loses half or more (round up) of its members.

TYPES OF SCENARIOS

If desired, one player may randomly generate a type of scenario by rolling 1D6 and consulting the Scenario Type Table. Alternatively, players may simply select a scenario type. These general types represent only a few of the possible scenarios that *BattleTech* players can create. You can use these as models to create your own scenarios.

The following paragraphs contain brief descriptions and victory conditions for each type of scenario. Each description includes the special rules used to play that scenario type, along with guidelines for force composition and victory conditions.

Note: Many of the scenarios mention using equal numbers of units. This is a general rule of thumb to help balance a scenario that applies to an equal number of the same type of units. For example, if Player A has four 'Mechs and Player B has four combat vehicles, most likely Player A will have an unfair advantage. To correct this problem, players should work to make sure that each side has an appropriate number of the same type of units when choosing and assigning forces.

Aerospace Units

Most of the scenarios are tailor-made for ground forces, making them slightly more difficult to use when incorporating aerospace units. Though some scenario types (particularly the Standup Fight) can be used with aerospace units only, players should be inventive when adopting some scenario types for aerospace units.

Infantry

In most cases, infantry units—even those with high Gunnery and Anti-'Mech skill levels—are valued well below the lightest 'Mech and even most combat vehicles. To reflect this, players should be a flexible in balancing a force when using infantry. For example, in a Hold the Line scenario, the attacking player has twice the number of units as the defender—and, if using the Battle Value system, twice the number of points. If both players are randomly determining

forces and the defending player rolls an infantry unit, the attacking player will find it difficult to balance his forces to twice that of the defender's force. The easiest way to solve this dilemma is to have the attacking player randomly switch one of his units for an infantry unit as well.

As players get a feel for how games play out with various unit types, it becomes easier to know during set-up and force creation when flexibility is needed in massaging players' forces appropriately so that everyone has an enjoyable time.

SCENARIO TYPE TABLE

1D6	Scenario Type
1	Standup Fight
2	Hide and Seek
3	Hold the Line
4	Extraction
5	Breakthrough
6	Chase

STANDUP FIGHT

In a stand-up fight, the simplest and most common scenario, two forces of roughly equal size square off against each other. Only one side leaves the field alive.

Force Composition

Both sides should have the same number of units.

Battle Value: If you are using the BV system, each side should have an equal allotment of points. For example, an appropriate number of points for each side in a lance-on-lance battle is 4,000 to 6,000 points.

Victory Conditions

The scenario ends when all the units on one side have been destroyed or retreated off the map. The surviving side at the end of the scenario wins.

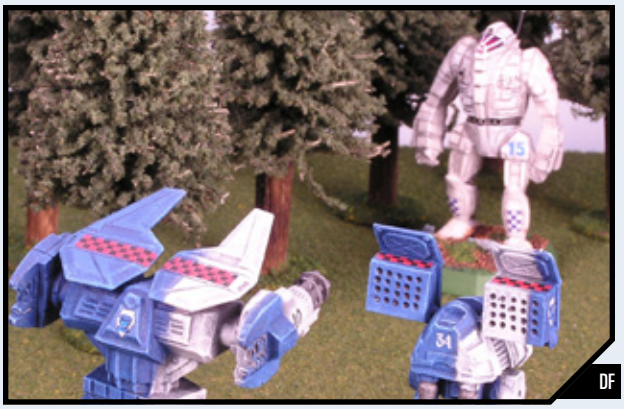
Battle Value: If you are using BV to build forces, the standard Victory Points and victory levels described in *Determining Victory* (p. 257) apply.

HIDE AND SEEK

In the hide-and-seek scenario, the defending player is "it"—his forces hide, and the attacker attempts to find and destroy them.

Use half the number of mapsheets (rounded up) recommended in the *Selecting Mapsheets* rules, page 262. If possible, avoid using the Wetland or Coastal Terrain mapsheets. Light Urban and Heavy Urban Terrain mapsheets are ideal, but only if buildings are used. Otherwise, avoid these mapsheets as well, because they provide few hiding places for the defender's units.

After the attacking player selects a home map edge, the defending player sets up his units using the *Hidden Units* rules below. Defending units may be placed anywhere on the map, except for clear and paved hexes.



'Mechs from the Twenty-sixth Lyran Guards face down a Word of Blake Exterminator.

Hidden Units

At the start of the scenario, the defender may hide their units on the map. Any player doing so writes down the number of each hex in which they hide a unit or units (stacking limits must be observed). They must also designate the facing of each, and if it is prone. A unit remains hidden until it is revealed (placed on the map).

Hidden units are not counted when making movement or fire selections. However, if a player plans to move a hidden unit, they must reveal it at the start of the Movement Phase. If a player plans to attack with a hidden unit (not including a pointblank shot; see below), they must reveal it at the start of the Weapon Attack Phase.

If a unit attempts to enter a hex containing a hidden enemy unit, it stops next to that hex instead (unless jumping; see below). However, if it is skidding or is being displaced into that hex, those rules take priority and the unit does not stop. Either way, the hidden unit is revealed. Additionally, a unit that ends its move next to a hex containing a hidden unit reveals that hidden unit. Hidden units revealed in these ways cannot move that phase.

Hidden units may not attack, but may spot for indirect fire and/or act as part of a C^3 network.

Active Probes: At the end of the Movement Phase, any hidden unit within range of an enemy unit's active probe and with line of sight to that enemy unit is revealed.

Airborne Units: Airborne units (including VTOLs and WiGEs) cannot be hidden using these rules unless grounded at the start of the scenario. Even then, DropShips cannot be hidden.

Area-Effect Attacks: Area-effect attacks automatically reveal any hidden unit in the blast area, and damage them as normal. Units revealed by this act as normal in subsequent phases.

Battle Armor: Mechanized battle armor is hidden only if the unit they are riding on is hidden as well. If the unit they are riding on is hidden, the battle armor must also be hidden.

Buildings: If hiding a unit in a building, its controller must note the level it is hidden on (this must be a level the unit could normally access). A unit that moves into or ends its move adjacent to a building hex reveals every hidden enemy unit in that building, regardless of the level a hidden unit is on.

Forbidden Hexes: A unit can only be hidden in a hex/level it can legally enter and could normally access if not hidden. No unit may hide in a paved or road/bridge hex. 'Mechs and Large Support Vehicles cannot be hidden in clear hexes. Units may only be hidden in water hexes if fully submerged.

Jumping: Jumping over hexes does not reveal units hidden in them. If jumping into a hex would reveal a unit hidden there, the jumping unit still lands in that hex, causing a domino effect (see p. 152).

Pointblank Shots from Hidden Units: A hidden unit revealed by enemy movement may immediately make a special pointblank weapon attack against the unit that revealed it. It may first torso twist or rotate its turret, and uses a Range of 1. Ignore Target Number modifiers for movement or terrain. Any damage dealt and Piloting Skill Rolls required take effect immediately. If the target unit is still capable of moving, has MP remaining, and isn't jumping, it may continue its move after the attack. If the damage from a pointblank shot triggers a forced withdrawal and the damaged unit has MP remaining, its forced withdrawal begins immediately.

If an enemy unit skids, jumps, or is displaced into a hidden unit, any pointblank shot made occurs before any collision or displacement.

A unit making a pointblank shot cannot perform any other action for the remainder of that turn.

Force Composition

Set the attacking force at twice the size of the defending force. For example, if the defending force fields four units, the attacking force should field eight units. Players should also attempt to make the total tonnage of the attacking force roughly double that of the defender; if the defending player controls a single lance, the attacking player uses two lances. Players may use any size forces they wish, as long as the attacker's force is twice the size of the defender's.

Battle Value: If using the BV system, the point value of the attacking force should be double that of the defending force.

Victory Conditions

The scenario ends when all of one player's units have been destroyed or retreated off the map. The player whose forces control the map or simply survive at the end wins the scenario.

Battle Value: When using the BV system, standard rules for victory conditions apply.

HOLD THE LINE

In a hold-the-line scenario, the defending player must fend off a larger attacking force. The defending units may not intentionally leave the boundaries of the playing area for any reason; ground forces may not leave the ground map playing area, and aerospace units may not leave the space or atmospheric map—though they may move between playing area maps as they change altitude during normal movement maneuvers.

Force Composition

Set the attacking player's force at twice the size of the defender's force. Players may use any size forces they wish, as long as the attacker's force is twice as large as the defender's. Set the experience levels of the defending player's forces at one level higher than those of the attacker. For example, if the attacking force consists of regular units, the defender uses veteran units.

Battle Value: If you are using the BV system, the point value of the defending force equals that of the attacking force, though the defending force must be only half as large as the attacking force. In addition, each defending unit receives a 1-point improvement in Piloting and Gunnery skills at no cost in points, rather than the experience-level increase.

With the Blakist's violation of Clan honor, Clan Steel Viper surrounds a lone 'Mech.

Victory Conditions

The scenario ends when all the units on one side have been destroyed or retreated off the map.

If the defenders destroy a number of opposing units equal to or greater than the number of defending units that started the scenario, the defending player wins. For example, if the defending player begins with a single lance (four units), he can claim victory if he manages to destroy four or more attacking units. In all other cases, the player whose forces survive or control the map at the scenario's end wins.

Battle Value: If using the BV system, standard rules for determining victory apply.

EXTRACTION

In an extraction scenario, the attacking player attempts to extract a target, such as a secret weapon, an important diplomat or a computer memory core, from behind the defender's lines.

After the players roll dice and select their home map edges, the attacker secretly chooses a target hex for the extraction. The target hex must be within four hex rows of the defender's home edge and cannot be within four hexes of any other map edge. The attacker then writes down the target hex's number and mapsheet name on a slip of paper, which he folds and gives to a neutral party for safekeeping (or the defending player can simply put the paper in his pocket without looking at it).

The attacking player can reveal the target hex to the defender during any End Phase, but must reveal the target hex if an attacking unit ends the turn in the target hex. Any attacking unit can pick up the extraction target by occupying the target hex during an End Phase. In addition, a unit that retrieves the target can pass it to any friendly unit in the same hex or an adjacent hex during any End Phase.

If a unit carrying the extraction target is destroyed, place the slip of paper in the hex previously occupied by the unit. Any unit in play can retrieve the target by occupying the target hex during any End Phase.

Variations

A variation on the Extraction scenario is to designate the object as having a specific tonnage; this would be done before play begins. Then, during the extraction scenario, the players use the *Cargo Carriers* rule below to provide additional variety. This rule can also be used to increase the difficulty of the scenario; depending on the tonnage of the item to be carried, players

may need an assault 'Mech or even a large support vehicle to move the item, making it harder to achieve victory.

Cargo Carriers

In addition to the cargo a unit can carry in a dedicated cargo bay, a 'Mech or vehicle may also carry unprotected cargo (in slings, strapped to the top, in lightweight containers and so on) equal to its own tonnage.

Movement Penalties: Unlike cargo in a dedicated cargo bay, a unit carrying external cargo must modify its movement. Cargo weighing up to a quarter of the carrying unit's weight subtracts 3 from—or cuts in half, rounding down—the carrier's Walking/Cruising MP, whichever reduction is less. A unit carrying a load weighing more than a quarter of its own tonnage may only move at half its Walking/Cruising MP (round down). No unit can use Jump Movement while carrying cargo, unless the cargo is being carried using the 'Mech Lifting Capabilities rules, at right.

Loading and Unloading: Unless it mounts a lift hoist (see p. 136) or is a 'Mech carrying the cargo in its hands (see *'Mech Lifting Capabilities*, below), a unit can only load or unload cargo during a scenario if friendly infantry is present in the same hex.

To load or unload cargo, a unit must end its Movement Phase in the same hex as the cargo (or adjacent hex if Large Support Vehicle). It may make no weapon or physical attacks for that turn and three subsequent turns (meaning it cannot expend any MP in those three subsequent turns) for each 20 tons of cargo (or fractions thereof). A friendly infantry unit must be present in the same hex for the duration of loading. If the infantry unit is eliminated or moves out of the hex, the clock stops for loading or unloading. If another friendly infantry unit ends the Movement Phase in the same hex as the unit loading or unloading cargo, the clock starts once again, for as long it takes to load each 20 tons of cargo (or fractions thereof). The carrying unit cannot expend any MP during this time, or the cargo is considered to not be loaded and the clock stops.

The controlling player of a unit unloading cargo announces that he is beginning to unload at the end of any Movement Phase. The cargo is considered to be in the same hex as the unloading unit during the End Phase of the final turn in the unloading process.

The following conditions cut down on the number of turns it takes to load and unload cargo (to a minimum of 1 turn). These conditions are cumulative:

- Subtract 1 turn if two friendly conventional infantry units occupy the same hex
- Subtract 1 turn for every friendly battle armor unit that occupies the same hex.
- Subtract 1 turn if any of the battle armor units mount cargo lifter manipulators (see p. 229).
- Subtract 1 turn if the cargo is being loaded or unloaded into or from a dedicated cargo bay (as opposed to strapped or slung on as unprotected cargo).

Dropping Cargo: A hauling unit may drop its cargo (as opposed to unloading, as described above) during its Movement Phase by expending 1 MP and declaring that it is dumping all its cargo. The dropped cargo remains in the hex where it was dropped, regardless of whether the dropping unit is grounded or airborne.

Cargo dumped in this fashion may be destroyed. For ground units dumping cargo, roll 1D6. On a result of 1–3, all the dumped cargo is destroyed; on a result of 4–6, the cargo is undamaged. For airborne units dumping cargo, roll 1D6. On a result of 1–5, all the dumped cargo is destroyed; on a result of 6, the cargo is undamaged. Undamaged cargo may be picked up in a subsequent turn using the rules above.

Combat: Any successful attack on a unit carrying unprotected cargo also strikes the cargo. If the cargo is infantry, the attacking weapon applies its damage as though it were an attack from another infantry unit (see p. 216). Determine hit location and damage against the carrying unit as normal; unprotected cargo does not reduce this damage. For every point of damage applied to the carrying unit, a ton of cargo is destroyed.

'Mech Lifting Capabilities: In some situations, a MechWarrior may want his machine to lift and carry a piece of equipment. A 'Mech may not pick up another unit. Only 'Mechs with functioning hand actuators may pick up an object. To pick up an object, a 'Mech must end its Movement Phase in the same hex as the object, it must have an undamaged hand actuator in both arms and it may make no weapon or physical attacks that turn. A 'Mech can pick up objects weighing up to ten percent of its tonnage (this is increased to 20 percent of the 'Mech mounts operating Triple Strength Myomer, see p. 143). While the 'Mech is carrying the object, it cannot fire any arm or forward-firing torso-mounted weapons, make punching or pushing attacks, use a club or make physical weapon attacks, though it may charge, kick and execute death-from-above attacks. In addition, the 'Mech suffers the limitations described in *Cargo Carriers*, above. Note that 'Mechs suffer no movement penalties provided that they are carrying no more than 10% of their constructed weight (20% with active Triple-Strength Myomer).

Force Composition

Both sides start with an equal number of units.

Battle Value: If using the BV system, each side should be worth an equal number of points.

Victory Conditions

If the attacker can move a unit carrying the extraction target off his home map edge, he wins the scenario. Otherwise, the defender wins.

Battle Value: If using the BV system, determine victory as follows. The defender scores points normally. However, the attacker scores only the point value for each opposing 'Mech he destroys (instead of twice their point value, as normal). The attacker loses points normally for each of his 'Mechs that the defender destroys. If the attacking player manages to move the extraction target off his home map edge, he scores points equal to the total points used to buy forces for the defender's side in the scenario.

BREAKTHROUGH

In a breakthrough scenario, the attacking player's forces have become trapped behind enemy lines. To reach safety, the units must cross the map and break through the defender's forces.

Use one more mapsheet than the standard single map for every four units (see *Selecting Mapsheets*, p. 262). For example,

if eight units will be in play, use three mapsheets rather than two. If you have fewer than the needed number of mapsheets, simply use all available mapsheets. Place the mapsheets in a single, long row with their short edges touching.

Next, both players roll 2D6. The player who gets the higher result may choose to play the defender or the attacker. The attacker then chooses one of the narrow edges of the map as the place from which his forces will enter. The attacker's home edge is the one opposite the entry edge. The attacker's objective is to exit his forces at his home map edge.

The defender may set up his forces in any hexes on the map, and may position up to half of his units (round down) using the *Hidden Units* rules, p. 259.

BREAKTHROUGH VICTORY POINTS TABLE

Attacker
2 points for each attacking unit that safely exits at home edge
1 point for each defending unit destroyed

Defender
3 points for each attacking unit destroyed or crippled
2 points for each attacking unit forced to retreat off the map

Force Composition

Both sides should have the same number of units.

Battle Value: If using the BV system, each side should be worth the same number of points.

Victory Conditions

The scenario ends when all the defending units have been destroyed or retreated off the map, or when all attacking units have retreated, been destroyed or been crippled. For this type of scenario, units become crippled when they lose one or more legs or their gyros are destroyed. Attacking units may intentionally exit the map only at their home edge; a unit exiting from any other edge has retreated.

A Castillian Brigada Vulcan *and Pegasus on patrol in the Deep Periphery.*

If all the attacking units survive and exit at their home edge, the attacking player wins a Decisive victory. If all the attacking forces are destroyed or crippled, or none exit at their home edge, the defending player wins a Decisive victory. If the players meet neither of these conditions, consult the Breakthrough Victory Points Table to determine each player's Victory Points. The player with the most points wins a Marginal victory.

If both players score the same number of Victory Points, the scenario ends in a draw.

Battle Value: If players are using the BV system to buy their forces, Victory Points are allocated somewhat differently. The defender scores points normally, though he gains only half the listed points for enemy units forced off the wrong edge of the map. The attacker scores the unmodified point value for destroying opposing 'Mechs, instead of twice their point value. He also scores the unmodified point value for each attacking unit that exits the map via the attacker's home map edge. The attacker loses points normally for any of his own 'Mechs that the defender destroys. Determine the level of victory as normal, based on each side's final score.

CHASE

In a chase scenario, the attacker's forces must race across the map to reach their DropShip before a larger force of pursuing defenders can reach them. Chase scenarios use the same rules and victory conditions as breakthrough scenarios, with the following exceptions.

The defending player does not deploy his forces until Turn 2. During Turn 1, attacking units may enter and move unopposed per standard rules. The defending units enter during the Movement Phase of Turn 2, from the same map edge as the attacking units.

Force Composition

Set the defender's force at twice the size of the attacking force. For example, if the attackers form a single lance, the defending force should contain two lances.

Battle Value: Under the BV system, the defending force should be worth twice the point value of the attacker's force.

SELECTING MAPSHEETS

After selecting a scenario type, determine the terrain by selecting mapsheets. Certain scenarios require specific types of mapsheets according to their descriptions. In most scenarios, however, players can simply select whichever mapsheets they like or make random dice rolls and consult the appropriate mapsheet tables.

Before selecting mapsheets, determine how many you want to use. For most *BattleTech* play, an appropriate ratio is one mapsheet for every four units. For example, a scenario that pits one lance of attackers against one lance of defenders (eight units total) works best with two mapsheets. A scenario that pits one company of attackers against a company of defenders (twenty-four total units) works best with six mapsheets. Different scenarios may work best with other mapsheet/unit ratios, so check the scenario type description.

USING THE MAPSHEET TABLES

Players may either select a terrain type and then roll 1D6 to determine each map used, or roll 2D6 to determine the terrain type for the scenario and then roll 1D6 to determine the specific maps.

MAPSHEET TABLES

Base Terrain Type		
2D6	**Terrain**	**Table Below**
2	Hills	2
3	Badlands	4
4	Wetlands	5
5	Light Industrial	7
6	Hills	2
7	Flatlands	1
8	Wooded	6
9	Light Industrial	7
10	Badlands	4
11	Mountains	3
12	Alien	8

Table 1: Flatlands Terrain	
1D6	**Mapsheet**
1	Grassland #1 (BB)
2	Grassland #2 (AGOAC)
3	Grassland #3 (AGOAC)
4	Open Terrain #1 (BB)
5	Open Terrain #2 (MP: Grasslands)
6	Open Terrain #3 (MP: Grasslands)

Table 2: Hills Terrain	
1D6	**Mapsheet**
1	Hilltops #1 (CI)
2	Hilltops #2 (CI)
3	Rolling Hills #1 (MP: Grasslands)
4	Rolling Hills #2 (MP: Grasslands, CI)
5	Rolling Hills #3 (MP: Grasslands)
6	Rolling Hills #4 (MP: Grasslands)

Table 3: Mountains Terrain	
1D6	**Mapsheet**
1	Foothills #1 (MP: Grasslands)
2	Foothills #2 (MP: Grasslands)
3	Washout #1 (MP: Desert)
4	Washout #2 (MP: Desert)
5	Mines #1 (MP: Desert)
6	Mines #2 (MP: Desert)

Table 4: Badlands Terrain	
1D6	**Mapsheet**
1	Badlands #1 (MP: Desert)
2	Badlands #2 (MP: Desert)
3	Desert #2 (AGOAC)
4	Sand Drifts #1 (MP: Desert)
5	Barren Lands #1 (CI)
6	Barren Lands #2 (CI)

Table 5: Wetlands Terrain	
1D6	**Mapsheet**
1	Streams (MP: Grasslands)
2	River CommCenter (MP: Grasslands)
3	Lakes (MP: Grasslands)
4	Grassland #2 (AGOAC)
5	Oasis (MP: Desert)
6	Open Terrain #3 (MP: Grasslands)

Abbreviations: MP = *MapPack*, AGOAC = *A Game of Armored Combat* box set, BB = *Beginner Box* set, CI = *Clan Invasion* box set.

Table 6: Wooded Terrain	
1D6	**Mapsheet**
1	Woodland (MP: Grasslands)
2	Scattered Woods (MP: Grasslands)
3	Grassland #3 (AGOAC)
4	Rolling Hills #2 (MP: Grasslands, CI)
5	Desert #3 (AGOAC)
6	Rolling Hills #1 (MP: Grasslands)

Table 7: Light Industrial Terrain	
1D6	**Mapsheet**
1	River CommCenter (MP: Grasslands)
2	Mines #1 (MP: Desert)
3	Mines #2 (MP: Desert)
4	AeroBase #1
5	AeroBase #2
6	Desert runway

Table 8: Alien Terrain*	
1D6	**Mapsheet**
1	Fungal Crevasse (MP: Alien Worlds)
2	Caustic Valley (MP: Alien Worlds)
3	Crystalline Canyon (MP: Alien Worlds)
4	Lunar Base (MP: Alien Worlds)
5	Crystalline Canyon (MP: Alien Worlds)
6	Caustic Valley (MP: Alien Worlds)

***Note:** These are double-sized maps.

Before play begins, one player rolls 2D6. The result indicates which terrain table is used. For example, on a result of 7, use the Flatlands Terrain Table; on a result of 6, the Hill Terrain Table; and so on. Players may simply select a specific Terrain Table and skip this step.

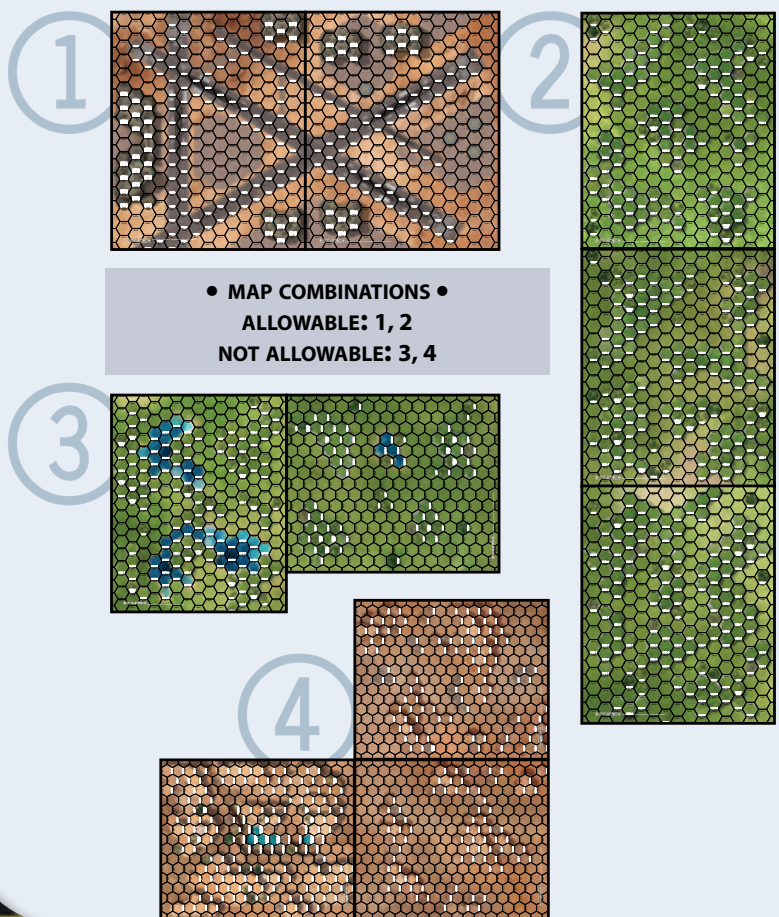
Next, select mapsheets from the appropriate table by rolling 1D6. If using two mapsheets, roll twice; if using four mapsheets, roll four times; and so on.

Note: All of the mapsheet tables assume that players possess at least one copy each of *BattleTech MapPacks*: *Grasslands*, *Deserts*, and *Alien Worlds*, as well as *Beginner Box*, *A Game of Armored Combat*, and *Clan Invasion* box sets. If any roll result indicates an unavailable mapsheet, repeat the roll (or simply choose a similar mapsheet that's available).

Laying Out Mapsheets

To begin laying out mapsheets, the players roll 2D6. The player with the higher result places the first selected mapsheet on the table or floor. The other player then places the next selected mapsheet. The players continue to alternate laying out the remaining mapsheets.

Each mapsheet must be placed with one of its short edges touching the short edge of a mapsheet already placed or with one of its long edges touching the long edge of a mapsheet already placed. In addition, unless players agree otherwise or the specifics of a scenario call for an unusual set-up, the mapsheets must form a continuous rectangular or square playing area. Within these and any guidelines provided in the scenario type description, players may arrange the mapsheets as they see fit.



UNIT GENERATION

After selecting the scenario type and mapsheets, generate the units that will take part in the scenario. Players can generate their forces in three ways. They may simply assemble any units they wish, perhaps based on the unit descriptions provided in the *Field Manual* series. A unit's battlefield strength is determined by its size, weight class, equipment and experience level, so players who want to create evenly matched battles should take note of these factors when assembling their forces. Players should also select appropriately sized forces for the chosen scenario.

Alternatively, players may use dice rolls to randomly generate forces. When using this system, players first determine their forces' composition, then assign units and finally set unit experience levels. This system may not always produce evenly matched forces, but players may increase the likelihood of generating balanced forces by setting a specific weight class, equipment rating and experience level for both sides before rolling the dice.

Campaign Operations contains several rules expansions for creating, building and deploying forces for a variety of scenarios or campaign play.

Battle Value: The most accurate method of force generation is to purchase forces for each side using Battle Value points (see p. 256). By setting a point level for each side, the players are free to choose any forces they wish within the point limit and need not rely on luck.

The following tables assist mainly in assigning forces randomly, though players can also use them with the BV point system. Players should not use these tables to construe what constitutes a standard lance weight (or even composition) for various factions within the fictional universe. They are provided here simply as a quick and convenient way to help players generate forces and jump into playing the game.

FORCE COMPOSITION

Begin assembling forces by determining the size of each force. Often, the specific conditions of a scenario may suggest a particular size. Players may wish to consider available playing time as well—larger engagements may take considerably longer to complete than smaller ones. Most engagements pit lance against lance, whether 'Mechs, vehicles, aerospace fighters, infantry or a combination of various units (though combination battles tend to be company-sized or larger), but players may use any size forces they desire.

After determining the size of each force, determine its weight class. For lance-sized forces, roll 2D6 and consult the Lance Type section on the Random Weight Class Tables. For company-sized forces, roll 1D6 and consult the Company Type section of the table. If a company-sized force contains more than three lances, use the Lance Type section to determine the weight class of the extra lances.

In an Inner Sphere force, some or all of the units may be combat vehicles and infantry instead of BattleMechs. Normally, the players make this choice, though they can also randomly generate each unit's type using the Unit Type Table. Keep in mind that using the Unit Type Table will likely result in high numbers of combat vehicles, as such units are far more common than BattleMechs in Inner Sphere armies. Clan units usually consist

RANDOM WEIGHT-CLASS TABLES

Unit Type	
1D6 Result	Unit
1	Battle armor/Infantry
2–4	Combat vehicle
5	'Mech
6	Aerospace fighter

Random Lance Type	
2D6 Result	Weight Class
2–3	Battle armor
4–5	Light
6–7	Medium
8–9	Heavy
10–11	Assault
12	Aerospace fighter

Random Star Type	
2D6 Result	Weight Class
2	Battle armor
3	ProtoMech
4–5	Light
6–7	Medium
8–9	Heavy
10	Assault
11	Aerospace fighter
12	Nova (roll again for weight class)

Random Company Type	
1D6 Result	Lance Weight Classes
1	1 Light, 2 Medium
2	1 Light, 1 Medium, 1 Heavy
3	2 Medium, 1 Heavy
4	1 Light, 2 Heavy
5	3 Heavy
6	2 Heavy, 1 Assault

RANDOM BINARY/TRINARY TYPE

2D6 Result	Star Weight Classes (Binary)	Star Weight Classes (Trinary)
2–4	2 Light	3 Light
5–6	2 Medium	1 Light, 1 Medium, 1 Heavy
7	1 Light, 1 Medium	2 Light, 1 Heavy
8	1 Medium, 1 Heavy	1 Light, 1 Heavy, 1 Assault
9	1 Heavy, 1 Assault	2 Heavy, 1 Assault
10–11	2 Heavy	1 Medium, 1 Heavy, 1 Assault
12	Supernova Binary (roll again for weight classes)	Supernova Trinary (roll again for weight classes)

LANCE WEIGHT COMPOSITION TABLE

1D6 Roll	Light Lance	Medium Lance	Heavy Lance	Assault Lance
1	4 Light	1 Light, 2 Med., 1 Heavy	1 Medium, 3 Heavy	1 Medium, 1 Heavy, 2 Assault
2–3	3 Light, 1 Medium	4 Medium	4 Heavy	2 Heavy, 2 Assault
4–5	2 Light, 2 Medium	3 Medium, 1 Heavy	1 Med., 2 Heavy, 1 Assault	1 Heavy, 3 Assault
6	2 Light, 1 Med., 1 Heavy	2 Medium, 2 Heavy	3 Heavy, 1 Assault	4 Assault

STAR WEIGHT COMPOSITION TABLE

1D6 Roll	Light Star	Medium Star	Heavy Star	Assault Star
1	5 Light	1 Light, 4 Medium	2 Med., 3 Heavy	1 Med., 2 Hvy, 2 Assault
2–3	4 Light, 1 Medium	5 Medium	1 Med., 4 Heavy	4 Heavy, 1 Assault
4–5	3 Light, 2 Medium	4 Med., 1 Heavy	5 Heavy	3 Heavy, 2 Assault
6	2 Light, 2 Med., 1 Heavy	3 Med., 2 Heavy	1 Med., 3 Hvy, 1 Assault	2 Heavy, 3 Assault

of 'Mechs and battle armor unless a scenario specifically calls for other types of units or players are using the point system.

Finally players should note that while 'Mechs remain the kings of the battlefield, often a combined-arms approach is the best allocation of forces, as it allows infantry to deal with infantry and vehicles with vehicles, while 'Mechs take the most dangerous enemy on the board: another 'Mech. In the end, of course, it is ultimately up to the players to decide what is most enjoyable.

After determining the weight classes of the lances or Stars in each force, use the Lance or Star Weight Composition Table to determine the weight classes of the units in each lance or Star.

Aerospace Units: Aerospace fighters do not have an assault class, so players should simply take a heavy fighter. DropShips represent a special case, as they are significantly more powerful than any other ground-based force. Players should not choose DropShips unless the scenario specifically calls for it, or both players agree to their inclusion in the game.

Clans: To reflect the unique configuration of Clan forces, use the following guidelines. For Star-sized forces, roll 2D6 and consult the Star Type section on the Random Weight Class Tables. A result of 12 indicates a Nova, consisting of a Star of OmniMechs and a Star of battle armor. Roll again to determine the weight class of the 'Mechs in the Nova, re-rolling a result of 2 or 12; also roll to determine which specific battle armor units are deployed in the Nova. Nova ´Mech Stars must contain OmniMechs, so second-line units should re-roll Nova results. For Binary- and Trinary-sized forces, roll 2D6 and consult the Random Binary/Trinary Type Table.

ComStar and Word of Blake: The table on page 265 provides weight classes and compositions for standard Inner Sphere and Clan forces. For ComStar and Word of Blake forces (which operate in formations of six), use the Inner Sphere tables, modified as follows: for a Level II formation (6 units), start with a random lance weight and add one additional unit of the heaviest and lightest weight classes. For example, a Lance Type roll result of 1 on the Medium Lance Composition Table normally results in 1 Light, 2 Medium and 1 Heavy 'Mech. A ComStar Level II formation adds a light and a heavy 'Mech to this configuration.

Bidding

When playing a game involving Clan forces on both sides, players can add the element of *batchall* to the force selection process. First, the players set the size of the defending force. Then, starting with the number of units that the attacker would normally be allowed in the scenario, the players take turns bidding away units from the attacking force to determine which of them will have the honor of being the attacker. The lowest bidder becomes the attacker. If neither player is willing to bid away any portion of the attacking force, determine the attacker randomly.

As long as the attacker bids away some portion of his starting force, he receives the following bonuses. He may add +1 to the dice roll result when rolling on the Random Experience Rating Table, and he gains a +1 Initiative bonus for the entire scenario, in addition to any other Initiative bonuses to which he may be entitled. If the attacker bids away half or more of his starting force, double these bonuses to 2.

ASSIGNING 'MECHS

After determining the weight classes of the units in each force, use the appropriate Random Assignment Tables to determine the specific unit designs.

To use the Random Assignment Tables, roll 2D6 and cross-reference the result with the appropriate weight class of the unit involved (if the unit has a weight class) on the appropriate faction column. Often, scenarios determine which factions are involved, but players can choose whatever faction they like as well; feel free to peruse the various fiction pieces in *Total Warfare* to see if the "feel" of a faction grabs your interest.

Weight: For ease of reference, every unit on the Random Assignment Tables has its weight in brackets following the name. In the case of battle armor, the information in brackets represents their weight class.

Note: The units on the Random Assignment Tables (RATs) represent a simplified, "quick and dirty" approximation of a faction's force in the Clan Invasion era. Players can generate much more detailed faction-specific units using era- and faction-specific RATs from the various *Field Manuals*.

Unit write-ups in Technical Readouts and their accompanying record sheets are often presented with a Battle Value (BV). This is a numerical rating that represents the capabilities and survivability of every *BattleTech* unit. Battle Value can be used in conjunction with RATs to further fine-tune the force you wish to deploy: forces evenly matched in terms of Battle Value are more likely to be evenly matched on the battlefield as well. The rules to calculate Battle Value manually appear in *TechManual*.

For ease of use, entries have been annotated after the tonnages to show which *Technical Readouts* contain which units: (SW) is *Technical Readout: Succession Wars*; (CI) is *Technical Readout: Clan Invasion*; (3039) is *Technical Readout: 3039*; (3050) is *Technical Readout: 3050 Upgrade*; (3055) is *Technical Readout: 3055 Upgrade*; (3057) is *Technical Readout: 3057, Revised*; (3058) is *Technical Readout: 3058 Upgrade*; (3060) is *Technical Readout: 3060*; (3067) is *Technical Readout: 3067*; (3085) is *Technical Readout: 3085*; (GC) is *Technical Readout: Golden Century*; (RG#) is a volume in the *Recognition Guide* series, where the # given corresponds to the exact volume in that series; and (RSOK) is *Record Sheets: Operation Klondike*.

The units on the tables usually but not exclusively represent the stock design as presented in the various Technical Readouts. However, almost all units have numerous variants that provide a different assortment of weapons and so on, many of them faction-specific, which can be found in various record sheet books (see *Record Sheets*, p. 11).

If players do not have a specific *Technical Readout* or record sheet for a unit, they can substitute another unit of equal weight from another portion of the table. Players should stay within the same faction, or at least stay on an Inner Sphere table if rolling for an Inner Sphere faction and on the Clan table if rolling for a Clan faction.

FINISHING TOUCHES

If all players agree, they can fine-tune their forces by shifting units between lances and Stars after they have generated all units and skills, though warriors may not be removed from their assigned units. Fine-tuning a force in this manner enables a player to group units with similar movement capabilities in lances and so on.

RANDOM 'MECH ASSIGNMENT TABLE: INNER SPHERE 1

Light 'Mechs

2D6	House Kurita	House Davion	House Liao	House Marik
2	SDR-C Spider [30] (3050)	LCT-3D Locust [20] (CI)	UM-R63 UrbanMech [30] (3050)	HER-3S Hermes [30] (3050)
3	STG-3R Stinger [20] (3039)	HNT-151 Hornet [20] (3039)	LCT-1E Locust [20] (SW)	HER-1A Hermes [30] (SW)
4	LCT-1V Locust [20] (SW)	LCT-1M Locust [20] (3039)	FS9-H Firestarter [35] (SW)	FLE-4 Flea [20] (SW)
5	PTN-9R Panther [35] (SW)	STG-3R Stinger [20] (3039)	STG-3R Stinger [20] (3039)	SDR-5V Spider [30] (SW)
6	WSP-1K Wasp [20] (3039)	WSP-1D Wasp [20] (3039)	WSP-1L Wasp [20] (3039)	WSP-1A Wasp [20] (3039)
7	PTN-9R Panther [35] (SW)	VLK-QA Valkyrie [30] (3039)	LCT-1V Locust [20] (SW)	LCT-1V Locust [20] (SW)
8	JR7-D Jenner [35] (SW)	JVN-10N Javelin [30] (SW)	UM-R60 UrbanMech [30] (SW)	STG-3R Stinger [20] (3039)
9	PTN-CA Panther [35] (3050)	VLK-QD Valkyrie [30] (3085)	RVN-3L Raven [35] (SW)	STG-5M Stinger [20] (CI)
10	SDR-5V Spider [30] (SW)	SDR-5V Spider [30] (SW)	SDR-5V Spider [30] (SW)	LCT-3M Locust [20] (CI)
11	JR7-C Jenner [35] (3050)	JVN-10P Javelin [30] (3050)	FLE-17 Flea [20] (SW)	SDR-7M Spider [30] (3050)
12	MON-67 Mongoose [25] (SW)	MON-67 Mongoose [25] (SW)	RVN-1X Raven [35] (SW)	FS9-H Firestarter [35] (SW)

Medium 'Mechs

2D6	House Kurita	House Davion	House Liao	House Marik
2	SHD-2K Shadow Hawk [55] (SW)	BJ-1 Blackjack [45] (SW)	CLNT-2-3T Clint [40] (SW)	VL-2T Vulcan [40] (SW)
3	CRB-20 Crab [50] (SW)	PXH-1D Phoenix Hawk [45] (3039)	BJ-1 Blackjack [45] (SW)	HBK-4G Hunchback [50] (SW)
4	HBK-4G Hunchback [50] (SW)	WVR-6D Wolverine [55] (SW)	HBK-4G Hunchback [50] (SW)	TBT-5J Trebuchet [50] (SW)
5	GRF-1DS Griffin [55] (RG1)	GRF-1DS Griffin [55] (RG1)	GRF-3M Griffin [55] (RG1)	GRF-3M Griffin [55] (RG1)
6	WTH-1 Whitworth [40] (SW)	CN9-A Centurion [50] (SW)	PXH-1 Phoenix Hawk [45] (3039)	PXH-1 Phoenix Hawk [45] (3039)
7	PXH-1K Phoenix Hawk [45] (3039)	ENF-4R Enforcer [50] (SW)	VND-1R Vindicator [45] (SW)	HER-2S Hermes II [40] (SW)
8	WVR-6K Wolverine [55] (SW)	DV-6M Dervish [55] (SW)	WVR-6R Wolverine [55] (SW)	WVR-6M Wolverine [55] (SW)
9	PXH-3K Phoenix Hawk [45] (CI)	CN9-D Centurion [50] (3050)	VND-3L Vindicator [45] (3050)	PXH-3M Phoenix Hawk [45] (CI)
10	SHD-2H Shadow Hawk [55] (SW)	SHD-2H Shadow Hawk [55] (SW)	SHD-2H Shadow Hawk [55] (SW)	SHD-2H Shadow Hawk [55] (SW)
11	WVR-7K Wolverine [55] (CI)	BSW-X1 Bushwacker [55] (CI)	BJ-2 Blackjack [45] (3050)	HER-5S Hermes II [40] (3050)
12	TBT-5N Trebuchet [50] (SW)	CRB-20 Crab [50] (SW)	CDA-2A Cicada [40] (SW)	CDA-2A Cicada [40] (SW)

Heavy 'Mechs

2D6	House Kurita	House Davion	House Liao	House Marik
2	CPLT-K2 Catapult [65] (SW)	OSR-2C Ostroc [60] (3039)	CPLT-C1 Catapult [65] (SW)	BL-7-KNT Black Knight [75] (SW)
3	JM6-DD JagerMech [65] (3050)	AXM-1N Axman [65] (3050)	CPLT-C3 Catapult [65] (3050)	GLT-5M Guillotine [70] (3050)
4	MAD-3R Marauder [75] (3039)	MAD-3R Marauder [75] (3039)	WHM-6L Warhammer [70] (3039)	QKD-4G Quickdraw [60] (SW)
5	QKD-C Quickdraw [60] (3050)	CRD-4D Crusader [65] (3085)	RFL-3N Rifleman [60] (3039)	RFL-5M Rifleman [60] (CI)
6	LNC25-02 Lancelot [60] (SW)	RFL-3C Rifleman [60] (3039)	TDR-5S Thunderbolt [65] (SW)	ON1-K Orion [75] (SW)
7	DRG-C Grand Dragon [60] (3050)	JM6-DD JagerMech [65] (3050)	CTF-3L Cataphract [70] (3050)	ON1-M Orion [75] (3050)
8	DRG-5N Dragon [60] (3050) (SW)	RFL-5D Rifleman [60] (CI)	TDR-7M Thunderbolt [65] (CI)	TDR-7M Thunderbolt [65] (CI)
9	ARC-2K Archer [70] (3039)	ARC-2R Archer [70] (3039)	ARC-2R Archer [70] (3039)	CRD-3R Crusader [65] (3039)
10	CDR-4K Crusader [65] (3085)	WHM-7S Warhammer [70] (3085)	CRD-5M Crusader [65] (3085)	ARC-4M Archer [70] (CI)
11	WHM-7K Warhammer [70] (CI)	CES-3R Caesar [70] (3050)	WHM-7M Warhammer [70] (CI)	WHM-7M Warhammer [70] (CI)
12	GLT-4L Guillotine [70] (SW)	CTF-3D Cataphract [70] (3050)	MAD-5M Marauder [75] (RG6)	MAD-5M Marauder [75] (RG6)

Assault 'Mechs

2D6	House Kurita	House Davion	House Liao	House Marik
2	KGC-0000 King Crab [100] (SW)	BLR-1D BattleMaster [85] (SW)	CGR-1A5 Charger [80] (SW)	BNC-3M Banshee [95] (SW)
3	CP-11-C Cyclops [90] (3050)	CP-10-Z Cyclops [90] (SW)	CP-10-Z Cyclops [90] (SW)	LGB-0W Longbow [85] (3039)
4	BLR-1G BattleMaster [85] (SW)	AWS-8Q Awesome [80] (SW)	BLR-1G BattleMaster [85] (SW)	BLR-1G BattleMaster [85] (SW)
5	AWS-8Q Awesome [80] (SW)	VTR-9B Victor [80] (SW)	AWS-8Q Awesome [80] (SW)	AWS-8Q Awesome [80] (SW)
6	HTM-27T Hatamoto-Chi [80] (3050)	VTR-9D Victor [80] (3050)	STK-3F Stalker [85] (SW)	AWS-9M Awesome [80] (3050)
7	STK-3F Stalker [85] (SW)	STK-3F Stalker [85] (SW)	VTR-9B Victor [80] (SW)	STK-3F Stalker [85] (SW)
8	CGR-C Charger [80] (3050)	ZEU-9S Zeus [80] (SW)	STK-5M Stalker [85] (3050)	STK-5M Stalker [85] (3050)
9	MAL-C Mauler [90] (CI)	LGB-0W Longbow [85] (3039)	HGN-733 Highlander [90] (SW)	THG-10E Thug [80] (SW)
10	VTR-9C Victor [80] (3050)	VTR-9D Victor [80] (3050)	AWS-9M Awesome [80] (3050)	BLR-3M BattleMaster [85] (RG3)
11	CRK-5003-2 Katana [85] (3050)	DVS-2 Devastator [100] (SW)	BLR-3M BattleMaster [85] (RG3)	THG-11E Thug [80] (SW)
12	AS7-CM Atlas [100] (3050)	NSR-9FC Nightstar [95] (SW)	AS7-D Atlas [100] (SW)	AS7-D Atlas [100] (SW)

RANDOM 'MECH ASSIGNMENT TABLE: INNER SPHERE 2

Light 'Mechs				
2D6	House Steiner	ComStar/Word of Blake	Mercenary/Periphery	Pirate
2	LCT-3S Locust [20] (CI)	OTT-7J Ostscout [35] (SW)	MON-67 Mongoose [25] (SW)	FS9-A Firestarter [35] (SW)
3	COM-3A Commando [25] (SW)	MON-66 Mongoose [25] (SW)	PTN-9R Panther [35] (SW)	LCT-3V Locust [20] (SW)
4	FS9-H Firestarter [35] (SW)	HSR-400-D Hussar [30] (3050)	UM-R60 UrbanMech [30] (SW)	UM-R60 UrbanMech [30] (SW)
5	STG-3R Stinger [20] (3039)	MCY-99 Mercury [20] (SW)	FS9-H Firestarter [35] (SW)	FS9-H Firestarter [35] (SW)
6	LCT-1V Locust [20] (SW)	HER-1S Hermes [30] (SW)	STG-3R Stinger [20] (3039)	STG-3R Stinger [20] (3039)
7	COM-2D Commando [25] (SW)	FFL-4C Firefly [30] (SW)	LCT-1V Locust [20] (SW)	LCT-1V Locust [20] (SW)
8	WSP-1A Wasp [20] (3039)	FLC-4N Falcon [30] (SW)	WSP-1A Wasp [20] (3039)	WSP-1A Wasp [20] (3039)
9	COM-5S Commando [25] (3050)	THE-N Thorn [20] (SW)	JVN-10F Javelin [30] (SW)	STG-3G Stinger [20] (3039)
10	SDR-5V Spider [30] (SW)	SDR-5V Spider [30] (SW)	SDR-5V Spider [30] (SW)	JVN-10A Javelin [30] (SW)
11	WLF-2 Wolfhound [35] (3050)	JVN-10N Javelin [30] (SW)	STG-3G Stinger [20] (3039)	SDR-5V Spider [30] (SW)
12	WLF-1 Wolfhound [35] (SW)	SPR-5F Spector [35] (SW)	WLF-1 Wolfhound [35] (SW)	FLC-4N Falcon [30] (SW)

Medium 'Mechs				
2D6	House Steiner	ComStar/Word of Blake	Mercenary/Periphery	Pirate
2	STN-3K Sentinel [40] (SW)	VL-2T Vulcan [40] (SW)	ASN-21 Assassin [40] (SW)	ASN-21 Assassin [40] (SW)
3	VL-5T Vulcan [40] (SW)	CN9-A Centurion [50] (SW)	CLNT-2-3T Clint [40] (SW)	CLNT-2-4T Clint [40] (SW)
4	VL-2T Vulcan [40] (SW)	GRF-1N Griffin [55] (SW)	HBK-4G Hunchback [50] (SW)	WTH-0 Whitworth [40] (SW)
5	GRF-1DS Griffin [55] (RG1)	WVE-9N Wyvern [45] (3050)	PXH-1 Phoenix Hawk [45] (3039)	HBK-4N Hunchback [50] (SW)
6	HCT-3F Hatchetman [50] (SW)	PXH-2 Phoenix Hawk [45] (3085)	SHD-2H Shadow Hawk [55] (SW)	WVR-6K Wolverine [55] (SW)
7	GRF-1S Griffin [55] (SW)	KTO-19 Kintaro [55] (SW)	GRF-1N Griffin [55] (SW)	SHD-2H Shadow Hawk [55] (SW)
8	WVR-6R Wolverine [55] (SW)	WVR-6R Wolverine [55] (SW)	WVR-6R Wolverine [55] (SW)	GRF-1N Griffin [55] (SW)
9	SHD-2D2 Shadow Hawk [55] (3085)	SHD-2H Shadow Hawk [55] (SW)	TBT-5N Trebuchet [50] (SW)	TBT-5S Trebuchet [50] (SW)
10	PXH-1 Phoenix Hawk [45] (3039)	STN-3L Sentinel [40] (SW)	CN9-A Centurion [50] (SW)	CN9-AH Centurion [50] (SW)
11	HCT-5S Hatchetman [50] (3050)	CRB-27 Crab [50] (SW)	BJ-1 Blackjack [45] (SW)	SCP-1N Scorpion [55] (3039)
12	CN9-AL Centurion [50] (SW)	STY-2C Starslayer [50] (3085)	SCP-1N Scorpion [55] (3039)	VL-2T Vulcan [40] (SW)

Heavy 'Mechs				
2D6	House Steiner	ComStar/Word of Blake	Mercenary/Periphery	Pirate
2	FLS-7K Flashman [75] (SW)	BMB-12D Bombardier [65] (SW)	GLT-4L Guillotine [70] (SW)	GLT-4L Guillotine [70] (SW)
3	AXM-2N Axman [65] (3050)	OSR-2C Ostroc [60] (3039)	OSR-2C Ostroc [60] (3039)	OSR-2L Ostroc [60] (3039)
4	MAD-3R Marauder [75] (3039)	MAD-3R Marauder [75] (3039)	OTL-4D Ostsol [60] (3039)	OTL-4F Ostsol [60] (3039)
5	RFL-5D Rifleman [60] (CI)	TDR-5S Thunderbolt [65] (SW)	RFL-3N Rifleman [60] (3039)	RFL-3N Rifleman [60] (3039)
6	TDR-5S Thunderbolt [65] (SW)	CHP-3N Champion [60] (3050)	TDR-5SE Thunderbolt [65] (SW)	TDR-5S Thunderbolt [65] (SW)
7	CRD-5S Crusader [65] (3085)	FLS-8K Flashman [75] (SW)	ARC-2R Archer [70] (3039)	ARC-2R Archer [70] (3039)
8	TDR-9S Thunderbolt [65] (CI)	GLT-3N Guillotine [70] (SW)	CRD-3R Crusader [65] (3039)	CRD-3R Crusader [65] (3039)
9	ARC-2R Archer [70] (3039)	ARC-2R Archer [70] (3039)	WHM-6R Warhammer [70] (3039)	WHM-6L Warhammer [70] (3039)
10	WHM-7S Warhammer [70] (3085)	BL-9-KNT Black Knight [75] (3050)	GHR-5H Grasshopper [70] (SW)	ON1-V Orion [75] (SW)
11	ARC-5S Archer [70] (CI)	EXC-B2 Excalibur [70] (SW)	ON1-K Orion [75] (SW)	STK-4P Stalker [75] (3039)
12	MAD-5S Marauder [75] (RG6)	EXT-4D Exterminator [65] (SW)	MAD-3R Marauder [75] (3039)	MAD-3L Marauder [75] (3039)

Assault 'Mechs				
2D6	House Steiner	ComStar/Word of Blake	Mercenary/Periphery	Pirate
2	CGR-1A1 Charger [80] (SW)	CP-11-A Cyclops [90] (SW)	CGR-1A1 Charger [80] (SW)	CGR-1A1 Charger [80] (SW)
3	CP-10-Z Cyclops [90] (SW)	KGC-001 King Crab [100] (3050)	CP-10-Q Cyclops [90] (SW)	CP-10-Q Cyclops [90] (SW)
4	HGN-733 Highlander [90] (SW)	BLR-1G BattleMaster [85] (SW)	VTR-9B Victor [80] (SW)	VTR-9A Victor [80] (SW)
5	LGB-0W Longbow [85] (3039)	AWS-8Q Awesome [80] (3039)	BLR-1G BattleMaster [85] (SW)	BLR-1G BattleMaster [85] (SW)
6	ZEU-9S Zeus [80] (SW)	THG-11E Thug [80] (SW)	BNC-3E Banshee [95] (SW)	BNC-3E Banshee [95] (SW)
7	ZEU-6S Zeus [80] (SW)	STK-3F Stalker [85] (SW)	STK-3F Stalker [85] (SW)	STK-3H Stalker [85] (SW)
8	BLR-3S BattleMaster [85] (RG3)	CRK-5003-1 Crockett [85] (SW)	BNC-3MC Banshee [95] (SW)	BNC-3E Banshee [95] (SW)
9	STK-3F Stalker [85] (SW)	HGN-732 Highlander [95] (SW)	AWS-8R Awesome [80] (SW)	AWS-8T Awesome [80] (SW)
10	BNC-5S Banshee [95] (3050)	SHG-2H Shogun [85] (RSOK)	LGB-0W Longbow [85] (3058)	LGB-7Q Longbow [85] (3039)
11	AS7-S Atlas [100] (3050)	AS7-D Atlas [100] (SW)	AS7-A Atlas [100] (SW)	STK-4N Stalker [85] (SW)
12	NSR-9J Nightstar [95] (SW)	PLG-3Z Pillager [100] (SW)	MAD-4A Marauder II [100] (3039)	MSK-7A Mackie [100] (SW)

RANDOM 'MECH ASSIGNMENT TABLE: CLAN

2D6	Wolf	Jade Falcon	Ghost Bear	Smoke Jaguar	Second Line†
			Light 'Mechs		
2	Uller S [30] (CI)	Puma A [35] (CI)	Uller S [30] (CI)	Hankyu A [30] (CI)	Snow Fox [20] (3060)
3	Koshi A [25] (CI)	Uller C [30] (CI)	Koshi Prime [25] (CI)	Koshi B [25] (CI)	Peregrine 2 [35] (3055)
4	Puma C [35] (CI)	Dasher Prime [20] (CI)	Uller Prime [30] (CI)	Dasher Prime [20] (CI)	THE-N Thorn [20] (CI)
5	Dasher Prime [20] (CI)	Uller A [30] (CI)	Puma Prime [35] (CI)	Koshi A [25] (CI)	Firefly C [30] (3050)
6	Koshi Prime [25] (CI)	Uller B [30] (CI)	Dasher B [20] (CI)	Hankyu Prime [30] (CI)	Locust IIC [25] (3085)
7	Puma Prime [35] (CI)	Uller Prime [30] (CI)	Dasher Prime [20] (CI)	Koshi Prime [25] (CI)	Jenner IIC [35] (3085)
8	Puma A [35] (CI)	Puma Prime [35] (CI)	Dasher D [20] (CI)	Puma A [35] (CI)	Peregrine [35] (3055)
9	Uller Prime [30] (CI)	Fire Falcon Prime [25] (CI)	Puma D [35] (CI)	Koshi C [25] (CI)	MON-66 Mongoose [25] (SW)
10	Puma D [35] (CI)	Koshi Prime [25] (CI)	Koshi C [25] (CI)	Puma Prime [35] (CI)	Vixen [35] (3085)
11	Uller B [30] (CI)	Uller D [30] (CI)	Dasher C [20] (CI)	Uller Prime [30] (CI)	UrbanMech IIC [30] (3060)
12	Uller W [30] (CI)	Fire Falcon A [25] (CI)	Uller D [30] (CI)	Hankyu B [30] (CI)	Pack Hunter [30] (3060)†

2D6	Wolf	Jade Falcon	Ghost Bear	Smoke Jaguar	Second Line†
			Medium 'Mechs		
2	Hunchback IIC [50] (CI)†	Hunchback IIC [50] (CI)†	Hunchback IIC [50] (CI)†	Ryoken A [55] (CI)	Great Wyrm [45] (3060)
3	Fenris B [45] (CI)	Ryoken B [55] (CI)	Dragonfly Prime [40] (CI)	Hunchback IIC [50] (CI)†	Shadow Hawk IIC 2 [45] (3085)
4	Black Hawk Prime [50] (CI)	Black Hawk Prime [50] (CI)	Black Hawk Prime [50] (CI)	Black Hawk Prime [50] (CI)	Griffin IIC 2 [40] (3085)
5	Fenris C [45] (CI)	Black Lanner A [50] (CI)	Ryoken C [55] (CI)	Grendel Prime [45] (CI)	Clint IIC [40] (3060)
6	Fenris A [45] (CI)	Dragonfly Prime [40] (CI)	Dragonfly D [40] (CI)	Ryoken B [55] (CI)	Hellhound [50] (3055)
7	Fenris Prime [45] (CI)	Ryoken Prime [55] (CI)	Ryoken Prime [55] (CI)	Ryoken Prime [55] (CI)	Griffin IIC [40] (3085)
8	Ryoken Prime [55] (CI)	Black Lanner Prime [50] (CI)	Dragonfly A [40] (CI)	Ryoken D [55] (CI)	Shadow Hawk IIC [45] (3085)
9	Fenris D [45] (CI)	Fenris Prime [45] (CI)	Dragonfly C [40] (CI)	Shadow Cat Prime [45] (CI)	Hunchback IIC [50] (CI)
10	Dragonfly Prime [40] (CI)	Ryoken A [55] (CI)	Fenris Prime [45] (CI)	Grendel A [45] (CI)	Wyvern IIC [45] (3060)
11	Black Hawk A [50] (CI)	Black Lanner B [50] (CI)	Dragonfly B [40] (CI)	Shadow Cat A [45] (CI)	Lynx C [55] (GC)
12	Black Hawk S [50] (CI)	Ryoken D [55] (CI)	Fenris D [45] (CI)	Grendel B [45] (CI)	SHD-2Hb Shadow Hawk [55] (RSOK)

2D6	Wolf	Jade Falcon	Ghost Bear	Smoke Jaguar	Second Line†
			Heavy 'Mechs		
2	Vulture A [60] (CI)	Vulture A [60] (CI)	Cauldron-Born Prime [65] (CI)	Vulture B [60] (CI)	Champion C [60] (3050)
3	Loki Prime [65] (CI)	Thor C [70] (CI)	Thor Prime [70] (CI)	Cauldron-Born C [65] (CI)	Lancelot C (GC)
4	Vulture Prime [60] (CI)	Vulture Prime [60] (CI)	Vulture A [60] (CI)	Mad Cat Prime [75] (CI)	FLS-8K Flashman [75] (SW)
5	Mad Cat B [75] (CI)	Loki A [65] (CI)	Thor D [70] (CI)	Vulture C [60] (CI)	Rifleman IIC [65] (3085)
6	Mad Cat D [75] (CI)	Thor B [70] (CI)	Vulture Prime [60] (CI)	Vulture A [60] (CI)	Galahad [60] (3055)
7	Mad Cat Prime [75] (CI)	Thor Prime [70] (CI)	Vulture B [60] (CI)	Vulture Prime [60] (CI)	Rifleman IIC [65] (3085)
8	Mad Cat A [75] (CI)	Thor A [70] (CI)	Vulture Prime [60] (CI)	Cauldron-Born Prime [65] (CI)	Guillotine IIC [70] (3060)
9	Mad Cat C [75] (CI)	Loki Prime [65] (CI)	Loki Prime [65] (CI)	Loki Prime [65] (CI)	Rifleman IIC 2 [65] (3085)
10	Thor Prime [70] (CI)	Loki B [65] (CI)	Mad Cat Prime [75] (CI)	Thor Prime [70] (CI)	Galahad 2 [60] (3055)
11	Mad Cat S [75] (CI)	Thor D [70] (CI)	Mad Cat A [75] (CI)	Cauldron-Born A [65] (CI)	EXC-B2 Excalibur [70] (SW)
12	Mad Cat N [75] (RG5)	Thor F [70] (RG3)	Thor C [70] (CI)	Cauldron-Born B [65] (CI)	BL-6-KNT Black Knight [75] (SW)

2D6	Wolf	Jade Falcon	Ghost Bear	Smoke Jaguar	Second Line†
			Assault 'Mechs		
2	Man O' War D [80] (CI)	Turkina D [95] (CI)	Kingfisher D [90] (CI)	Daishi B [100] (CI)	KGC-000 King Crab [100] (3050)
3	Daishi W [100] (CI)	Turkina B [95] (CI)	Kingfisher B [90] (CI)	Gladiator Prime [95] (CI)	EMP-6A Emperor [90] (SW)
4	Masakari Prime [85] (CI)	Masakari Prime [85] (CI)	Masakari Prime [85] (CI)	Man O' War Prime [80] (CI)	Warhammer IIC 2 [80] (RG4)
5	Man O' War A [80] (CI)	Man O' War Prime [80] (CI)	Gladiator B [95] (CI)	Masakari A [85] (CI)	SHG-2H Shogun [85] (RSOK)
6	Man O' War Prime [80] (CI)	Man O' War A [80] (CI)	Gladiator A [95] (CI)	Masakari Prime [85] (CI)	Phoenix Hawk IIC [80] (3085)
7	Man O' War Prime [80] (CI)	Man O' War A [80] (CI)	Gladiator Prime [95] (CI)	Daishi Prime [100] (CI)	Warhammer IIC [80] (RG4)
8	Man O' War Prime [80] (CI)	Turkina Prime [95] (CI)	Kingfisher Prime [90] (CI)	Masakari Prime [85] (CI)	Marauder IIC [85] (RG6)
9	Man O' War C [80] (CI)	Turkina A [95] (CI)	Kingfisher A [90] (CI)	Daishi A [100] (CI)	Kraken [100] (3055)
10	Gladiator A [95] (CI)	Gladiator Prime [95] (CI)	Gladiator C [95] (CI)	Masakari B [85] (CI)	Highlander IIC [90] (3060)
11	Daishi B [100] (CI)	Daishi Prime [100] (CI)	Daishi Prime [100] (CI)	Kingfisher Prime [90] (CI)	Phoenix Hawk IIC 2 [80] (3085)
12	Man O' War B [80] (CI)	Turkina C [95] (CI)	Kingfisher C [90] (CI)	Masakari C [85] (CI)	PLG-3Z Pillager [100] (SW)

†Non-OmniMechs

RANDOM COMBAT VEHICLE ASSIGNMENT TABLE: INNER SPHERE

2D6	Light	Medium	Heavy	Assault
2	GAL-102 Galleon [30] (3058)	Goblin [45] (3058)	Manticore 3055 [60] (3058)	Ontos 3053 [95] (3058)
3	Warrior H-7 [21] (3039)	Blizzard [25] (3058)	LRM Carrier 3055 [60] (3058)	Schrek AC Carrier [80] (3039)
4	Savannah Master [5] (3039)	Hetzer [40] (3039)	Po [60] (3039)	Behemoth (Armor) [100] (3039)
5	Skulker [20] (3039)	Drillson [50] (3039)	LRM Carrier [60] (3039)	Ontos [95] (3039)
6	Pegasus [35] (3039)	Myrmidon [40] (3060)	Pike [60] (3039)	Schrek PPC Carrier [80] (3039)
7	Scorpion [25] (3039)	Vedette [50] (3039)	Manticore [60] (3039)	Demolisher [80] (3039)
8	Hunter [35] (3039)	Maxim [50] (3039)	Pike (AC5) [60] (3039)	Partisan [80] (3039)
9	Saracen [35] (3039)	Condor [50] (3039)	SRM Carrier [60] (3039)	Ontos (LRM) [95] (3039)
10	Scimitar [35] (3039)	Vedette Ultra [50] (3058)	VNL-K65N Von Luckner [75] (3039)	Behemoth [100] (3039)
11	Saladin [35] (3039)	Maxim 3052 [50] (3058)	SRM Carrier 3054 [60] (3058)	Partisan Air Defense [80] (3058)
12	J. Edgar [25] (3039)	Regulator [45] (3058)	VNL-K75N Von Luckner [75] (3058)	Devastator [80] (3039)

RANDOM COMBAT VEHICLE ASSIGNMENT TABLE: CLAN

2D6	Light	Medium	Heavy	Assault
2	Beagle [15] (3050)	Epona C [50] (3060)*	Demon [60] (3050)	Heimdall A [95] (3067)*
3	Hephaestus C [30] (3067)*	Hachiman [50] (3060)	Burke [75] (3050)	Fury [80] (3050)
4	Odin [20] (3067)	Ku [50] (3060)	Shoden [70] (3067)	Rhino [80] (3050)
5	Zorya [35] (3060)	Ares [40] (3060)	Ishtar [65] (3060)	Mars [100] (3060)
6	Mithras [25] (3060)	Enyo [55] (3067)	Athena [75] (3060)	Morrigu [80] (3067)
7	Indra [35] (3060)	Epona Prime [50] (3060)*	Oro [60] (3060)	Mars [100] (3060)
8	Svantovit [35] (3060)	Tyr [45] (3067)	Ishtar [65] (3060)	Morrigu [80] (3067)
9	Asshur [20] (3060)	Epona A [50] (3060)*	Athena [75] (3060)	Alacorn Mk IV [95] (3058)
10	Shamash [11] (3060)	Hachiman [50] (3060)	Shoden [70] (3067)	Morrigu [80] (3067)
11	Hephaestus Prime [30] (3067)*	Epona B [50] (3060)*	Oro [60] (3060)	Heimdall Prime [95] (3067)*
12	Hephaestus A [30] (3067) *	Zephyr [40] (3050)	Magi [70] (3050)	Puma [95] (3050)

*OmniVehicle

RANDOM PROTOMECH AND INFANTRY ASSIGNMENT TABLE

2D6	ProtoMech*	Clan BA†	Inner Sphere BA†	Conventional Infantry‡
2	Harpy [2]	Sylph [L]	Kage [L]	Mechanized, Hover Platoon
3	Siren [3]	Sylph [L]	Infiltrator Mk. II [M]	Mechanized, Wheeled Platoon
4	Satyr [4]	Salamander [M]	Fa Shih [M]	Mechanized, Wheeled Platoon
5	Centaur [5]	Salamander [M]	Achileus [L]	Jump Platoon
6	Hydra [6]	Elemental [M]	Gray Death Standard [M]	Motorized Platoon
7	Roc [7]	Elemental [M]	Inner Sphere Standard [M]	Foot Platoon
8	Roc [7]	Elemental [M]	Raiden [M]	Foot Platoon
9	Gorgon [8]	Gnome [H]	Longinus [M]	Motorized Platoon
10	Gorgon [8]	Gnome [H]	Purifier [M]	Jump Platoon
11	Minotaur [9]	Undine [M]	Fenrir [A]	Mechanized, Tracked Platoon
12	Minotaur [9]	Undine [M]	Kanazuchi [A]	Mechanized, Hover Platoon

*All ProtoMechs are from *Technical Readout: 3060.*
†All battle armor is from *Technical Readout: 3058 Upgrade.*
‡After rolling an infantry platoon, roll an additional 1D6 to determine the specific type: 1 Rifle, Ballistic; 2 Rifle, Energy; 3 Machine Gun; 4 SRMs; 5 LRMs; 6 Flamers.

RANDOM AEROSPACE ASSIGNMENT TABLE: INNER SPHERE

2D6	Light Fighter	Medium Fighter	Heavy Fighter	DropShip
2	SL-21 Sholagar [25] (3039)	DARO-1 Dagger [45] (3067)*	SL-15 Slayer [80] (3039)	Nekohono'o (3067)
3	SPR-H5 Sparrowhawk [30] (3039)	CMT-3T Troika [65] (3067)	SHV-O Shiva [85] (3067)*	Fortress (3057)
4	F-10 Cheetah [25] (3039)	DFC-O Defiance [55] (3067)*	F-100 Riever [100] (3039)	Excalibur (3057)
5	F-10 Cheetah [25] (3039)	LCF-R15 Lucifer [65] (3039)	F-100 Riever [100] (3039)	Union-X (3067)
6	SPR-H5 Sparrowhawk [30] (3039)	CSR-V12 Corsair [50] (3039)	TR-13 Transgressor [75] (3039)	Leopard (3057)
7	SL-21 Sholagar [35] (3039)	TR-10 Transit [50] (3039)	SL-15 Slayer [80] (3039)	Union (3057)
8	TR-7 Thrush [25] (3039)	SL-17 Shilone [65] (3039)	CHP-W5 Chippewa [90] (3039)	Overlord (3057)
9	SYD-21 Seydlitz [20] (3039)	F-90 Stingray [60] (3039)	STU-K5 Stuka [100] (3039)	Triumph (3057)
10	SYD-21 Seydlitz [20] (3039)	LX-2 Lancer [55] (3067)	HSCL-1-O Huscarl [75] (3067)*	Seeker (3057)
11	TR-7 Thrush [25] (3039)	ON-1 Oni [55] (3067)	EST-O Eisensturm [85] (3067)*	Overlord A3 (3067)
12	Corax [30] (3067)*	MIK-O Tatsu [70] (3067)*	CHP-W5 Chippewa [90] (3039)	Conquistador (3067)

*OmniFighter

RANDOM AEROSPACE ASSIGNMENT TABLE: CLAN

2D6	Light Fighter	Medium Fighter	Heavy Fighter	DropShip
2	Vandal [30] (3055)	Jagatai [70] (3055)	Xerxes [85] (3067)†	Noruff (3057)
3	Avar [35] (3055)	Turk [50] (3055)	Sabutai [75] (3055)	Outpost (3067)
4	Charonea [25] (3067)†	Visigoth [60] (3055)	Scytha [90] (3055)	Confederate (3057)
5	Bashkir [20] (3055)	Ammon [65] (3067)†	Kirghiz [100] (3055)	Carrier (3057)
6	Sulla [45] (3055)	Turk [50] (3055)	Jengiz [80] (3055)	Union-C (3057)
7	Batu [40] (3055)	Visigoth [60] (3055)	Scytha [90] (3055)	Overlord-C (3057)
8	Bashkir [20] (3055)	Visigoth [60] (3055)	Hydaspes [95] (3067)†	Broadsword (3057)
9	Batu [40] (3055)	Turk [50] (3055)	Kirghiz [100] (3055)	Mercer (3067)
10	Issus [40] (3067)†	Tyre [55] (3067)†	Scytha [90] (3055)	Arcadia (3067)
11	Vandal [30] (3055)	Issus [40] (3067)†	Jengiz [80] (3055)	Sassanid (3057)
12	Corax [30] (3067)	Jagatai [70] (3055)	Sabutai [75] (3055)	Miraborg (3057)

†Not an OmniFighter

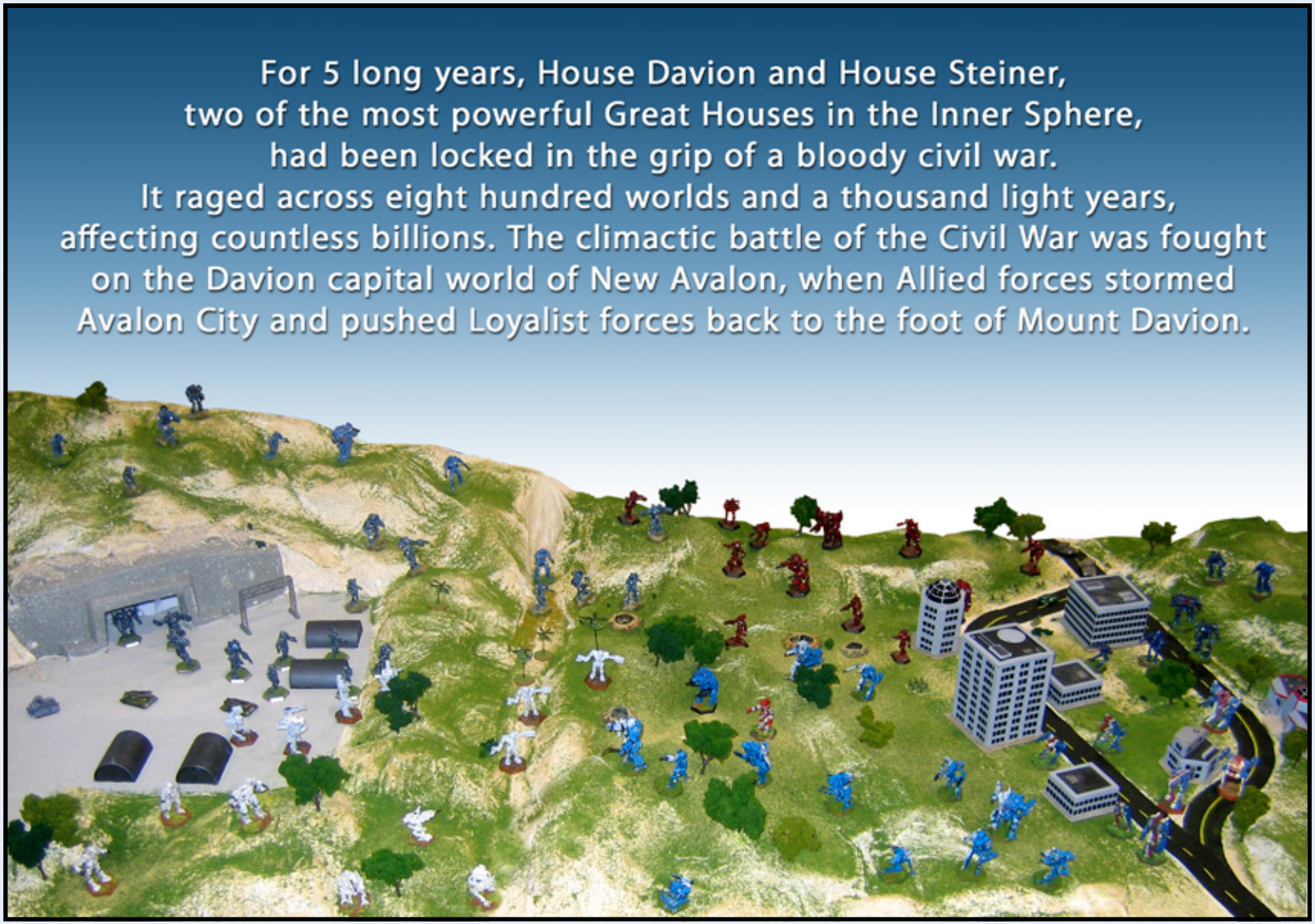
Highlander IIC, *Beta Galaxy (Clan Ghost Bear)*

EXPERIENCE RATING AND SKILLS

After determining the units employed by each force, the players determine their forces' experience ratings: Green, Regular, Veteran or Elite. If the players are using elements of specific units, they can consult the appropriate field manual. Alternatively, the players may simply set any experience ratings they wish, or use the Random Experience Rating Table. (Players can help ensure a balanced battle by setting the same level for both forces.)

After determining his forces' experience, each player determines the Gunnery and Piloting skills of his warriors. If the players agree, they can simply assign all warriors the standard starting skill ratings (see p. 39). Alternatively, each player may use the Random Skills Table to randomly determine skill ratings. To do so, each player makes two 1D6 rolls for each warrior in his force. The first die roll result determines the MechWarrior's Piloting Skill; the second, his or her Gunnery Skill.

For Clan MechWarriors, add 2 to each roll result; subtract 2 for Clan combat vehicle warriors.



2005 Origins International Games Expo Diorama

RANDOM EXPERIENCE RATING TABLE

2D6 Roll	Experience Rating
2-5	Green
6-9	Regular
10-11	Veteran
12	Elite

RANDOM SKILLS TABLE (EXPANDED)

1D6 (Green)	1D6 (Regular)	1D6 (Veteran)	1D6 (Elite)	Piloting	Gunnery
0	—	—	—	7	7
1	—	—	—	7	6
2–3	0	—	—	6	5
4–5	1–2	0	—	6	4
6–7	3–4	1–2	0	5	4
8	5–6	3–4	1–2	4	3
—	7–8	5–6	3–4	3	2
—	—	7–8	5–6	2	1
—	—	—	7–8	1	0

Commanders

In some cases, players may wish to designate lance, company, battalion or regiment commanders within their forces. Usually, the MechWarrior with the highest skills and/or heaviest BattleMech in a given formation is its commander, but players may use any criteria when designating such officers. After selecting commanders, each player should identify command units as such on those units' record sheets.

CLAN HONOR

The Clan codes of honor, or *zellbrigen*, also known as rules of engagement, are not part of the standard *BattleTech* game rules as presented in the previous sections of *Total Warfare*. However, players can use these codes to enhance the roleplaying aspect of *BattleTech*, creating a richer game experience more closely linked to the fictional *BattleTech* universe.

Using Clan honor puts Clan units at a distinct disadvantage. To compensate, in scenarios where the Clans must abide by these rules of engagement, the Clan side should have stronger forces or higher skills than it might otherwise have. This change helps offset the limitations that the honor codes place on Clan tactics.

Players should be aware, however, that it is generally difficult to accurately balance *BattleTech* games, even under the rules in this section; the use of Clan honor codes makes absolute game balance almost impossible. Through game play you will discover what works best for you and your fellow players. Because everyone plays Clan honor a little differently and each Inner sphere commander opposes it differently, no two games are alike.

As the very concept of the Clan honor rules brings more of a roleplaying style to the game (as opposed to the explicitly defined rules of standard play presented previously in this book), the exact way to integrate Clan honor rules with a given scenario type is up to the players. If the players wish to incorporate these rules into a scenario, they should be prepared to make adjudications on the fly, as Clan honor codes can generate numerous unforeseen circumstances. Players should agree before play begins that if a situation arises about which they cannot come to a consensus, they will roll 1D6 to determine the decision and get back to game play.

All players should agree to the use of Clan honor rules in a given scenario before play begins.

HONOR LEVELS

Clan honor codes fall into four categories, each dealing with a different part of combat: *batchall*, *zellbrigen*, physical attacks and retreat. Because the batchall (bidding) takes place before the scenario begins, guidelines for its use appear on page 266. Within each of the other three categories, a number from 1 to 4 represents the level of commitment to Clan honor. Honor Level 1 means strict conformity to the Clan codes; Level 2 and 3 require conformity only under certain circumstances; and Level 4 throws Clan honor out the airlock.

Normally, a fighting force's overall commitment to Clan honor is rated at Level 1, 2, 3 or 4. However, scenarios may include more than one honor level. For example, Honor Level 1 may apply to physical attacks and retreat, while Honor Level 2 applies to *zellbrigen*. Each honor level is determined by the circumstances of the scenario and the particular Clan fighting in it; see *Clan Honor Interpretation,* below.

Clan dueling rules and restrictions on physical attacks apply only to enemy 'Mechs. Clan MechWarriors may attack vehicles and unarmored infantry targets without reference to Clan honor. Likewise, Clan unarmored infantry and vehicles need not follow the rules of engagement. Battle armor and ProtoMechs follow the code of *zellbrigen*, with each Point considered a single unit for dueling purposes.

Clan Honor Interpretation

While players may assign whatever honor levels they deem appropriate for a given scenario, the following material provides a guideline for the honor levels to which a given Clan will default in a scenario.

The Clan Honor Interpretation Table gives a general idea of how each Clan interprets *zellbrigen*. The table shows two different time periods. Pre-Invasion describes the prevalent interpretation prior to the start of Operation Revival (the invasion of the Inner Sphere) in 3049; Post-Invasion reflects each Clan's view after the Battle of Tukayyid in 3052. During the Inner Sphere invasion (and subsequent events up through the Refusal War), each Invading Clan and many Home Clans experienced an ideological shift that caused changes in their view of *zellbrigen*. Depending on the time frame in which a given scenario is run, players can use the table as a guide to

CLAN HONOR INTERPRETATION TABLE

Clan Name	Pre-Invasion	Post-Invasion
Blood Spirit	Strict	Opportunistic
Cloud Cobra	Opportunistic	Opportunistic
Coyote	Strict	Strict
Diamond Shark	Liberal	Liberal
Fire Mandrill	Varies (Strict)*	Varies (Opportunistic)*
Ghost Bear	Strict	Liberal
Goliath Scorpion	Strict	Strict
Hell's Horses	Opportunistic	Opportunistic
Ice Hellion	Opportunistic	Opportunistic
Jade Falcon	Strict	Opportunistic
Nova Cat	Opportunistic	Opportunistic
Snow Raven	Opportunistic	Opportunistic
Star Adder	Strict	Opportunistic
Steel Viper	Strict	Strict
Wolf	Liberal	Opportunistic
Wolf (in-Exile)	N/A	Liberal

*Clan Fire Mandrill's internal divisions make it difficult to classify the entire Clan; each Kindraa follows its own interpretations. As such, players can either use the general classification given in parentheses, or based on information provided about the Kindraas in various sourcebooks, modify as appropriate.

determine what Clan honor levels are in effect before game play begins.

The table gives three different levels of interpretation. A strict interpretation means that the Clan's warriors generally follow *zellbrigen* against almost all opponents (except those considered extremely dishonorable, such as bandits and pirates, or against a long-hated enemy). An opportunistic interpretation means that the warriors follow *zellbrigen* unless mitigating circumstances dictate otherwise (they are outnumbered/outgunned, they think they can get away with it, and so on). Clans following a liberal interpretation use *zellbrigen* only against other Clans, and then only if they have the advantage.

ZELLBRIGEN

Under the rules for ritual dueling, or *zellbrigen*, Clan players must declare a target for each of their dueling 'Mechs. A typical declaration might sound something like, "I am MechWarrior Seth of Clan Steel Viper. I pilot the sole *Summoner* in Alpha Star. I hereby invoke the ritual of *zellbrigen* and challenge the pilot of the *Orion* adorned with the unit designation eleven to a duel of warriors. In this solemn manner, let no one interfere!"

During a duel, no other Clan warrior may attack either of the dueling 'Mechs. If a third unit interferes with a duel, the dueling Clan warrior may attack the interfering unit, provided that another Clan 'Mech has not already challenged the interloper to a duel. A duel ends when one combatant is destroyed, disabled or retreats from the battlefield.

At Honor Level 1, the Clan warrior upholds all the rules of dueling regardless of his opponent's actions.

At Honor Level 2, the Clan warrior follows the rules of dueling until the Inner Sphere side takes an action that violates the Clan honor codes (a third party interfering, a unit involved in one duel firing on a 'Mech involved in another duel, and so on). If this happens, the duel immediately degenerates into a free-for-all. During the Weapon Attack Phase, if a player declares that his unit will fire on a target already involved in a duel, any Clan player whose declaration of *zellbrigen* follows the Inner sphere player's declaration of a "dishonorable attack" may attack that Inner Sphere 'Mech without regard for honor rules. Only the violator may be attacked in this way.

At Honor Level 3, any infringement of Clan honor in the dueling rules renders the entire ritual of *zellbrigen* null and void, leaving the Clan 'Mechs free to attack any enemy unit without restraint for the remainder of the game. At Honor Level 4, dueling rules do not apply.

Using *zellbrigen* in a game requires a certain degree of cooperation between players. A crafty Inner sphere player can exploit the rules of engagement to deny the Clan player any targets. Not only is this grossly unfair, but it is also inaccurate in terms of the *BattleTech* universe (plus, it's not much fun for the Clan player).

Finally, the Clan player should not be expected to adhere to the rules of engagement when it would be foolish to do so, as in the following example:

> *You are playing the Clans in a scenario with Honor Level 1. You have one* Daishi *and your opponent has four 'Mechs: a* Banshee, *an* Orion, *an* Atlas *and a* Spider. *The* Spider *challenges the* Daishi *to a duel, which the* Daishi *accepts. The* Spider *then uses its superior movement rate to hide behind hills and heavy woods so that the* Daishi *never gets line of sight to it. Meanwhile, the other three members of the* Spider*'s lance pound the* Daishi *to dust. The* Daishi *cannot retaliate because its player must adhere to Clan honor, which in this case means he can only attack the 'Mech that challenged him to a duel. He vainly attempts to chase the* Spider, *while "off-limits" enemies destroy his BattleMech.*

Requiring the *Daishi* in this example to strictly obey the rules of engagement means that the Clan player must sit back and allow his unit to be destroyed. To give players some options in such situations, use the following guidelines to adjudicate the use of *zellbrigen* in game play.

1. Making the Challenge: One of the most important parts of a duel is the challenge. This takes place during the Weapon Attack Phase, when attacks are declared. When a Clan unit declares an attack on a unit that it has not attacked before, it is effectively announcing its intention to duel—the Clan player should verbally issue his challenge at this time. Dueling makes Initiative even more important, as Initiative also determines the order of attack declaration and challenges.

If the Inner Sphere side outnumbers the Clan side, it is considered bold (but acceptable) for a single Clan 'Mech to challenge

more than one opponent at the same time. All of a single 'Mech's opponents are considered part of the same duel and may fire on the lone challenger. However, at least one target must be left for each 'Mech on the Clan side (this tradition does not apply to non-'Mech Clan units). In fact, Clan MechWarriors greedy for battlefield glory may force their own armored vehicles, infantry units or even Elementals out of combat in this way.

Though a single Clan 'Mech may challenge more than one Inner sphere 'Mech, additional Inner Sphere 'Mechs cannot invite themselves into an onging duel even if the Clans outnumber their side. Such an action is a breach of *zellbrigen*.

2. Refusing a Challenge: A Clan warrior need not accept a challenge issued by an Inner Sphere warrior, especially if he suspects the challenge is a ploy to abuse *zellbrigen* and achieve victory through deceit. As a general rule, a Clan warrior can refuse a challenge from a 'Mech of a different weight class than his own, as long as he issues a challenge against another Inner Sphere 'Mech instead.

Also, though Inner Sphere warriors are not expected to accept or refuse challenges, the Inner Sphere side must abide by Clan honor when Honor Levels 2 or 3 are in effect or else risk touching off a melee. In these cases, the Inner Sphere player can refuse challenges from Clan 'Mechs outside the challenged 'Mech's weight class as long as an alternate challenge is made.

Finally, any challenge must be accepted if no alternate targets are in play.

3. Declaring a Duel Void: Certain situations may render a duel void, even if strict adherence to the rules of engagement (Honor Level 1) is in force. In these cases the judgment of the players must prevail; however, the gamemaster can use the following simple penalty system to judge these situations. The penalty system is intended to enforce the idea that dueling 'Mechs must actively fight one another for the duel to be valid. Because Clan warriors call people without honor *dezgra*, the penalties are referred to as *dezgra* points.

Each of the infractions listed below earns the violator a *dezgra* point, unless the violator's opponent declines the penalty (which he might do if he decides that the action was tactically appropriate). If a dueling 'Mech accumulates 3 *dezgra* points, it is clear that the duel is dishonorable, and so it becomes void in the End Phase of the turn in which the third point was earned. No dueling 'Mech can earn more than 1 *dezgra* point per End Phase.

If a dueling unit intentionally moves out of its opponent's line of sight, the unit earns 1 *dezgra* point.

If a dueling unit has line of sight to its opponent but intentionally fails to fire at the enemy, the unit earns 1 *dezgra* point. This guideline assumes that at least one shot is possible, meaning that the enemy unit is within the firing arc and range of the weapon being fired.

If a dueling unit moves out of firing range of all its weapons, the unit earns 1 *dezgra* point.

If the unit earns no *dezgra* points in a turn, it may remove 1 *dezgra* point in the End Phase of that turn. A unit can not, however, reduce its *dezgra* points to zero in this way.

Once a unit has accumulated 3 *dezgra* points, any Clan unit may freely fire on it for the remainder of the scenario without violating the dueling rules.

Area-Effect Weapons: Area Affect Weapons (as well as any system that requires multiple units to operate, such as TAG, C^3, semi-guided LRMs and so on) by their nature violate *Zellbrigen*. No Clan warrior will use any area-effect weapon system or special munitions while fighting at Honor Levels 1, 2 or 3. Only at Honor Level 4, when dueling rules do not apply, will a Clan warrior use such systems.

A Clan warrior's response to an Inner Sphere unit declaring an attack using such a system against a Clan unit depends on the honor level in use. At Honor Level 1, the Clan warrior upholds all the rules of dueling, regardless of the type of weapon used. At Honor Level 2, the duel degenerates into a free-for-all, with the violators—the unit that fired the area-effect weapon, designated with TAG or used a C^3 system—open to attack by any Clan unit. At Honor Level 3, the use of area-effect systems renders the entire ritual of *zellbrigen* null and void.

Physical Attacks

Unlike dueling, the Clans' dislike of physical attacks in 'Mech combat is an informal, if widespread, custom. No explanation is yet known for this distaste, though some experts suspect that Nicholas Kerensky chose to encourage a long-range fighting style among the Clans.

At Honor Level 1, a Clan warrior never makes physical attacks in 'Mech combat. At Honor Level 2, a Clan warrior may make a physical attack only if an enemy unit makes one first. During the Physical Attack Phase, if the Inner Sphere player declares a physical attack, any Clan unit whose declaration follows that violation of Clan honor may freely engage that 'Mech in physical combat.

At Honor Level 3, a single physical attack by an Inner Sphere 'Mech allows all Clan warriors to retaliate in kind against all enemy units for the remainder of the game. At Honor Level 4, the taboo against physical attacks no longer applies.

Retreat

Clan MechWarriors despise their Inner Sphere counterparts because they consider Inner Sphere armies dishonorable warriors fighting in inferior 'Mechs. Therefore, Clan warriors consider retreating from Inner Sphere opponents a disgrace almost beyond redemption. When allowed to choose whether or not to flee a losing battle, many Clan warriors prefer to fight to the death.

At Honor Level 1, a Clan warrior never retreats. At Honor Level 2, Clan warriors may retreat from enemy 'Mechs that are using advanced technology, but never from 'Mechs, vehicles or infantry units using 3025 (introductory) technology. At Honor Level 3, Clan warriors may retreat from any vintage of enemy 'Mech, but will not retreat from vehicles or infantry units. At Honor Level 4, Clan warriors may retreat at will.

BACK END OF NOWHERE

David L. McCulloch

COCHRAN VALLEY
RANDALL'S REGRET
THE PERIPHERY
11 APRIL 3065

Tendrils of black smoke curled into the chill azure of the morning sky—hazy tombstones around which blue-tailed buzzards circled. The Jameson place had been hit two days ago, the third ranch to be raided in the past week. The hammering started up again, making Mathew Garret wince as he scanned the horizon with blood-shot blue eyes. Stooping at the rough-hewn water trough, he splashed icy water over sandy hair and a face weathered by years toiling under the blowtorch sun.

Perhaps it had been a mistake to drink quite so much of cousin Errol's home-brewed liquor last night.

The night before, Garret had been creeping through Satan's ruddy moonlight. The silvery face of Gabriel was cresting the horizon when he reached the smoking ruins of the Jameson ranch. He'd smelled the stink of death everywhere. Dead cattle. Dead pigs. Dead nurfers. Dead people. Garret had not lingered in that charnel house. The main building had been blasted apart. Giant footprints traced a path of destruction. The feed store he had helped the Jamesons erect two summers ago was unrecognizable. The barn that had served as a DropShip in childhood games was a smoldering pile of wreckage.

It looked like the raiders had at least one 'Mech, an armed IndustrialMech or maybe a BattleMech. Not good.

The closest law was in Fort McNeil, and Sheriff Brandon packed nothing more lethal than a gopher gun. The nearest BattleMech was way over in Silverpeak. Marshal Hancock and his deputies could be here in three weeks—perhaps two with luck.

More hammering pounded at Garret's throbbing head. After splashing more water on his unshaven face, he pulled on a shirt of green homespun wool as he walked across the yard. Echoes from two nights before were everywhere he looked. A low-built house with thick walls that was supposed to keep storm and bandit at bay. Weighty tiles of red clay on the roof. A veranda to shade the women from the burning sun as they sewed and wove. The barn Garret and his brothers had built three years ago. The Jamesons had helped. A string of outbuildings arranged in a defensible square on a solid base of ferrocrete to keep the lion moles—burrowing predators colloquially known as "gophers"—at bay.

Leaning on a doorpost that had taken two days to carve from the trunk of a titan palm, Garret observed the frenzied activity inside. Errol couldn't read too well, but the skinny man was exceptionally skilled with his hands. The air was thick with the odor of coolant and spirits, cut with the ozone tang of an arc-welder. Errol had completed mating a boxy missile launcher to the chassis of Garret's *CattleMaster*—a tired and battered IndustrialMech brought to the Regret by Randall's original colonists fleeing the chaos of the Succession Wars. Now Errol's attention had turned to the squat form of the Kerns' faded yellow HarvesterMech. He was working to dismount a wide-throated combine unit from the front of the quadruped's chassis.

"How's it going?" Garret looked over to where Jonathan Kerns was propping up the other doorpost, shouting to be heard.

"Your cousin says he reckons he can get those guns onto our Harvester." Jonathan's face bore the scars of a run-in with a lion mole five summers back. Garret looked at the mismatched machine guns leaning against the barn's rough-plank wall. He didn't know where his eternally grease-smeared cousin had come by all these weapons. Right now he wasn't going to ask.

With a hollow clanging that drove spikes of pain through Garret's brain, the combine unit dropped away at last. Errol turned, his grin of triumph shockingly white against a wide, grimy face. Garret gestured toward the guns. "How long do you reckon?"

Errol glanced over his shoulder at the IndustrialMech he was tearing apart. "Say three or four hours. More time and I could maybe tack on some metal plating around the cockpit. Maybe give Jonathan here a might bit more protection." He flashed another grin at Kerns. "Don't think they maybe put this critter together with combat in mind."

"I'd appreciate it." Kerns smiled back, then looked at Garret. "What do you figure we're looking at? How many gun hands? How many 'Mechs?"

"Hard to say. They made a real mess of the Jamesons'." Garret thought for a moment. "Nobody's seen any BattleMechs wandering around. Reckon they must be holing up somewhere out of sight. About the only place you can hide something that big would be over by Cedar Creek." He nodded toward the foothills in the west. "Reckon I'll go have a look."

No doubt about it. Things were getting more dangerous by the day. Ringo sat cross-legged on the foot of his faithful Bessie, back against the cool armor of her right leg. The tree-dotted hills offered little cover from the elements, but the winding canyons made a perfect place to plan his next move without getting bothered by the locals. It had not rained for several days, and the air was thick with the scent of tree resin and nose-tingling pollen. He scratched absently at a scraggly ginger beard that had been growing since he first set foot on the sorriest excuse for a planet it had ever been his misfortune to see.

He had picked off all the easy marks. Outlying farms and ranches that lacked support from the others. Worse, by now the locals would have some idea what they were up against—probably gone hollering for help to Silverpeak and Marshal stinking Gregor God-damned Hancock.

Ringo spat on the mossy ground.

Hancock had run Bessie and him out of Southfield, and now word was that the grizzled Marshal was none too happy about Ringo shooting out some of his right leg actuators. Spare parts were hard to come by all the way out here—they'd cost a body an arm and a leg. No, he didn't want to cross trails with Hancock and his deputies again.

Tugging at the collar of his cooling vest, Ringo wondered whether he should ditch the bulky garment. It had quit on him three weeks ago, and only the protection offered by the rough ballistic cloth armor covering had prevented him from throwing it away on the spot. Ammo was becoming a problem, too. The local dirt farmers made a good enough source for food, drink, clothing, women and a little coin if he was lucky. But Ringo was barely scratching a living out here in the boonies. He needed one good caper. One big payoff, and Bessie and he could get themselves off this rock. Maybe he could even get Bessie a much-needed refit. She'd been barely operational when he won her in that smoky poker game on Tortuga. To think! His mother had said he'd never amount to anything. But he'd proved her wrong. If only she could see him (wherever she was now). He was a high and mighty MechWarrior now! Not some two-bit stick-up artist or petty thief.

Now all he had to do was get himself off this accursed rock to someplace where the real action was.

Randall's Regret. Ringo snorted in disgust. Randall (whoever the hell he was) doubtless regretted even landing on the Blake-forsaken place. Ringo certainly did. Damned system wasn't even on the charts. Maybe he should've listened to that Precentor back on Herotitus. The Robes had been scurrying around the back streets like mice in a cheese factory. Looking for a few good men (and women), they'd said. Good pay, they'd said. Chance to be part of something special, they'd said. Ringo had always stayed well clear of religion. It had never helped his mother and sisters. Weekly visits to the rickety old church had certainly never done him or his family a single shred of good. Some of the stories about the toaster-worshipers had made him a might bit nervous, though. But now that he was stuck on an elbow of a planet, signing on with the Wobbies looked like a much more attractive proposition.

Pulling a scrap of paper from the breast pocket of his cooling vest, Ringo unfolded the rough map he had sketched out during the week he'd spent scouting out the region. The three farmsteads he had already visited were spread out along the edge of a river valley fertile enough to attract enough families to create a self-sufficient community. After last night, those farmers would probably expect him to strike further north. Probably some hotheads would have gotten the idea of concentrating their meager firepower up there in the hope of giving him a bad case of lead poisoning or (if he were really unlucky) fitting him for an uncomfortably tight rope necktie.

Better to break from his previous pattern. Visit somewhere near the last place. Don't go at night. Go now, perhaps. One last caper, and then move on before Marshal elbow-sucking Hancock came looking for him and Bessie.

More than two hours' hard riding had carried Garret to where the hills broke like a sea of stone on the rocky shore of the river valley's edge. Bringing a second nurfer had allowed him to switch mounts every few kilometers and make good time, but the ride had left his rawhide coat and knee-length boots coated in dust. Scaly, ugly and smelly, the hexapedal nurfers were native to the Regret. Once domesticated, they had proven to be excellent draft animals, despite a strangely jointed backbone that gave them a swaying side-to-side gait guaranteed to invoke nausea (or worse) in a novice rider. Resting the barrel of his wide-bore gopher gun at the ready across the pommel of his saddle, Garret threaded his way between thick gray cedar trunks and under the sprawling canopy of titan palms as he worked his way into the hills, following the familiar game trails to the accompaniment of chattering stone squirrels.

His quarry proved ridiculously easy to find. Garret was sure even a deaf man could have heard the rhythmic thumping of 'Mech footfalls.

Beneath the winding trail Garret was following, a lone BattleMech plodded laboriously along a narrow gully, following the bed of a dried-out wash. Half-obscured by the cedars, the outline of the machine's bulbous body was broken up with a peeling gray-and-tan camouflage paint scheme—and by the cargo nets stuffed with a bizarre collection of items. Mixed in with the crates and barrels, Garret could see farm implements, furniture, even a glossy black stove that had been Mrs. Jameson's pride and joy.

He was unfamiliar with the design—Garret was no expert when it came to BattleMechs. Jack would know, perhaps. His sister's ten-year-old son was fanatical about everything connected with the combat versions of the IndustrialMechs the colonists had brought with them. This machine lacked the humanoid profile of the half a dozen BattleMechs he had ever seen. It moved slowly, kicking up dust from the dry wash. Garret cussed. Slow meant big. Perhaps too big for him to deal with, even with all his neighbors along for the ride. The only good thing was that the BattleMech appeared to be alone. No vehicles or hordes of gun-toting bandits on foot.

Garret considered taking a shot at the 'Mech, but then thought better of it. His gun had the stopping power to put down a three-meter hexapedal lion mole at close range, but it'd hardly scratch the paint on that manmade monster out there. More likely, all he'd do was get himself killed. Then who would tell everyone where the BattleMech was?

Garret spat another curse into the afternoon heat. He remembered where this particular wash ran out of the hills. Muttering a string of expletives, he hauled both nurfers around on the narrow trail and nudged his mount into a foolhardy canter. It looked like his own ranch was next on the bandit's list of targets. If he pushed his luck—and his mounts even

further—he could cut across the hills and beat the bandit back to the ranch.

He coaxed more speed from his mount.

Garret's last nurfer was yowling piteously as it staggered through the gates. Under normal circumstances he never would have dreamed of pushing a valuable animal on that final run. The other nurfer lay dead on the trail twelve kilometers back.

Tossing the reins to young Jack, Garret dismounted with haste. "Look after him, boy. He's had a long run." Seeing his sandy-haired nephew's nod of understanding, Garret walked with a gait stiff from hours in the saddle toward the barn, brushing trail dust from his clothes and beckoning his brothers George and Paul to join him.

"We got trouble coming," he told the others as they gathered at the doorway. "A BattleMech, headed this way. An hour behind me. Maybe less." Ignoring the confusion of shouted questions, Garret snatched up a printed technical readout. Dog-eared and battered, the disreputable-looking book was missing its cover and several pages. It belonged to his nephew, who'd been sulking since the adults had appropriated it. Flicking through the pages, Garret jabbing a finger at the book. "That's it."

Jonathan Kerns took the readout. "An *Imp*? One hundred tons." He glanced at the others as they gathered round to read. "PPCs. Lasers. Missiles. You think we can stop this thing? All we've got here are two IndustrialMechs and a bunch of rifles. We haven't got everybody organized yet."

"I don't see that we have any choice, Jon. If we run for it now, maybe we could get everyone away before that 'Mech gets here—but we'd lose everything. This is my home, and I don't feel like giving it up without a fight." Garret looked steadily at Kerns. "If you want out, I'll understand. You've got your own folks to look out for." Kerns stared at the ground, scratching his matted hair. "Maybe you can get the others organized better and stop the next raid."

"No. I said I'd stand with you." Kerns met Garret's gaze. "I'll stick with you."

Garret was the first to break the silence. "Let's do it. How are we set, Errol?"

"Well, now. I've got Jon's HarvesterMech patched together. Center of gravity's shifted some after the hack job I did on her, but she'll fight." Errol threw a thumb over his shoulder at the *CattleMaster*. "Just fueling up your rig now. You've got twenty missiles onboard, but watch it—fire control is going to be by guess and by gosh. Don't know how close you're maybe gonna have to get to hit anything."

Garret pulled off his dusty coat and threw it aside as he strode over to the foot of his *CattleMaster*. "You let me worry about that. Just finish getting me fueled up. Everyone else, mount up." Climbing the chain-link ladder that trailed down from the IndustrialMech like a necktie, Garret looked down to see Errol lift a large earthenware jug and pour the contents into a rusty old funnel protruding from the 'Mech's engine pack. As he clambered into the cramped cockpit, the roar of Kerns' HarvesterMech starting up was joined by the growl of a second engine as George and Paul drove up in a four-by-four. George had their father's hunting rifle. Paul had taken up the gopher gun that Garret had been carrying.

Pulling the canopy shut, Garret fastened the seat-harness straps before settling the heavy bulk of the battered neurohelmet on his shoulders. Without a cooling vest, he had to depend on homemade pads of cloth stuffed with nurfer hair to carry the weight of the thing.

"You're good to go!" Errol had to scream to get Garret's attention. Waving Errol clear, he thumbed the starter and listened as the IndustrialMech's IC power plant spluttered into life. Greasy black smoke smelling worse than Errol's outhouse poured from the *CattleMaster*'s twin exhaust stacks.

"Real smooth!" Errol bellowed, taking a swig from the jug before joining George and Paul in the four-by-four.

Following the HarvesterMech out of the barn, Garret glanced at the house. Mother was watching from the veranda. Next to her was Emma, holding tight to young James to keep him out from under the crushing 'Mech feet. He was too far away to see their faces clearly. That made it a bit easier. "Let's go kick some!"

Throttling up to walking speed, Garret led them into the west to fight for their home.

Ringo yawned and stretched mightily before tossing another chunk of broken roof-beam onto the fire. A constellation of sparks erupted into the night sky. The smell coming from the pig suspended on a makeshift spit over the fire was mouthwatering. Taking another pull from an earthenware jug, Ringo sat back against Bessie's right leg and flicked through the crumpled pages of a book he had found when picking through the wreckage. Finding nothing of interest, he tossed the remains of the dog-eared book into the flames.

Things were definitely getting harder.

A pair of cobbled-together IndustrialMechs and a jeep full of yokels armed with popguns were no match for his mighty *UrbanMech*. He'd left the quad lying on its back like a dead mechanical spider, and a single burst from Bessie's small laser has seen to the yahoos in the four-by-four. The *CattleMaster* had burned. But even as it died, it had made that one last lunge—trying to catch his BattleMech in a dying embrace. That had been too close.

Leaning forward, Ringo retrieved the spit without burning himself too badly. He cut a chunk of meat free with his belt knife, blew on it, and then stuffed it in his mouth.

Not too shabby a haul, though. Some coin and even a compact roll of C-bills—someone's savings for a rainy day that would never come. Maybe his luck would hold and he could get enough to buy passage off this rock.

The pig tasted very good.

A Castilian Brigada force defends ancestral holdings against a raid by un-identified pirates.

by Drew Williams

Total Warfare is filled with photos of painted miniatures by a variety of talented artists. Perhaps "there is a fine line between inspiration and intimidation," but don't be intimidated! The artists who painted these miniatures wanted to inspire you to paint. Feel free to try painting your minis to match the photos you like. This is how most painters improve and learn. Experimenting is also an excellent way to learn how to paint. If you don't like how it turned out, you can strip the paint off in a bath of Pine-Sol and try again.

This guide provides the specific information you'll need to paint miniatures in a particular style, based on the art of Franz Volwinkel. We all see his cover art from numerous *BattleTech* products and say, "I wish my 'Mechs looked like that." Well, this guide is an attempt to mimic his style on miniatures and teach you how to do it as well. Also included is advice on materials, paints and brushes, and various techniques. Inspiration and guidance can also be found online at camospecs.com. Many fan sites and miniatures painter sites have tutorials and forums as well.

If you're a "green" painter, you may want to stock up on some supplies. Below is a list of handy items. Given the right tools, inspiration and motivation, you can work your way up to being a "gunslinger" with a paintbrush.

Plastic Miniatures

While this section details painting metal miniatures, most of these guidelines are just as effective for painting the plastic line of miniatures releasing in various *ForcePack*s.

Materials and Tools

Here's a list of materials and tools you'll find useful. Those marked with an asterisk were used for the miniatures in this guide. You can find most of these items at hobby, craft or art stores:

- Size 5/0 *(for the smallest details)*
- Size 000 brush* *(useful for small details and final highlights)*
- Size 00 brush* *(primary detail and highlight brush)*
- Size 0 brush* *(good for coverage and base coats)*
- Size 8 round brush* *(for dry-brushing)*
- Palette* *(for mixing paints; this can be a simple piece of cardboard, plastic or a palette paper pad)*
- Water container* *(for rinsing paint brushes)*
- Paper towels/clean rag* *(for cleaning and drying paint brushes)*
- Old newspaper *(for covering your work surface)*
- Modeling knife* *(the type with the replaceable blades, such as an x-acto with #11 blades)*
- Super glue* *(also called gap filling CA, or cyanoacrylate)*
- Set of small jeweler's files* *(fingernail files, aka emery boards, and foam sanding blocks are also handy)*
- Sand, flock and ground cover materials*
- Bottle of PVA glue * *(Elmer's, Mrs. Glue or any white glue will work)*
- Modeling putty *(optional, useful for filling gaps or converting minis)*
- Spray varnish* *(spray Testor's Dullcote, Krylon Crystal Clear, etc.)*
- Primer spray paint *(black, gray and white are the most common)*
- Selection of acrylic paints*
- Selection of "water mixable" oil paints*

PAINTING TO MATCH COVER ART

To match cover art, the first thing you need to do is collect your references. For this project I printed the cover art for *Total Warfare 1st Edition*. This print will serve as reference for the *BattleMaster*, Inner Sphere standard battle armor and conventional infantry. I also used my CD case for HeavyMetalPlus design software; I've always liked the color scheme on the Scimitar vehicle and wanted to paint a Harasser to match.

Next, assemble and clean the minis to be painted. Refer to *Kitbashing* (see p. 289) for advice on cleaning, assembly and converting the miniatures if you desire.

Before jumping right in and experimenting with painting, green painters may wish to consult *Additional Advice* (see p. 286) for general guidelines on the basic painting techniques used for the miniatures below, as well as some safety tips that should always be observed.

THE BATTLEMASTER AND BATTLE ARMOR

The mottled appearance of the *BattleMaster* in the art presents a challenge, but can be approximated using a complicated but effective method. Most of the techniques described can also be used to paint the battle armor, though you can skip some steps because of the battle armor's smaller size.

Clean and Assemble the 'Mech (BM-1, BA-1)

First, clean and assemble the 'Mech miniature. Scrape off mold lines with a sharp blade and do touch-ups with a combination of emery boards and jeweler's files. For the hex base, press each face flat against a sheet of fine sandpaper and sand in a figure-eight pattern (first clockwise and then an equal amount counter-clockwise). If the arms do not fit well, drill matching holes where the arms and shoulders fit together and insert pins and glue (see *Pinning*, p. 293).

After gluing the miniature together with Superglue, position it in the hex base. Carefully add more Superglue to fill the gaps in the hex base and spritz a little zap-a-gap to accelerate the cure of the Superglue. You can also use putty to fill these gaps. Once the miniature is assembled, carefully wash it in warm soapy water and let it dry.

Preparing to Paint

Prime the Miniature (BM-2, BA-2)

Prime the miniature with Krylon Gray Primer spray. Warm the can under hot tap water, and then shake it thoroughly. Position the miniature face down on a piece of scrap cardboard. Spray the mini in a well-ventilated area with a light but even coat. I find that spraying from about eight inches away works well. It's also useful to spray at a 45-degree angle from the bottom of the figure, so you can get all those hard to reach places. Once the paint is dry, flip the miniature on its back and do it again. Spray the third and final coat with the figure standing straight up. It works better to spray a miniature with a few light coats than one thick coat.

Undercoat with Wash (BM-3, BA-3)

Create a wash using Vallejo Game Color #816 and water and apply it to the miniature. I expected this wash to be darker than the primer because it's a much darker gray. However, the wash turned out to be lighter with a blue splotchiness. I still don't understand why it did that, but it turned out to be a happy accident, so I went with it.

Paint Body (BM-4, BM-5, BM-6, BA-4)

Squeeze a bit of titanium white onto your palette (*Windsor and Newton, Artisan, water mixable oil*). Take care; even though titanium white can be mixed with acrylic and cleans up with water, it still behaves like oil paint. It takes a long time to dry and if it accidentally gets on something, the paint will transfer to everything it touches.

Dab a large paintbrush (#8 round; it's huge!) into the white oil and create a mixing area on your palette. Now add Vallejo #816 until it's a little lighter than the primer. Once mixed, wipe most of the paint off the brush onto the palette. Start brushing this mix all over the mini with downward or side strokes (see *Figure 4*).

With the paint still wet, add a little more white to the mix and do it again. This time, don't cover the miniature quite as much (see *Figure 5*).

Finally, add a little more white to the mix (it should be very light gray) and do it again. This final application will be lighter than the last and should only catch highlights (see *Figure 6* and *Figure 6A*)

Let the mini sit for a couple of hours. The paint will still be wet, so be careful handling it. Spray a coat of Testor's Dullcote on the miniature. This sets the paint while forming a protective barrier.

If you are proficient at dry brushing and feel more comfortable doing that, you can substitute dry-brushed layers of standard acrylic for the technique described above. The miniature will not look the same, but should be close.

Dry-Brush Highlights (BM-7, BA-5)

For the final highlight, dry-brush the miniature with white acrylic using a medium flat-tipped brush. IWM white works well for this. To dry-brush, first dip the brush into the paint, then wipe off most of the paint on a paper towel until the brush is almost dry. Lightly brush the miniature to catch raised detail and create highlights.

For additional mottling, mix some Vallejo #816 with glaze medium. Carefully add areas of darker gray in small angular patterns to further discolor the overall gray.

Brown Body (BM-8, BA-6)

Paint all areas that you'd like to be brown with GW Bestial Brown. Use a fine-tipped 0 brush and take care to "keep it in the lines."

Brown Highlights (BM-9, BA-7)

Thin some GW Snakebite Leather with water and make random triangular patterns with a 00 brush. Then mix a little Vallejo white with the Snakebite Leather and carefully paint the highlights (sharp upper edges and details).

Yellow Highlights (BM-10, BA-8)

Paint all areas intended to be warning stripes with GW Golden Yellow. You can highlight this yellow by adding a little white to the mix and using a 00 brush.

Metallic Touches (BM-11, BA-8)

Paint all areas intended to look metallic with GW Boltgun Metal using a 00 brush.

Black Wash (BM-12, BA-9)

At this point, apply a targeted black wash (also referred to as black lining). The most common method is to thin black paint with water and apply it only to deep engraved details or joints to create shadow. You can also achieve this by adding glaze medium to black or using future floor finish with black. I used a mix of turpentine and standard black oil paint for this miniature. Be warned—turpentine plus oil paint is not only smelly, it's flammable and toxic, so take precautions! I prefer this type of wash because it works so well on an acrylic base. Use a 5/0 or 000 brush to carefully create shadows and panel lines. The mix will flow, so take care not to apply too much at a time.

Finishing Touches (BM-13, BA-10 Final)

In this stage, finishing touches are added to the miniature. Paint the black checkers on the leg, black stripes on the warning panels, black canopy and numbers with appropriate brushes. The checks can be traced out using a sharpened mechanical pencil to make painting easier. You can use decals from Fighting Piranha Graphics for unit insignia, and for numbers and checks as well. The unit insignia, numbers and checks on the *BattleMaster* pictured were hand-painted.

BattleMaster-1

BattleMaster-5

BattleMaster-9

BattleMaster-2

BattleMaster-6

BattleMaster-10

BattleMaster-3

BattleMaster-7

BattleMaster-11

BattleMaster-4

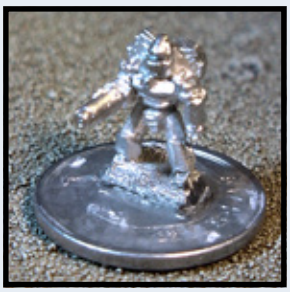
BattleMaster-8

BattleMaster-12

Style the Base (BM-Final, BA-10 Final)

I finished the base in the following manner. First, I painted the edges painted black. Then I painted the top Bestial Brown. Once dry, I painted the top again with a white glue and water mix. While the glue mix was wet, I dropped a few small rocks in place, then added fine ballast around these rocks. Finally, I covered the base in fine sand and then turned it to dump off the excess. This combination looks realistic and didn't need to be painted. Once the glue was dry, I carefully applied another layer of white glue where I wanted the flock to be, then sprinkled it with flock.

BattleMaster-13



BattleArmor-1

BattleArmor-4

BattleArmor-7

BattleArmor-2

BattleArmor-5

BattleArmor-8

BattleArmor-3

BattleArmor-6

BattleArmor-9

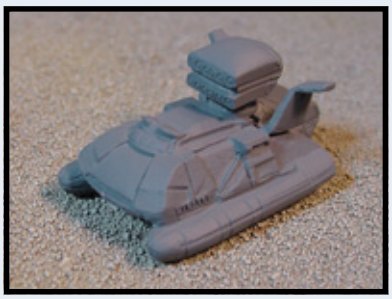
BattleMaster-14 Final

BattleArmor-10 Final

Harasser-1

Harasser-4

Harasser-7



Harasser-2

Harasser-5

Harasser-8

Harasser-3

Harasser--6

Harasser-9 Final

THE HARASSER

The method used to paint the harasser is straightforward and simple. It takes a steady hand and good brush control, but is a faster way to paint. In my opinion, it is also the best method for mimicking the art of Franz Volwinkel in miniature form. It also makes an efficient method for painting multiple miniatures at once.

Clean and Assemble the Miniature (H-1)

Clean and assemble the miniature.

Prime the Miniature (H-2)

Prime the miniature with Krylon Gray Primer in a manner similar to the *BattleMaster*.

Blackline (H-3)

Mix black paint with glaze medium or future. Carefully blackline the entire tank.

Paint the Panels Blue (H-4, H-5)

Using a fine-tipped brush (0 or 00), start painting the panels with GW Enchanted Blue. Take care not to paint all the way to the edges. The effect we want is worn paint, so feel free to leave tiny unpainted areas. These will represent chipped paint later on.

Paint Panel Edges Gray (H-6)

The remaining gray now gets highlighted with GW Chainmail where light would collect or along panel edges. These fine lines need not be uniform; in fact, they look better if broken and varied.

Add Further Gray Highlights (H-7)

At this stage, paint certain areas light gray for accent. GW Codex Gray works well for this. Add some white to the mix and highlight this gray.

Add Light Blue Highlights (H-8)

Mix some white with the Enchanted Blue and glaze medium in a puddle on your palette. Paint a thin outline around the blue areas as a highlight. If the paint is kept thin and transparent, you'll get a subtle effect. You can do additional highlighting for more contrast; I chose not to for this Harasser.

Add Warning Stripes, Mount on Base (H-9 Final)

Paint or use decals to make yellow and black warning stripes and white numbers. Paint the canopy black. Mount the miniature on its hover stand with Superglue. Dullcote the miniature and you're done.

Infantry-1

Infantry-4

Infantry-7

Infantry-2

Infantry-5

Infantry-8

Infantry-3

Infantry-6

Infantry-9 Final

THE INFANTRY

Conventional infantry are tiny, but can be painted. We recommend 2x reading glasses or some other form of magnification for this.

Clean and Assemble the Miniatures (I-1)

Clean up the miniatures and cut the base between each figure. I glued them to a popsicle stick using a little Superglue for each miniature. Gluing them to a stick makes it much easier to paint many figures at once.

Prime the Miniatures (I-2)

Prime the miniatures with GW Chaos Black spray paint. I warmed the can under hot tap water and painted the front, back and standing in the same manner as a 'Mech.

Paint Arms and Legs (I3, I4)

Using a 000 or 5/0 brush, paint the arms and legs with GW Snakebite Leather. Be sure to leave some black in the shadows to function as blacklining. After painting this color on all the figures, I added a bit of white to the puddle to make a lighter brown and touched the highlights on the arms and legs. Highlighting something this tiny is optional.

Paint the Bodies (I-5)

The body armor or torso of the miniature gets a coat of GW Vermin Fur brown. Again, add a tiny bit of white to lighten the color for highlights (if you want them).

Paint Flesh and Highlight (I-6)

Use GW Dwarf Flesh to paint all flesh areas. Another round of optional highlighting.

Paint Weapons and Metals(I-7)

Paint the weapons with GW Boltgun Metal.

Paint Highlights and Base (I-8)

Paint the bottom GW Bestial Brown. Mix a little GW Shadow Gray with black and paint the highlights on the helmets. Paint the hexbase black.

Attach to Base and Style Base (I-9 Final)

Carefully remove the finished miniatures from the popsicle stick and glue them to the hex base. Once all figures are on the hex base, the gaps between them are filled with Superglue. Once the glue dries, the "ground" is painted brown. Use the same method for sanding and flocking as for the *BattleMaster*.

Next, hand-paint unit insignias and—just kidding—you're done!

ADDITIONAL ADVICE

The following section provides some general advice on the equipment needed for painting and how to take care of it, as well as additional techniques that will prove useful in your painting.

PAINTS AND BRUSHES

Your paints and brushes are the most important materials and tools you'll be using, so it's worth saying a little more about them.

Though other types of paints are available, most modelers favor water-based—or acrylic—paints. Acrylics dry much more quickly than most other types of paints and produce "cleaner" colors. And because they are water-based, you can use water to clean your brushes and thin your paints. Acrylics are waterproof once they dry, and they also tend to be kinder to your brushes than other types of paints. Acrylic glaze medium can be used to extend the drying time of acrylic paints and makes an excellent mixing medium for washes. Future floor finish also works for mixing and washes, but leaves a glossy sheen.

Acrylics come in a wide variety of colors from many manufacturers. For this guide, I used only three brands of paint, each of which is described below. Feel free to try any acrylic paints and find what works best for you.

- Vallejo makes two ranges of paints, model color and game color. Model color covers better and the colors are more military-looking. Game color is vibrant and excellent for blending. This manufacturer also makes additional items like glaze medium, slow dry and other useful additives for acrylics.
- Games Workshops paints are rich in color but dry out quickly. The inks are fantastic but can stain paint, so it's best to thin them down. These mix well with most other paints.
- Iron Wind Paints are excellent for dry brushing. IWM Ivory is one of the most useful paints I have ever worked with, and is my primary weathering paint for dry brushing.

Brushes can be the most expensive tools you use, so be sure to take good care of them. Wash them in warm soapy water or use brush soap between colors, and do not leave them in the water cup or the bristles will curl. The more a brush is used, the better it becomes. You can paint a very fine line with a well cared for 0 brush.

Most brushes used for this guide were Windsor and Newton Series 7. Other brushes should work fine. Like paints, the choice of brush should be up to the painter. Store them with bristles facing up.

HOBBY KNIFE SAFETY TIPS

Hobby knives are very sharp, and it's easy to give yourself a bad cut if you're not careful. To avoid accidents, follow the safety tips. If you've never used a hobby knife before, ask for some help.

- **ALWAYS cut AWAY from yourself!** It may seem easier to scrape the blade back toward your thumb, but sooner or later your blade will slip and you'll give yourself a deep cut.

- **Always cover the blade and store your hobby knife when you're done using it.** Don't leave the blade exposed, and don't leave the knife laying on your work surface. It's too easy to forget it's there, and you're likely to lean onto the blade or knock it off the work surface.

- **Never use excessive force when working with a hobby knife.** Go slow and trim any imperfections a little bit at a time. If you try to trim away large pieces, you're more likely to slip and injure yourself, break the knife blade and damage the miniature.

USING SPRAY PRIMER

Primers are usually available in brush-on and spray types. Spraying produces thinner and more even undercoats than brushing. Here are a few tips to remember when spraying:

- **Always spray in a well-ventilated area.** You can get very sick if you breathe in fumes from the spray can, so it's best to spray outside if possible. Some painters spray in garages or sheds. If you spray in an enclosed area, keep the doors and windows open.
- **Use a spray booth.** Using a spray booth will keep the paint from getting on things you don't want painted. You can make a spray booth out of a cardboard box. Simply remove the flaps from the top and set the box on its side. Place the miniatures inside the box. The excess paint that misses the miniatures when you spray will stay inside the box.
- **Check with your parents, your spouse or whoever is in charge before spraying.** Make sure the place where you'll be spraying is okay.
- **Read the instructions on the can.** Ask for help if you don't understand the instructions on the can. When you're set up and ready to start, hold the can about 10–12 inches away from the miniatures and spray with light, smooth strokes. Don't try to drench them in one fell swoop! Once this first coat has dried, turn the miniatures around and spray the backs. You can use brush-on primer to touch up any small areas the spray missed.

BASIC TECHNIQUES

Here are some common painting techniques and terms. Most of them are used in the examples provided in this guide.

Washes

A *wash* is a thin layer of color, usually applied on top of another color that has already dried. The wash is semi-transparent, so that the base color under it still shows through. For example, a red wash applied over a black base color will produce a dark red tone. The black base provides the darkness, while the wash adds color to the final tone. A dark wash may also be applied to a lighter base color. In this case, the thin wash color will seep into the deeper details of the painted section, accentuating the surface texture of the miniature.

The simplest way to create a wash is by thinning paint with water. The consistency of the wash—how thin or thick it is—determines how much of the base color shows through. The consistency of a wash will also affect how easily the wash flows, or *bleeds*.

To apply a wash, first mix a little black paint into a puddle of the base coat color. Add water to this puddle until it turns semi-transparent. Now you have a choice: you can do a coverage wash or a detail wash. A coverage wash will often darken, or stain, the basecoat. A coverage wash is good to use before you block in the panels or dry-brush the miniature. For detail washing, you use a fine-tipped brush such as a 0 or 5/0 to paint the wash into panel

lines, crevices and details. Detail washing is similar to blacklining/outlining. Detail washing works best after dry brushing but may be used before. Another use for detail washing is to "clean up" panels and large areas that have been dry-brushed. Refer to the banding technique, but use a wash that is the same as the base coat.

Vary the consistency of your washes, and watch how the wash affects the final color.

Dry Brushing

Dry brushing lets you apply small bits of color, usually highlights, to a section already painted. This method is used to apply colors to the raised surfaces of the miniature, rather than the recessed details. Dry brushing can be hard on the bristles of a brush, so use your roughest brush (in this case, the Size 2 brush) or an old/cheap brush. Many painters reserve specific brushes for dry brushing. Size 8 is an example of a dedicated dry brush.

To apply a dry-brushed highlight, first mix a little white paint into a puddle of base coat color. Always use a different brush for mixing in order to keep your dry brush dry. It may be a good idea to let the paint sit for a few minutes, giving it a chance to thicken and making it easier to apply. When the paint is the right consistency, tap the dry brush into the paint. You want only a little paint on the tip of the brush.

Wipe the excess paint onto a paper towel or piece of paper until almost no paint comes off the brush. With angled strokes, brush the figure to catch panel edges and details. If the lighter color isn't catching the details, then dip your brush again. Once the entire figure is highlighted this way, you can add a little more white to the mix. This lighter mix should be applied with less pressure than the last one. This technique is easy to learn but difficult to master. Practice and do what you are comfortable with.

Experiment by leaving differing amounts of paint on the bristles and altering the amount of pressure you apply with the brush. You'll soon see what looks right and what looks messy.

Panel Painting and Blending

Panel painting and *blending* are two advanced techniques used to accentuate the three-dimensional surface features of a miniature ´Mech or vehicle. In our examples, we used the panel painting technique when adding our middle tones.

When panel painting or blending a section of a miniature, first paint the entire section a darker shade of the base color; a coverage wash will suffice for this purpose. After this coat of paint or wash has dried, paint each panel with the base color. Be sure to use a size 0 brush for this so you get a clean, even coat on each panel. If you make a mistake and paint outside the line, just wipe it off and try again. Clean your brush after applying the base color. (In our examples, the base color is the middle tone of each section.)

If you are blending, you can paint onto the base color before it dries. Paint the edges of the panels with a lighter shade of the base color. Blend the edges where the highlight and the base color meet, so that the edges disappear.

After applying the highlight, clean your brush. If you like, you can add a second highlight to the section. Simply go back to your palette and add a touch of white to the color to lighten it more. Then apply this third tone to the edge of the panels. Leave a band of the second tone showing, or blend the edges between the second and third tones.

VL-2T Vulcan *and QKD-4G* Quickdraw, *Castilian Brigada (Nueva Castile)*

Panel painting and blending can be a bit tricky, so it's a good idea to practice on an old miniature before you try these techniques on your favorites. In addition to changing the tone of each successive layer, you can change the consistency of the paint by mixing in a bit of water to thin it.

Blacklining

Blacklining requires a steady hand and fine brush control, so you may want to wait to try this technique until you've had a bit more experience. Blacklining consists of painting fine lines between different parts of the miniature to separate one area from another. Often this is done as one of the last jobs on the figure. Many modelers use black to do their outlining (hence the term blacklining), but you can also use dark grays and browns.

When blacklining, the consistency of the paint is the most important factor. Generally, the paint must be thinned a little so that it flows freely and can be applied in thin lines. If the paint is too thin, however, it will run, making it difficult to paint controlled lines. Acrylic inks and fine permanent ink pens also work well for blacklining. Inks can be purchased at local hobby stores; most paint lines have a selection of inks. Art and craft stores also carry artists' ink. If you use this ink, it's advisable to thin it before applying it to the miniature. Ultra-fine 005 permanent pens can be found at art and/or craft stores and come in a variety of colors.

Adding Details

Details are the really small areas and features of the miniature, such as the cockpit, gun and jump jet ports. Details also include any "extras" that don't show on the unpainted miniature, such as divisional and unit insignias, rank insignias and "kill" markers.

Usually, details are added after all the other painting is finished. Painting details requires a steady hand and fine brush control, so it's best for beginners to add only a few. You can also add details using commercially available decals. Licensed *BattleTech* decals are available online at http://fightingpirannhagraphics.com/.

SDR-9K Venom *(un-identified mercenary)*

FINISHING TOUCHES

Unless you plan to lock your miniature away in a glass display case, you should probably finish it with a coat of protective varnish or sealer. The varnish will enhance and protect the paint job (If you use an unvarnished miniature in games, parts of the paint will eventually start rubbing away).

You can find protective varnish at your local hobby shop, available in brush-on or spray varieties. If you plan to use spray varnish, be sure to apply it in a well-ventilated area. For best results, tell your hobby dealer what kind of paints you used on your miniature (acrylic paints, in this case) and ask him to recommend a varnish or sealer formulated to work with that type of paint. Acrylic brush-on lacquers are the safest and can be found at local game stores.

MISTAKES

Even the best figure painters in the world make the occasional blunder, and everyone makes mistakes when they're first painting. Don't let mistakes discourage you. Mistakes are an important way of learning, and sometimes a mistake may look better than what you intended to paint or give you an idea for something you wouldn't have thought of otherwise!

Also, keep in mind that you can fix most mistakes by painting over them. Most of your mistakes will probably involve getting paint from one part of the miniature onto an area where you don't want it. If you get a bit of light-colored paint on a dark area, you can fix it by painting it over with a darker color. If you get a bit of dark paint on a light area, you may need to paint over the dark color with a little white before retouching the area with the original light color.

Most often, you'll make mistakes when you're getting tired. This is a sign to stop painting and start fresh the next day or evening. Otherwise, you're likely to make more mistakes and get frustrated, which is the last thing you want. Painting miniatures is supposed to be fun; don't get so caught up in the challenge of the work that you forget about the fun part.

A FINAL NOTE

Hopefully, this section offers you enough guidance to paint some cool miniatures. However, you don't need to rely on this information alone. Ask other painters how they like to paint their miniatures. Ask the people at your local hobby shop how they do it. Most people will be happy to talk about their hobby. Online *BattleTech* forums often have good tips and discussions about painting and modeling, and most painters online are happy to help as well.

As you continue to paint miniatures, you'll get better and better at it. You'll probably learn new techniques and new skills. Pretty soon, people will be asking *you* for advice. Just remember to be patient. You may not be the greatest painter when you start, but if you keep at it you'll get better.

KITBASHING

by Ray Arrastia

Kitbashing is a term coined by model kit builders to describe the process of building a model with altered or additional pieces (including parts from multiple kits) to achieve a completely different model than the original. The term applies equally well to the miniature gaming hobby, and to *BattleTech* in particular. Kitbashing techniques are invaluable for creating 'Mech and vehicle variants not currently in production, as well as miniatures of your own design. We'll be looking at a few different projects as we go along to help illustrate the various stages and skills involved in kitbashing.

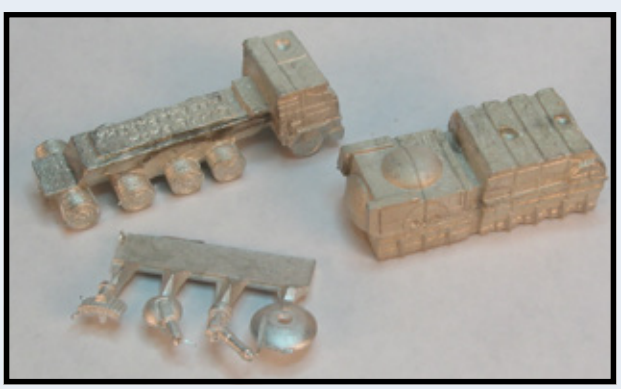
CONCEPT AND PLANNING

Before you grab any tools and start cutting up miniatures, you need a concept and a plan of action. Decide what your finished product is, what your starting point will be and what parts, tools and techniques are necessary to complete the project. Below are a few sample kitbashing projects that we'll describe throughout this section. Additional details and techniques for these projects will appear in later sections.

Light Utility Truck (LUT)

When I saw this vehicle in the *Technical Readout: Vehicle Annex* (*TRO:VA*), I was struck by the similarity between it and the Mobile HQ [IWM stock # 20-743]. The LUT looks like an intermediary between the Mobile HQ and the more common command van, making the Mobile HQ the perfect basis for the LUT. Kitbashing the LUT requires cutting the Mobile HQ's tractor to six wheels and shortening the cabin to match. Some paneling needs sculpting and minor details should be added.

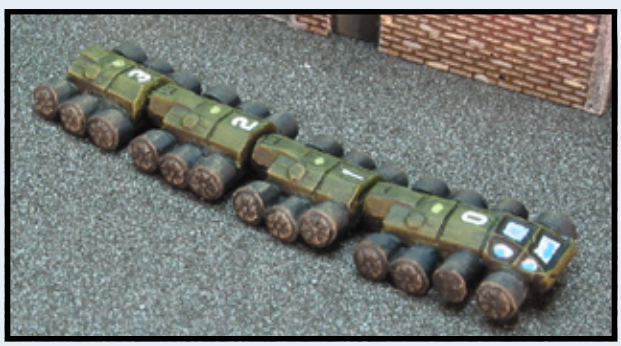
Completed Light Utility Truck (LUT).



Mobile HQ parts used in the creation of the LUT and Heavy Truck.

Land Train Cargo Transport (LCT)

This kitbash is loosely based on the vehicle by the same name from *TRO:VA*. The compact design of the Swift Wind scout car [IWM stock # 20-306] can be used as the basis for the six-wheeled pod-like cars of the LCT. For the three cargo pods, we can remove the crew compartments, detach the wheels from the discarded crew segments and affix them to the cargo pods. A Swift Wind can stand in for the LCT's crew car with a minor modification—adding an extra pair of wheels to bring its total to eight.



Completed Land Train Cargo Transport (LCT).

Swift Wind Scout Car, used in the creation of the LCT.

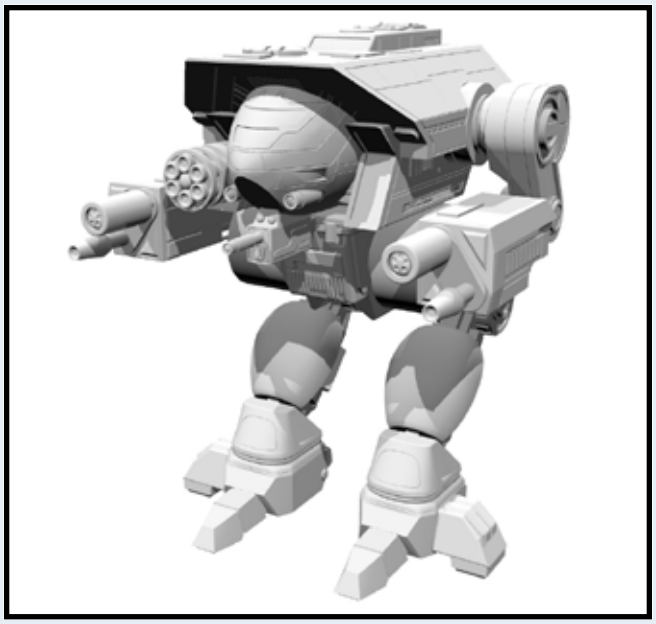
Heavy Truck

The heavy truck from *TRO:VA* can be approximated by once again using the versatile Mobile HQ miniature as a base. Like the LUT, this modification requires cutting the chassis down to six wheels. Also, walls for the truck bed can be created from cut-down parts of the body, and some additional sculpting will be necessary.

Completed Heavy Truck.

Daishi (Dire Wolf) Widowmaker

All OmniMechs have several standard configurations, and the *Widowmaker* is among the more unique configurations for the *Daishi* (*Dire Wolf*) OmniMech [IWM stock # 20-607RE]. Kitbashing a *Widowmaker* may pose a bit of a challenge, but the modular nature of OmniMech weaponry and design principles makes project planning and acquisition of parts relatively simple. The current arm weapons should be replaced, the left top torso filled to cover the unneeded SRM slot, the right torso filled out and an AC/20 installed, medium lasers positioned on either side of the nose, and the chin box modified or replaced in order to house a small laser.



CAD Rendering of Daishi Widowmaker

Final Assembled and Painted Daishi Widowmaker

TOOLS AND EQUIPMENT

In kitbashing, the old adage, "use the right tools for the right job" proves true. For minor work you can get away with almost no tools at all—but if you plan on lots of kitbashing or intricate work, it's a good idea to expand the collection of tools at your disposal. Always keep in mind the need to take proper safety precautions.

Cutting Tools

Knives and Saws

A hobby knife with an interchangeable blade is an ideal kitbashing tool. Besides minor cutting, some blade replacements are suitable for sawing, and a few are even helpful when sculpting small details. Hobby knives are extremely sharp; always cut away from yourself and use caution when cutting. Some hobby saws are good for cutting styrene and balsa wood, and jeweler's saws allow for very fine cutting. A pair of hobby clippers is also useful for cleanly removing items from sprues and for cutting though hunks of unwanted material.

Files

Files and Sandpaper

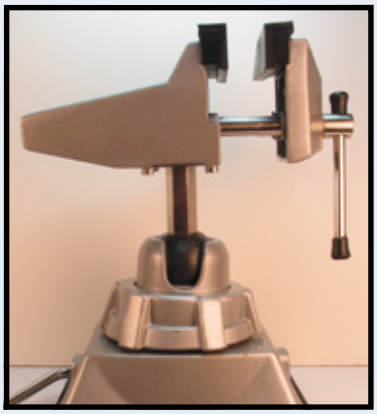
Use jeweler and needle files for metal or for hard-to-reach areas; sandpaper is more useful for larger surfaces or non-metallic items. Use finer (high-grit) sandpaper to smooth surfaces and clean up any imperfections created by rougher filing or sanding. When doing heavy filing or sanding, wear a protective mask.

Pin Vise

The old stand-by tool for drilling into plastic or metal miniatures, a pin vise is basically a hand-powered drill. It fits in your hand as you turn it, just like a screwdriver. The force from your palm helps push the drill bit deeper. Most pin vises allow for interchangeable drill bits, completely compatible with

Pin Vise and Rotary Tool

Adhesives and Green Stuff



Hobby Vise

smaller power tool drill bits. A rotary tool can be useful for more intensive work, or to give your poor wrist a break (see *Rotary Tool*, below).

Rotary Tool

A Dremel rotary tool can be indispensable for kitbashers. This item alone often replaces all the aforementioned tools, saving you lots of time and effort. However, using a Dremel for simpler or finer jobs is overkill and can potentially ruin your work. Some forethought is needed when deciding what equipment to use. Take extreme caution, as this is a power tool. Always use proper safety equipment such as protective goggles/glasses and mask, and a vise for holding your work.

Adhesives and Gap-fillers

Glues and epoxies are used as adhesives and to fill gaps. For kitbashing *BattleTech* miniatures, there aren't too many adhesives to worry about. Cyanoacrylate glues and gels (AKA Superglue) are the bare minimum required for gluing metal to metal, or styrene plastic to metal. On the rare occasion that you'll glue plastic to plastic, a styrene glue or cement is preferred. Both types of adhesives are fast acting. Products known as "kickers" are available for cyanoacrylate glue that can accelerate the curing process and strengthen the bond. Epoxies are cold-welding compounds that hobbyists sometimes use as alternatives to glues, and are much more versatile gap-fillers than cyanoacrylate glue (styrene glues are not recommended for gap-filling). In addition, most hobby shops carry putties specifically suited for gap filling.

Green Stuff, Brown Stuff and Sculpting Tools

Sometimes in kitbashing, sculpting is required. The majority of miniature hobbyists use a two-part epoxy called Kneadatite®, which comes in a green or brown variety (universally known as green stuff and brown stuff). Both epoxies have their uses, but brown stuff is better suited for working on *BattleTech* 'Mechs and vehicles. Some hobbyists also use traditional modeling clays. When deciding what to use as sculpting tools, the possibilities are vast: fingers, hobby knives, toothpicks, erasers, pen nibs, nails and pins, dental tools and so on. Many professional hobby sculptors make their own tools by combining the previously listed items. Through trial and error, you'll discover what tools work best for you.

Bits

"Bits" is the term applied to the parts and pieces used in your kitbash that are drawn from other sources, though it usually means parts from other miniatures. The more kitbashing projects you undertake, the more discarded bits you wind up with. Eventually, you'll build up a "bits box," which becomes your first resource when kitbashing. If you have a part in mind but don't have it in your bits box, you can always call up Iron Wind Metals and request the bit directly; please make sure you have the product number of the miniature the bit came from, and be as specific as possible. In addition to raiding your bits box, you can create new bits from styrene plastic, which is sold in a wide variety of sheet thicknesses, rods, tubes and other architectural and engineering shapes. Pins, needles and florist wires are also handy for some projects, as are washers of all sizes.

Hobby Vise

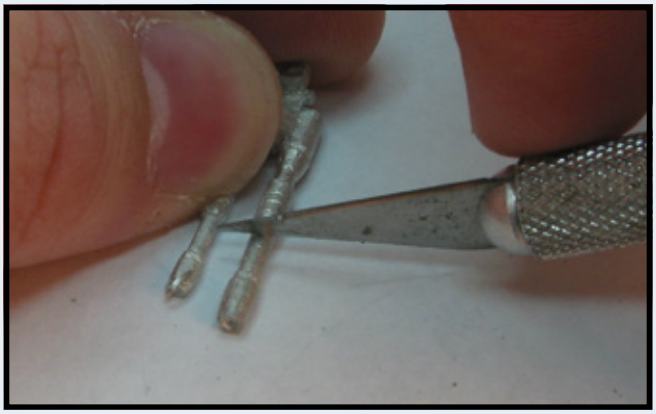
A vise or hobby vise is a necessity for complex modifications. Any work involving heavy sanding, filing, cutting, sawing or drilling greatly benefits from using a vise; it allows you to have both hands free while keeping the miniature perfectly steady. If using a rotary tool, a vise is an absolute safety must-have.

TECHNIQUES

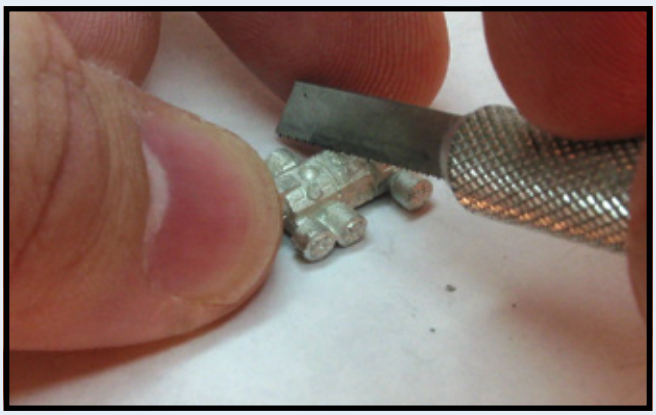
Now that we're familiar with the requisite tools, we can go over some of the tips and techniques used in kitbashing. Many of these techniques overlap. For ease of reference, we have separated the techniques in a logical fashion, with specific examples from the four kitbashing projects mentioned earlier.

Cutting

Whether you're removing unwanted parts from your miniature or scavenging parts off another, cutting is the most basic procedure involved in kitbashing. You can do most cutting with a hobby knife, but you'll want to use more efficient tools for arduous tasks. For thin or frail pieces, or removal of surface details, a hobby knife is sufficient. Brace the piece on your work mat, and make sure to cut away from yourself. Use only moderate pressure—too much force and you may send the detached piece (and possibly the blade tip) hurtling through the air.



Cutting with a Knife Blade



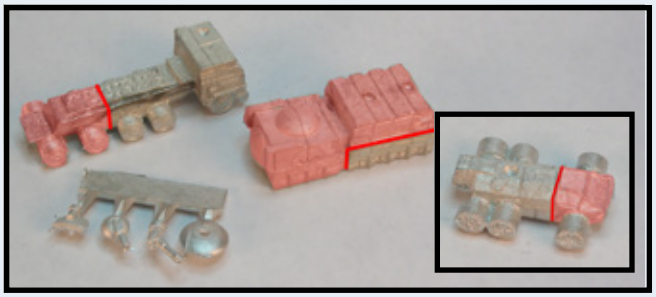
Cutting with a Saw Blade

In our four kitbashing projects, I chose to use the standard hobby knife blade only while trimming flash and the large lasers off the right and left arm of a *Vulture* (*Mad Dog*) for later use on the *Daishi*. I also used the knife to scrape off the nubs under the *Daishi*'s nose, as that area must be flat in order to attach the small laser housing.

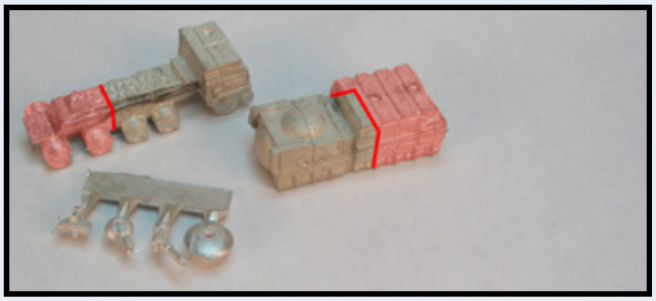
When dealing with a slightly larger cut, or one that requires a little more control, swap out the standard blade in your hobby knife for a saw blade. At this point, we recommend you use a vise to hold the mini, as the sawing motion may throw off your cut otherwise. Lubricating the blade with water or petroleum jelly helps ensure a steady back and forth motion. Depending on how you position the piece in the vise, you may need to remove it and flip it once you reach a halfway point. Keep in mind that saw blades destroy a lot of material where the cut is made. In our sample kitbashing projects I used the saw blade on the Swift Wind cars to remove the wheels from the crew segments, as well as cut the crew segments from the rest of the vehicle.

For pieces that require a longer cut, or are thicker in diameter, you can use a jeweler's saw or hobby saw. Use the same technique as when using saw blades; however, these blades tend to do less damage, and you can use them with a little more finesse. On the other hand, jeweler's saw blades are very fine and can snap if too much pressure is applied or if they get stuck. Luckily, the blades are easy enough to replace.

Extremely thick pieces might require a rotary tool. The rotary tool's cutting discs do a lot of excess damage, so you should only



The pink areas were removed to create the Heavy Truck and the LCT, respectively.



The pink areas were removed to create the LUT.

resort to a rotary if you don't care about damaging the piece you're removing. Even then, proceed cautiously. You can also use the cutting wheel to shave away large amounts of unwanted material, but this requires patience, and again must be done with caution. When using the rotary tool, secure the miniature in a vise, and wear protective goggles and a mask. Using a rotary even briefly on pewter miniatures heats them up a lot, so you'll need to wait for them to cool down before handling them.

In our sample kitbashing projects, I found the rotary quite useful in removing the *Daishi*'s weapon pods at its "wrist," and for removing an AC/20 from the left arm of a *Ryoken* (*Stormcrow*) [IWM stock # 20-611] for later use. I also cut the *Daishi*'s right torso vent and "subtracted" extraneous material from that area, in order to create a flat vertical surface later on. I also had to use the rotary to cut down the two Mobile HQ cabs, shortening one to form the LUT cab and the other to form the walls of the Heavy Truck bed.

You can use hobby clippers as a quick-and-dirty way to cut through lots of unwanted metal, but the clippers will flatten and

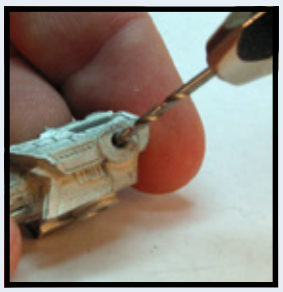
Attaching the Legs

push material away from themselves. Clippers are really only suitable for brute force removal of material, and only if you don't have a rotary tool at hand.

Daishi arm, with "pin".

Attaching Parts

Before permanently attaching pieces, make sure to test-fit everything. Take note of how all the parts connect with each other and make sure all the pieces have clearance. To help strengthen the bond between two pieces, we recommended that you roughen their surfaces, either by using very low grit (rough) sandpaper or scoring the surface in a criss-cross pattern with the hobby knife. This creates small grooves, nooks and crannies where your adhesive can go.



Shoulder drilled to receive pin.

Follow the directions for the glue or epoxy you are using, and allow for the recommended curing time before handling the newly connected parts again. You can speed up the curing process if desired. For cyanoacrylate glue, you can use "kickers" to cure the bond almost instantly. With green or brown stuff, place the piece under a hot lamp for about 30 minutes—closely monitored, as too much exposure will cause it to warp and bubble. You can also use small clamps or a vise to secure the connection while the bond cures. If the bond will be fighting gravity as it cures (as when attaching legs to feet in a hexbase, or setting an upraised arm), you can use modeling clay to secure the miniature in its pose.

Pinning: Pinning refers to the practice of strengthening a bond by drilling into both pieces and inserting a metal pin or rod. I use brass rods for most pinning, but straightened paperclips work just as well and are usually at hand. Before you drill, put a small dot of paint on one of the pieces where you plan to drill. Carefully test-fit it with the piece you're attaching it to—now the other surface has picked up the paint showing you where to drill so that the pin will be correctly aligned. A pin vise is sufficient for most jobs, but at times you may want to drill deeper, and the rotary tool will make things easier. Make sure you don't drill clean through the other side of the piece! Once you have your pinholes, test the length of pin you'll need, and cut it to size using hobby clippers. From there, follow the steps for attaching parts. In our sample kitbashing projects, most of the *Daishi*'s limbs and weapons needed pinning.

Gap Filling: Regardless of whether you're attaching standard parts or fitting kitbashed pieces to your miniature, you are often left with small gaps that need to be filled. Though there are excellent products made specifically to fill gaps, we can manage just fine with material on hand. Very small or thin cracks can be filled with Superglue. Use a kicker to quickly cure the glue, and see if more is needed. Sometimes the gaps are significantly larger, longer or deeper, such as when two parts cannot be attached flush, or you have "obsolete" weapon ports or slots that need to be covered. In these cases, use some brown stuff to seal the gap, scraping off excess and smoothing the seal with a lubricated tool or your finger. If necessary, you can file or sand the seal smooth after the brown stuff cures.

Sculpting

Most kitbashes are simple, requiring little more than replacing parts and filling a few gaps. Other modifications result in large gaps or transitions that seem illogical, are visually not pleasing, or that do not match your concept. In these cases you may have to resort to sculpting to rebuild the area. Typically, green stuff or brown stuff is used; green stuff has an elasticity that suits it well for more organic sculpts, while brown stuff can hold sharp edges better and can be filed and sanded after it cures. Brown stuff (or a mixture of green and brown) is better suited for modeling machinery.

When working with brown stuff, keep your fingers and tools well lubricated, or they will stick to the epoxy. The most convenient lubricant is water—keep a small dish of water close by to dip your tools or fingers as you work. Petroleum jelly is slightly better, but requires you to wash the piece after the epoxy cures to remove the grease. Once the epoxy is mixed, break off a piece, roll it into a ball or a sausage shape and smooth it into the area you need to cover. (If you mix more epoxy than you think you'll need, it can be stored in the freezer and reused for up to 24 hours.) Work on creating a smooth transition between the miniature and the brown stuff area. Once you're satisfied with the transition, allow the epoxy to cure for about 15-20 minutes, or place it under the heat of a lamp for about 5 minutes. At that point you may select the appropriate tools to create panel lines and details. If the area you're covering is especially deep, it's best to fill the area

Assembled Light utility Vehicle (LUT).

Assembled Heavy Truck

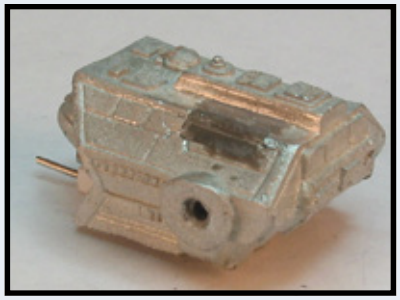
first, allow the brown stuff to *fully* cure, and then apply a layer of brown stuff over top for detailing. The same goes for when you need to create layered details.

In our sample kitbashing projects, attaching the LUT's cabin to the trailer left a gap between the crew cab and the main cabin. I used brown stuff to fill the breach and sculpted details to match the cabin. As for the heavy truck, the truck bed walls looked fine, but there was no rear wall, so I created a thin rear wall with brown stuff. After it cured, I added a second layer for detailing. I also used brown stuff to sculpt a tarpaulin over the truck bed.

I used brown stuff on the *Daishi* torso, to fill in the slot on the left torso where the SRM normally goes. I smoothed out the area using a blade-tool and created some panel details with the flat edge of a hobby knife. After it cured, I used the knife to trim away excess and then filed to blend the transition. The *Daishi's* right torso "underhang" needed to be flush with the overhang, and I needed a flat area in the front right torso (where the AC/20 will sit). Accomplishing this was easy; I filled the area slightly to excess, and then trimmed and filed it down flush after curing.

Reposing

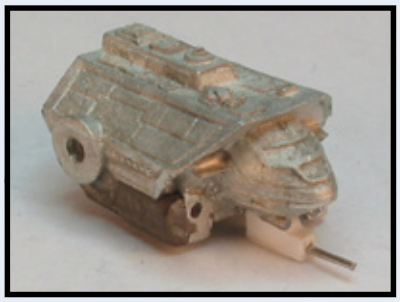
Reposing can be considered a subset of kitbashing—using any or all the techniques above, you can create a miniature representing the exact same unit you began with, but in poses ranging from slightly to radically different than the original. A simple but effective technique used in reposing is bending. Bending an arm or a leg, or twisting a torso just a few degrees, can have a major impact on the miniature's overall stance and attitude. Prior to bending, the piece should be warmed up, either in your hands or by running it through some warm water. Find the best way to leverage the piece in your hands (or using a clamp or vise), and apply firm but slow pressure. Pewter can be unstable, so pay close attention and feel for any cracking. You can use a little brown stuff to sculpt over any cracks or unnatural-looking results. In our sample kitbashing projects, I bent the *Daishi*'s right leg slightly back at the knee to make a running pose. An approximately 1mm crack opened at the knee, which I repaired with brown stuff.



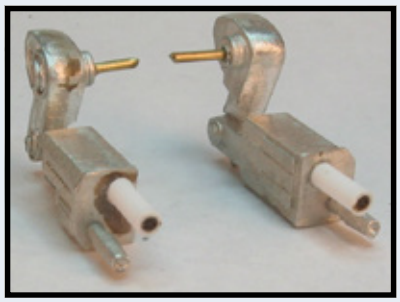
Torso gap filled in.

Using Bits

The first place to check when you need to produce new weapons or equipment is your bits box. Your bits collection may be modest at first, but as you put together more and more miniatures and kitbashes, your bits box will grow. After all, bits are nothing more than the unused pieces of your past projects, including hacked-up remains of whole miniatures. You can even keep interesting or flat pieces of sprue on hand in your bits box for later use. If your set of bits is small, or you don't have the right part for the job, take some time to peruse the *BattleTech* section of the Iron Wind Metals catalog at www.ironwindmetals.com or the CamoSpecs Gallery at www.camospecs.com. You might find a piece that perfectly suits your needs. You can order the individual piece directly from IWM, or pick up the whole miniature and throw the superfluous parts in your bits box. You can be as staid or imaginative as you like when using bits. You can transplant a laser from one miniature to another, and feel confident that other players will recognize it as such; or you can take an entire limb from a small 'Mech and use it as a cannon on a larger 'Mech, and create a completely convincing result.



Styrene and a paperclip become a laser.



The weapons are recycled bits and styrene.

In our sample kitbashing projects, the *Daishi Widowmaker* used a number of modified bits. An AC/20 from a *Ryoken* left arm was cut down to size, and a casing created from brown stuff. The weapon was pinned and glued to the flat forward area of the *Dire Wolf* that I had created earlier. To represent the 'Mech's large lasers, I cut down a *Mad Dog*'s lasers and pinned them to the *Dire Wolf*'s wrists.

The LUT and heavy truck required little in the way of extra bits. The LUT needed a small antennae dish, so I used one of the discarded Swift Wind dishes. The base of the antennae had to be cut down to sit at the proper angle, and I had to drill a new hole in the LUT's roof to allow for the antennae's peg. The heavy truck merely required a small wedge-shaped device on its roof. I cut off the tip of the Mobile HQ's laser and mounted that on top of the heavy truck.

While recycled bits are the primary source for parts in kitbashing, they're not always suitable. Styrene plastic sheets, rods and tubes, brass rods and tubes, and other basic hobby building materials make a good secondary resource for parts and are readily available at hobby shops. Styrene is versatile and easy to use, though somewhat fragile. Drilling holes in styrene with a pin vise is quick and painless, and cutting styrene is a simple matter of scoring your cut lines with a hobby knife and a straight edge, then bending it at the mark until it snaps. Styrene can be easily carved, filed or sanded into any shape. Using a rotary tool on styrene is not recommended, as even the briefest use can melt the plastic. If you feel you must use a rotary, use it at the lowest possible speeds and pause it frequently so that the styrene stays cool.

For the *Daishi*'s arm-mounted particle projector cannons (PPCs), I originally intended to use PPC tips from a *Masakari* (*Warhawk*), but found they were too short compared to the conceptual art. Instead, I took a styrene rod of compatible diameter (2.5mm) and cut two pieces to the desired length. I hollowed out these barrels about a quarter of the way through and filled them with brown stuff, which I then detailed to match the inner barrel of a PPC. When cured, I pinned and glued them to the *Daishi*'s wrists.

Magnets allow for on the fly miniature customization.

Your standard friendly neighborhood ForestryMech.

A ForestryMech armed and ready for combat.

The *Daishi* also needed a small laser and housing to fit just under its nose. I cut a rectangle from a 2mm-thick styrene sheet, and carved and filed it into shape. I used a small pin to recreate the small laser, pinning and gluing it under the Dire Wolf's nose. I made the lasers on either side of the 'Mech's cockpit from plain metal rod—first I carefully drilled a hole and groove on each side, then glued and fitted the rods into place.

Limb-Swapping and Magnets

The differences between some 'Mech variants are so minor that you can achieve them simply by swapping out a limb or weapon for another that is similarly equipped. This is especially true with OmniMechs, given the uniform appearance of their limbs and weaponry. You can even go a step further and outfit a miniature with multiple limbs and weapons that swap out. The way to achieve this is similar to pinning. Drill a hole on each of the connecting surfaces, test-fit a pin or rod, and then glue the pin to the limb instead of gluing the parts together. You may need longer pins and deeper drilling to create good temporary holds.

If you are seriously interested in limb swapping, the most useful items at your disposal are rare earth magnets. These powerful, compact magnets are not rare despite their name and can be obtained from numerous vendors, as revealed by a simple Internet search. Rare earth magnets not only make limb swapping a breeze, they also allow you to attach or detach other external equipment at will. Numerous shapes and sizes are available, but I find the 1/8" x 1/16" and 1/16" x 1/32" discs the most useful.

Once you determine the size of the disc you'll need and where it will be placed, choose a drill bit a little larger in diameter than the disc. Drill a little and test-fit the magnet. It should lie flush against the surface; if it doesn't, drill a little further and repeat. Once the magnet fits perfectly, use Superglue to set it in place, and fill any gaps as you normally would. Once the glue and/or epoxy are cured, you may repeat the process for the other surface. Before gluing the second magnet in place, make certain the polarities are properly aligned. Allow the loose magnet to attach itself to the first magnet. Then paint or mark the exposed face of the loose magnet. Now you know that the non-painted side of the second magnet must face outward. In our sample kitbashing projects, I installed magnets in all the component cars of the LCT, allowing the vehicle some modularity.

FINISHING

Once you've completed your kitbashing, you can use the techniques described earlier in the section under *Painting Miniatures* to paint your miniatures, allowing you to place your own creations on the field of battle. For examples of the final results for the sample kitbashing vehicles, see the photos in the *Support Vehicles* section, beginning on p. 204.

PREPARING TERRAIN

BattleTech is usually fought on hexgrid maps. However, players can play on hexless terrain—either using miniatures conversion rules, or the *Alpha Strike: Commander's Edition* rules. In both instances, players will be using 3-D terrain.

Once the miniatures are ready, players will need to construct the terrain on which their miniatures will fight. We recommend creating a playing surface that measures at least three feet square. That size allows you to add enough terrain to make the battlefield interesting. An ideal playing surface measures six feet by four feet or larger.

For beginners, virtually any objects found around the house can be used as miniature terrain. Foam packaging, small boxes and a piece of felt spread out over stacked books for hills can be used to represent a useful (if not realistic) playing surface. Once you have gotten accustomed to 3-D gaming, see the following suggestions for ways to represent various terrain features more realistically on the tabletop.

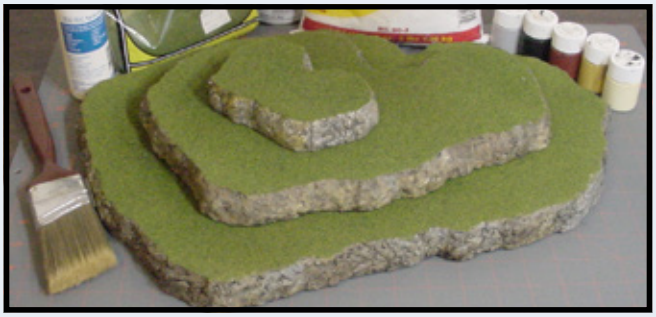
CLEAR

For clear terrain, we recommend a flocked gaming table. The most common type of game table is a four-foot by six-foot piece of flocked hardboard or plywood with one-by-two battens. If space is limited, you can use commercially available flocked mats, which have the bonus of being portable. The most inexpensive playing surface can be made by covering the table with a felt cloth of the appropriate color.

HILLS

Make hills out of blue or pink insulation foam measuring from half an inch to three-quarters of an inch thick, or out of white Styrofoam (also called expanded polystyrene). Each piece of foam represents one elevation level. Construct hills of various levels by cutting and shaping successively smaller contour levels and then stacking them on top of each other. The result should resemble a contour map. Each contour of a hill should be cut and shaped individually, then stacked to make hills of various sizes. A good utility knife will work, or you can use a purpose-built foam cutter. A foam cutter is an electric device that heats up a wire, and is the cleanest and quickest way to cut foam. Be careful, though, as the wire gets quite hot.

When stacking the levels together, leave enough ledge exposed on the lower levels to allow a mounted miniature to easily stand on them. If the exposed area is not large enough for a mounted miniature, that section represents a cliff face.



Preparing Terrain

Single Trees

The advantage of Styrofoam is the ease of cutting it to a desired shape and size. We recommend that you paint and flock the hills to match your playing surface. Use latex paint of the appropriate color to seal the hills; this gives a good undercoat for the flock and helps protect the hillsides. Flock or model railroad grass can be found at your local hobby store and should be glued to your hills with a 50/50 mix of white glue and water. If using a felt playing surface, simply glue a piece of extra felt to the hilltop and cut around its edge with scissors. You can find white Styrofoam at hobby and craft stores. Local home improvement or hardware stores carry blue and pink insulation foam.

To get a rock-like texture around your hill, apply sculptamold papier maché to the edge. Crumple some aluminum foil and then open it back up. Wrap the edge of the hill with the foil so the crumpled surface of foil makes a pattern on the sculptamold. Once the sculptamold is hard, you can peel off the foil and paint your hill. Paint washes are an excellent way to paint the rock texture.

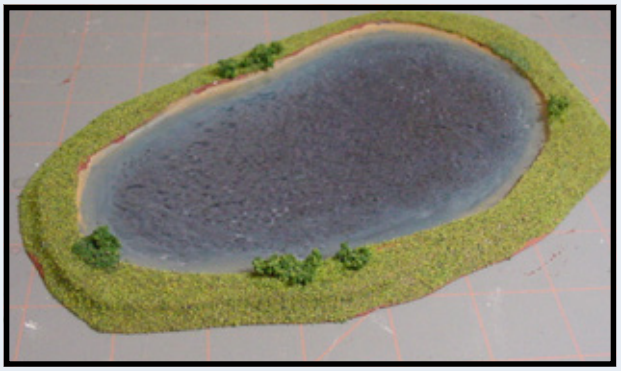
TREES

Hobby and model railroading shops carry a large variety of trees. To make tree stands, mount individual trees on hex bases or large washers. You can use trees mounted in this way on woods templates, and also on hill levels to denote whether a hill is wooded. When placed next to water, marsh templates and roads, these individual tree stands add realism.

Model railroad trees that measure between 1 and 1 1/2 inches tall can be purchased at local hobby stores. Tree making kits for deciduous trees can also be purchased, or you can make realistic trees from various floral products found at your local craft store. Below is a step-by-step guide for making and using both types of trees.

To create light woods, make a woods template base and mount it with a group of trees, spacing them about three inches apart.

Tree Template



Water

Simple Building

You can make the template of any material sturdy enough to support the trees. Gator board is among the best materials and can be found at your local art and craft store. Paint the template the same shade of green as your ground cloth. For a more realistic look, paint the template and sprinkle landscaping material over it before the paint dries to represent grass. Alternatively, you can cover the template with a coat of Durham's water putty and mix various grades of ballast or sand into it. When dry, it becomes rock-hard and very durable. Paint and flock after the putty dries.

An excellent way to demonstrate the type of woods the template represents is to use the woods template together with the tree stands. Use light green trees for light woods, medium for medium, and so on. If all your trees are the same color, then the number of tree stands on a woods template makes a useful way to identify woods: one stand for light, two for medium, and so on.

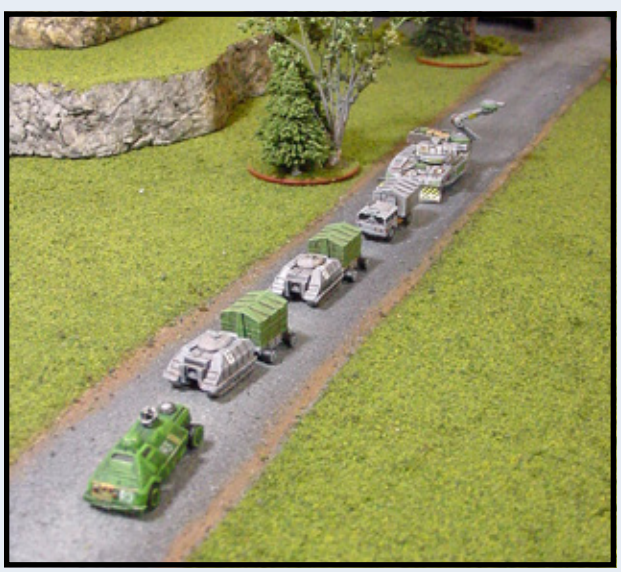
WATER

To create rivers, streams and lakes, use one of the following methods. The simplest is to use pieces of blue felt or cloth to represent water. Some model railroading suppliers sell ready-made plastic sheets of "water" that can be cut to a specific shape. If using this method, you can create a realistic shoreline for your rivers and lakes by gluing sand around the edge. Then you can paint the entire thing and glue flock on the edge as well. Be sure to leave a thin strip of the bank showing between the water and the flock.

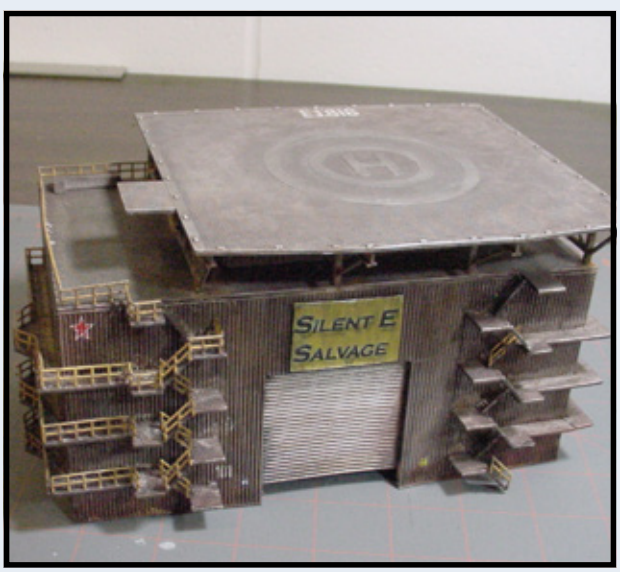
If you used gator board for your woods, you have a simple and effective way to make water templates. Cut the template as you would for woods. Then mark where you want the water to be. Carefully cut the wood veneer in that pattern and pull the veneer away. Scrape the foam away from the bottom veneer to create the depression where your water will be (see examples below). Use thinned-down water putty to create the "water" (go figure…). Once dry, this can be painted blue and gloss-coated for a realistic water template.

ROADS/BRIDGES

Hobby and railroad modeling shops carry all kinds of appropriate materials for representing roads and bridges, including simulated road materials ranging from flexible cork roadways to rolls of paper roadway. Often the rolled roadway is the most realistic because of its texture and printed lines, and is usually the least expensive to boot. Use "Z gauge" scaled bridges—these most closely match the scale Iron Wind Metals uses for its *BattleTech* miniatures.



Road



Complex Building

BUILDINGS

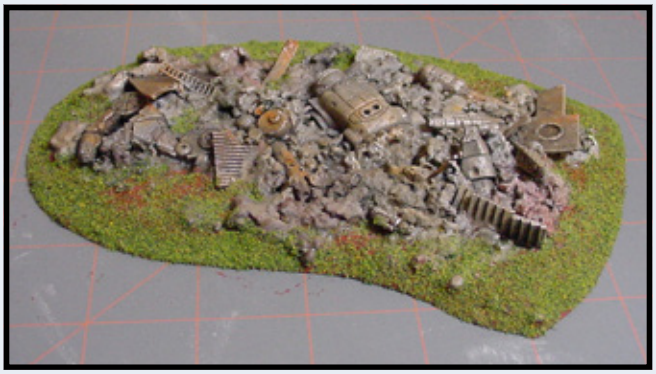
Foam and plastic packaging, painted and detailed, is an inexpensive and convincing way to make your own buildings. Plastic caps for spray paint as well as many other household items that would otherwise be tossed out can be put to use on the battlefield. A little imagination can go a long way

Buildings appropriate for *BattleTech* miniatures play can also be found at hobby and model railroading shops. We recommend products scaled for micro-armor or "Z-gauge" scale model railroading. Resin-cast buildings produced especially for micro-armor gaming are also available, as are kits that allow you to fabricate buildings in plaster to your own specifications (these require quite a bit of time and effort).

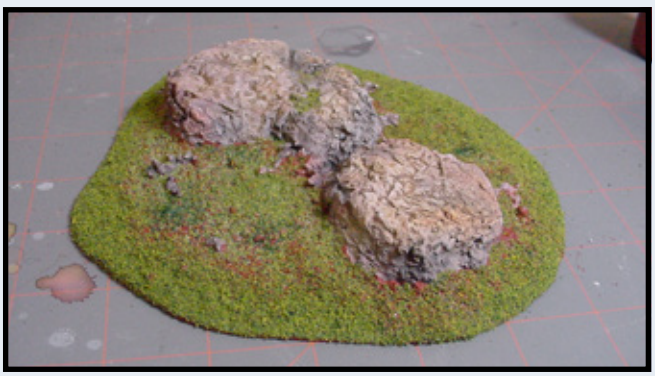
If the BattleMechs in your game jump a lot, you might prefer buildings with flat roofs. Remember that each half- to three-quarter-inch of height represents one elevation level. Mark the Construction Factor (CF) on the bottom of each building model, preferably with a pencil so it can be easily changed from scenario to scenario.

RUBBLE

You can use anything you have lying around to represent rubble. Broken buildings, pieces left over from making other parts of the terrain, or even other models can be "distressed" using woodworking tools, a soldering iron and/or a hot knife. Please be very careful using such tools. The result should look like something that got blasted apart or burned down. You can also make rubble with gravel, sand, leftover foam, bits of plastic and even BattleMech parts from your bits box.



Rubble



Rough Ground

This tank shed was easily constructed out of molded/textured styrene sheets and foam core board.

ROUGH GROUND

Rough ground can be represented by gluing small rocks or model railroad ballast to a gator board, plastic or card template. Gravel, sand and flock can be added to make it more realistic. We recommend that you paint the template and then glue flock around its edge so it looks good on your playing surface. If using a felt surface, cut some extra felt and place a couple of small rocks on it.

You can make rocky outcroppings using extra bits of foam and papier maché.

ASSEMBLING THE PLAYING AREA

Now that you've created all the necessary terrain, it's time to assemble a playing area and start a game. Enjoy!

Terrain table ready for play.

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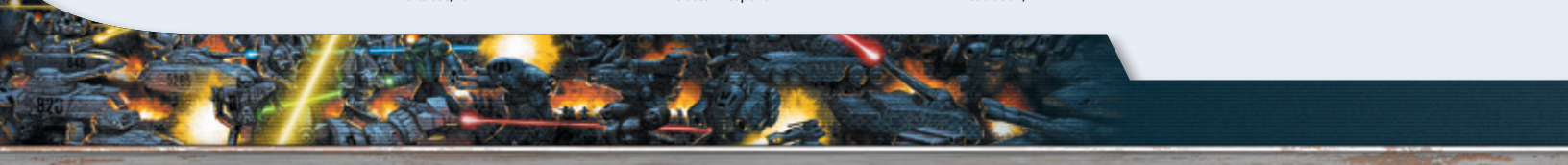

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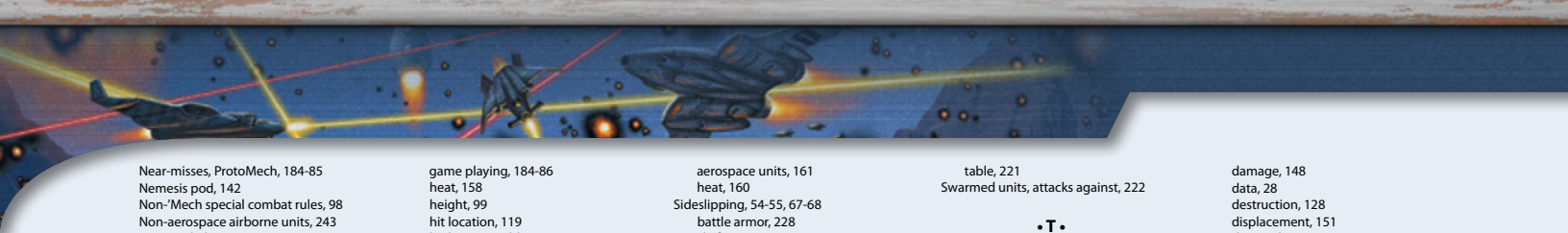

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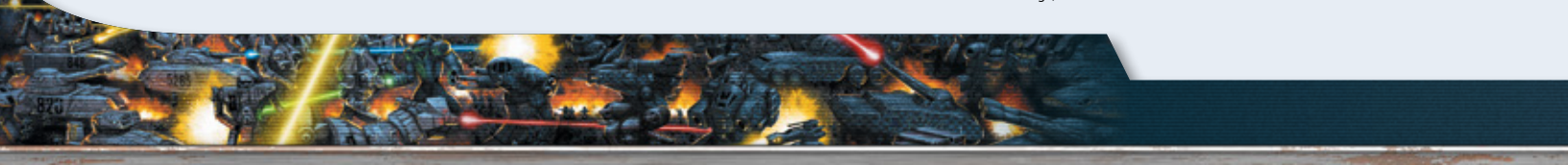

INNER SPHERE WEAPONS AND EQUIPMENT TABLE

Item	Type*	Heat	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	Ammo Per Ton	Aero Attack Value††	Aerospace Range‡	To-Hit Modifier
Direct-Fire Ballistic Weapons†††											
Autocannon/2	DB, S	1	2	4	1–8	9–16	17–24	45	2	Long	0
Autocannon/5	DB, S	1	5	3	1–6	7–12	13–18	20	5	Medium	0
Autocannon/10	DB, S	3	10	0	1–5	6–10	11–15	10	10	Medium	0
Autocannon/20	DB, S	7	20	0	1–3	4–6	7–9	5	20	Short	0
Light Gauss Rifle	DB, X	1	8	3	1–8	9–17	18–25	16	8	Extreme	0
Gauss Rifle	DB, X	1	15	2	1–7	8–15	16–22	8	15	Long	0
Heavy Gauss Rifle	DB, X, V	2	25/20/10	4	1–6	7–13	14–20	4	25/20/10	Long	0
LB 2-X AC	DB, C/S/F‡‡	1	2	4	1–9	10–18	19–27	45	2	Extreme	0, –1†
LB 5-X AC	DB, C/S/F‡‡	1	5	3	1–7	8–14	15–21	20	3	Long	0, –1†
LB 10-X AC	DB, C/S/F‡‡	2	10	0	1–6	7–12	13–18	10	6	Medium	0, –1†
LB 20-X AC	DB, C/S/F‡‡	6	20	0	1–4	5–8	9–12	5	12	Medium	0, –1†
Light AC/2	DB, S	1	2	0	1–6	7–12	13–18	45	2	Medium	0
Light AC/5	DB, S	1	5	0	1–5	6–10	11–15	20	5	Medium	0
Light Machine Gun	DB, AI§	0	1	0	1–2	3–4	5–6	200	1	Short	0
Machine Gun	DB, AI§	0	2	0	1	2	3	200	2	Short	0
Heavy Machine Gun	DB, AI§	0	3	0	1	2	—	100	3	Short	0
Nail/Rivet Gun	DB, AI**	0	0**	0	1	—	—	300	0**	—	0
Rotary AC/2	DB, R/C	1/Sht	2/Sht, R6	0	1–6	7–12	13–18	45	8	Medium	0
Rotary AC/5	DB, R/C	1/Sht	5/Sht, R6	0	1–5	6–10	11–15	20	20	Medium	0
Ultra AC/2	DB, R/C	1/Sht	2/Sht, R2	3	1–8	9–17	18–25	45	3	Extreme	0
Ultra AC/5	DB, R/C	1/Sht	5/Sht, R2	2	1–6	7–13	14–20	20	7	Long	0
Ultra AC/10	DB, R/C	4/Sht	10/Sht, R2	0	1–6	7–12	13–18	10	15	Medium	0
Ultra AC/20	DB, R/C	8/Sht	20/Sht, R2	0	1–3	4–7	8–10	5	30	Medium	0
Direct-Fire Energy Weapons											
ER Large Laser	DE	12	8	0	1–7	8–14	15–19	—	8	Long	0
ER Medium Laser	DE	5	5	0	1–4	5–8	9–12	—	5	Medium	0
ER Small Laser	DE	2	3	0	1–2	3–4	5	—	3	Short	0
Flamer	DE, H, AI§	3	2§§	0	1	2	3	—	2§§	Short	0
Flamer (Vehicle)	DE, H, AI§	3	2§§	0	1	2	3	20	2§§	Short	0
Large Laser	DE	8	8	0	1–5	6–10	11–15	—	8	Medium	0
Medium Laser	DE	3	5	0	1–3	4–6	7–9	—	5	Short	0
Small Laser	DE	1	3	0	1	2	3	—	3	Short	0
Plasma Rifle	DE, H	10	10**	0	1–5	6–10	11–15	10	10**	Medium	0
Light PPC	DE	5	5	3	1–6	7–12	13–18	—	5	Medium	0
PPC	DE	10	10	3	1–6	7–12	13–18	—	10	Medium	0
Heavy PPC	DE	15	15	3	1–6	7–12	13–18	—	15	Medium	0
ER PPC	DE	15	10	0	1–7	8–14	15–23	—	10	Long	0
Snub-Nose PPC	DE, V	10	10/8/5	0	1–9	10–13	14–15	—	10/8	Medium	0
Pulse Weapons											
Large Pulse Laser	P	10	9	0	1–3	4–7	8–10	—	9	Medium	–2
Medium Pulse Laser	P	4	6	0	1–2	3–4	5–6	—	6	Short	–2
Small Pulse Laser	P, AI§	2	3	0	1	2	3	—	3	Short	–2
Missile Weapons‡‡‡											
LRM 5	M, C, S	2	1/Msl, C5/5	6	1–7	8–14	15–21	24	3/4	Long	0
LRM 10	M, C, S	4	1/Msl, C5/10	6	1–7	8–14	15–21	12	6/8	Long	0
LRM 15	M, C, S	5	1/Msl, C5/15	6	1–7	8–14	15–21	8	9/12	Long	0
LRM 20	M, C, S	6	1/Msl, C5/20	6	1–7	8–14	15–21	6	12/16	Long	0
MML 3**	M, C, S										
LRM ammo	—	2	1/Msl, C3/3	6	1–7	8–14	15–21	40	2/2	Long	0
SRM ammo	—	2	2/Msl, C2/3	0	1–3	4–6	7–9	33	4/4	Short	0
MML 5**	M, C, S										
LRM ammo	—	3	1/Msl, C5/5	6	1–7	8–14	15–21	24	3/4	Long	0
SRM ammo	—	3	2/Msl, C2/5	0	1–3	4–6	7–9	20	6/8	Short	0
MML 7**	M, C, S										
LRM ammo	—	4	1/Msl, C5/7	6	1–7	8–14	15–21	17	4/6	Long	0
SRM ammo	—	4	2/Msl, C2/7	0	1–3	4–6	7–9	14	8/12	Short	0
MML 9**	M, C, S										
LRM ammo	—	5	1/Msl, C5/9	6	1–7	8–14	15–21	13	5/7	Long	0
SRM ammo	—	5	2/Msl, C2/9	0	1–3	4–6	7–9	11	10/14	Short	0
MRM 10	M, C	4	1/Msl, C5/10	0	1–3	4–8	9–15	24	6	Medium	+1
MRM 20	M, C	6	1/Msl, C5/20	0	1–3	4–8	9–15	12	12	Medium	+1
MRM 30	M, C	10	1/Msl, C5/30	0	1–3	4–8	9–15	8	18	Medium	+1
MRM 40	M, C	12	1/Msl, C5/40	0	1–3	4–8	9–15	6	24	Medium	+1
Narc Missile Beacon	M, E, S	0	**	0	1–3	4–6	7–9	6	**	**	0
Improved Narc Launcher	M, E, S	0	**	0	1–4	5–9	10–15	4	**	**	0
Rocket Launcher 10	M, C, OS	3	1/Msl, C5/10	0	1–5	6–11	12–18	OS	6	Medium	+1
Rocket Launcher 15	M, C, OS	4	1/Msl, C5/15	0	1–4	5–9	10–15	OS	9	Medium	+1
Rocket Launcher 20	M, C, OS	5	1/Msl, C5/20	0	1–3	4–7	8–12	OS	12	Medium	+1
SRM 2	M, C, S	2	2/Msl, C2/2	0	1–3	4–6	7–9	50	2/4	Short	0
SRM 4	M, C, S	3	2/Msl, C2/4	0	1–3	4–6	7–9	25	4/6	Short	0
SRM 6	M, C, S	4	2/Msl, C2/6	0	1–3	4–6	7–9	15	8/10	Short	0
Streak SRM 2	M, C**	2	2/Msl, C2/2	0	1–3	4–6	7–9	50	4	Short	0
Streak SRM 4	M, C**	3	2/Msl, C2/4	0	1–3	4–6	7–9	25	8	Short	0
Streak SRM 6	M, C**	4	2/Msl, C2/6	0	1–3	4–6	7–9	15	12	Short	0
Equipment											
A-Pod	PB, OS, AI	0	**	—	—	—	—	OS	**	—	—
B-Pods	PB, OS, AI, X	0	**	—	—	—	—	OS	**	—	—
Anti-Missile System	PB	1	**	—	—	—	—	12	**	—	—
Beagle Active Probe	E	—	—	—	—	—	4	—	—	**	—
Guardian ECM Suite	E	—	—	—	—	—	6	—	—	**	—
Machine Gun Array	T	**	**	**	**	**	**	**	**	**	0
TAG	E	0	—	0	1–5	6–9	10–15	—	—	**	—

*See the Weapon and Equipment Types Table, p. 304, for abbreviation explanations, or *Weapons and Equipment,* p. 113, for complete details. If weapon types are separated by a slash, then those weapon types all apply at once. For example, an LB-X can either be fired as a Direct-Fire Ballistic Weapon, or as Cluster Weapon, which means it also has switchable ammo and is flak capable.

**See *Other Combat Weapons and Equipment,* p. 129; for aerospace units, see *Weapons and Equipment,* p. 236.

†When fired as a Cluster Weapon by non-aerospace units; aerospace units always apply the –1 to-hit modifier.

††For Missile Weapons, the number after the slash represents a missile weapon linked to Artemis IV FCS (see p. 130).

†††Rapid-Fire Weapons display their Damage Value uniquely; i.e. an Ultra AC/2 is "2/Sht, R2", meaning each shot that is fired deals 2 points of damage (2/Sht) and it can fire a total of two shots in a turn (R2).

‡Maximum range for weapons mounted on aerospace units; see *Range Modifier,* p. 235, in the *Aerospace Units* section.

‡‡May use Cluster Ammunition; see *LB-X Weapons* and *Cluster Ammunition,* pp. 120 and 141 respectively.

‡‡‡Missile Weapons display their Damage Value uniquely; i.e. an LRM 20 is "1/Msl, C5/20", meaning each missile does 1 point of damage (1/Msl), the largest Damage Value grouping is 5 (C5), and that 20 missiles are fired with each shot (/20).

§See Burst-Fire Weapon Damage Vs. Conventional infantry Table, either p. 217 or p. 310.

§§Against 'Mech/aerospace fighter/small craft targets only, every time the weapon is fired, before the to-hit roll is made, the player may announce he is applying the Damage Value as heat to the target, in place of damage (see *Heat-Causing Weapon*, p. 113).

CLAN WEAPONS AND EQUIPMENT TABLE

Item	Type*	Heat	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	Ammo Per Ton	Aero Attack Value††	Aero Range‡	To-Hit Modifier
Direct-Fire Ballistic Weapons†††											
LB 2-X AC	DB, C/S/F‡‡	1	2	4	1–10	11–20	21–30	45	2	Extreme	0, –1†
LB 5-X AC	DB, C/S/F‡‡	1	5	3	1–8	9–15	16–24	20	3	Long	0, –1†
LB 10-X AC	DB, C/S/F‡‡	2	10	0	1–6	7–12	13–18	10	6	Medium	0, –1†
LB 20-X AC	DB, C/S/F‡‡	6	20	0	1–4	5–8	9–12	5	12	Medium	0, –1†
AP Gauss Rifle	DB, X, AI§	1	3	0	1–3	4–6	7–9	40	3	Short	0
Gauss Rifle	DB, X	1	15	2	1–7	8–15	16–22	8	15	Long	0
HAG 20	DB, X, C, F	4	C5/20**	2	1–8	9–16	17–24	6	16/12/12	Long	0
HAG 30	DB, X, C, F	6	C5/30**	2	1–8	9–16	17–24	4	24/18/18	Long	0
HAG 40	DB, X, C, F	8	C5/40**	2	1–8	9–16	17–24	3	32/24/24	Long	0
Light Machine Gun	DB, AI§	0	1	0	1–2	3–4	5–6	200	1	Short	0
Machine Gun	DB, AI§	0	2	0	1	2	3	200	2	Short	0
Heavy Machine Gun	DB, AI§	0	3	0	1	2	—	100	3	Short	0
Nail/Rivet Gun	DB, AI	0	0**	0	1	—	—	300	0**	—	0
Ultra AC/2	DB, R/C	1/Sht	2/Sht, R2	2	1–9	10–18	19–27	45	3	Extreme	0
Ultra AC/5	DB, R/C	1/Sht	5/Sht, R2	0	1–7	8–14	15–21	20	7	Long	0
Ultra AC/10	DB, R/C	3/Sht	10/Sht, R2	0	1–6	7–12	13–18	10	15	Medium	0
Ultra AC/20	DB, R/C	7/Sht	20/Sht, R2	0	1–4	5–8	9–12	5	30	Medium	0
Direct-Fire Energy Weapons											
ER Large Laser	DE	12	10	0	1–8	9–15	16–25	—	10	Extreme	0
ER Medium Laser	DE	5	7	0	1–5	6–10	11–15	—	7	Medium	0
ER Small Laser	DE	2	5	0	1–2	3–4	5–6	—	5	Short	0
ER Micro Laser	DE	1	2	0	1	2	3–4	—	2	Short	0
Flamer	DE, H, AI§	3	2§§	0	1	2	3	—	2§§	Short	0
Flamer (Vehicle)	DE, H, AI§	3	2§§	0	1	2	3	20	2§§	Short	0
Heavy Large Laser	DE	18	16	0	1–5	6–10	11–15	—	16	Medium	+1
Heavy Medium Laser	DE	7	10	0	1–3	4–6	7–9	—	10	Short	+1
Heavy Small Laser	DE	3	6	0	1	2	3	—	6	Short	+1
Plasma Cannon	DE, H	7	0**	0	1–6	7–12	13–18	10	0**	Medium	0
ER PPC	DE	15	15	0	1–7	8–14	15–23	—	15	Long	0
Pulse Weapons											
Large Pulse Laser	P	10	10	0	1–6	7–14	15–20	—	10	Long	–2
Medium Pulse Laser	P	4	7	0	1–4	5–8	9–12	—	7	Medium	–2
Small Pulse Laser	P, AI§	2	3	0	1–2	3–4	5–6	—	3	Short	–2
Micro Pulse Laser	P, AI§	1	3	0	1	2	3	—	3	Short	–2
Missile Weapons‡‡‡											
ATM 3**	M, C, S	2	2/Msl, C5/3	4	1–5	6–10	11–15	20	4	Medium	0
ATM 6**	M, C, S	4	2/Msl, C5/6	4	1–5	6–10	11–15	10	10	Medium	0
ATM 9**	M, C, S	6	2/Msl, C5/9	4	1–5	6–10	11–15	7	14	Medium	0
ATM 12**	M, C, S	8	2/Msl, C5/12	4	1–5	6–10	11–15	5	20	Medium	0
ATM ER Ammo	—	**	1/Msl, C5/**	4	1–9	10–18	19–27	**	§§§	Extreme	0
ATM HE Ammo	—	**	3/Msl, C5/**	0	1–3	4–6	7–9	**	§§§	Short	0
Narc Missile Beacon	M, E, S	0	**	0	1–4	5–8	9–12	6	**	**	0
LRM 5	M, C, S	2	1/Msl, C5/5	0	1–7	8–14	15–21	24	3/4	Long	0
LRM 10	M, C, S	4	1/Msl, C5/10	0	1–7	8–14	15–21	12	6/8	Long	0
LRM 15	M, C, S	5	1/Msl, C5/15	0	1–7	8–14	15–21	8	9/12	Long	0
LRM 20	M, C, S	6	1/Msl, C5/20	0	1–7	8–14	15–21	6	12/16	Long	0
SRM 2	M, C, S	2	2/Msl, C2/2	0	1–3	4–6	7–9	50	2/4	Short	0
SRM 4	M, C, S	3	2/Msl, C2/4	0	1–3	4–6	7–9	25	4/6	Short	0
SRM 6	M, C, S	4	2/Msl, C2/6	0	1–3	4–6	7–9	15	8/10	Short	0
Streak SRM 2	M, C**	2	2/Msl, C2/2	0	1–4	5–8	9–12	50	4	Medium	0
Streak SRM 4	M, C**	3	2/Msl, C2/4	0	1–4	5–8	9–12	25	8	Medium	0
Streak SRM 6	M, C**	4	2/Msl, C2/6	0	1–4	5–8	9–12	15	12	Medium	0
Equipment											
A-Pod	PB, OS, AI	0	**	—	—	—	—	OS	**	—	—
B-Pods	PB, OS, AI, X	0	**	—	—	—	—	OS	**	—	—
Anti-Missile System	PB	1	**	—	—	—	—	24	**	—	—
Active Probe	E	—	—	—	—	—	5	—	—	**	—
Light Active Probe	E	—	—	—	—	—	3	—	—	**	—
ECM Suite	E	—	—	—	—	—	6	—	—	**	—
Machine Gun Array	T	**	**	**	**	**	**	**	**	**	0
TAG	E	0	—	0	1–5	6–9	10–15	—	—	**	—
Light TAG	E	0	—	0	1–3	4–6	7–9	—	—	**	—

*See the Weapon and Equipment Types Table, below, for abbreviation explanations, or *Weapons and Equipment,* p. 113, for complete details. If weapon types are separated by a slash, then those weapon types all apply at once. For example, an LB-X can either be fired as a Direct-Fire Ballistic Weapon, or as Cluster Weapon, which means it also has switchable ammo and is flak capable.

**See *Other Combat Weapons and Equipment,* p. 129; for aerospace units, see *Weapons and Equipment,* p. 236.

†When fired as a Cluster Weapon by non-aerospace units; aerospace units always apply the –1 to-hit modifier.

††For Missile Weapons, the number after the slash represents a missile weapon linked to Artemis IV FCS (see p. 130).

†††Rapid-Fire Weapons display their Damage Value uniquely; i.e. an Ultra AC/2 is "2/Sht, R2", meaning each shot that is fired deals 2 points of damage (2/Sht) and it can fire a total of two shots in a turn (R2).

‡Maximum range for weapons mounted on aerospace units; see *Range Modifier,* p. 235, in the Aerospace Units section.

‡‡May use Cluster Ammunition; see *LB-X Weapons* and *Cluster Ammunition,* pp. 120 and 141 respectively.

‡‡‡Missile Weapons display their Damage Value uniquely; i.e. an LRM 20 is "1/Msl, C5/20", meaning each missile does 1 point of damage (1/Msl), the largest Damage Value grouping is 5 (C5), and that 20 missiles are fired with each shot (/20).

§See Burst-Fire Weapon Damage Vs. Conventional Infantry Table, either p. 217 or p. 310.

§§Against 'Mech/aerospace fighter/small craft targets only, every time the weapon is fired, before the to-hit roll is made, the player may announce he is applying the Damage Value as heat to the target, in place of damage (see *Heat-Causing Weapon,* p. 113).

§§§Non-Bays: When using ER ammo, increase the range bracket to extreme and half the Attack Value (round up). When using HE ammo, reduce the range bracket to short and then multiply the Attack Value by 1.5 (round up). Bays: If all the ATMs in a given bay have at least one ton of each ammo type, the bay's short range bracket Attack Value is multiplied by 1.5 (round up), the medium range bracket remains the same, and it also has a long and extreme range brackets, with an Attack Value that is halve (round up) the standard value.

WEAPON AND EQUIPMENT TYPES TABLE

See *Weapons and Equipment,* p. 113, for complete details of weapon and equipment types.

AE: Area-Effect Weapon
C: Cluster Weapon
DE: Direct-Fire Energy Weapon
DB: Direct-Fire Ballistic Weapon
H: Heat-Causing Weapon
M: Missile Weapon
R: Rapid-Fire (Multi-Firing) Weapon
V: Variable Damage
AI: Anti-Infantry
OS: One-Shot Weapon
P: Pulse Weapon
PB: Point-Blank Weapon
E: Electronics
CE: Counter-Electronics
T: Targeting System
S: Switchable Ammo Supply
PE: Performance Enhancement
F: Flak
X: Explosive Weapon

AEROSPACE WEAPONS AND EQUIPMENT

Item	Heat	Attack Value*	Aerospace Range‡	To-Hit Modifier
Killer Whale	20	4	Extreme	0
White Shark	15	3	Extreme	0
Barracuda	10	2	Extreme	–2
AR10	†	†	†	†
Kraken-T‡	50	10	Extreme	0
Killer Whale-T‡	20	4	Extreme	0
White Shark-T‡	15	3	Extreme	0
Barracuda-T‡	10	2	Extreme	0

*Capital-scale damage; see p. *Damage*, p. 238

†AR10 can fire Killer Whale, White Shark, or Barracuda missiles (but not tele-operated missiles) as long as the appropriate ammunition is available.

‡See *Tele-Operated Missiles,* p. 251.

ADDITIONAL INNER SPHERE WEAPONS AND EQUIPMENT FOR BATTLE ARMOR

Item	Type	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	To-Hit Modifier
Direct-Fire Ballistic Weapons							
"Firedrake" Support Needler	DB, AI‡‡	1	0	1	2	3	0
"David" Light Gauss Rifle	DB	1	0	1–3	4–5	6–8	0
"King David" Light Gauss Rifle	DB	1	0	1–3	4–6	7–9	0
Grand Mauler Gauss Cannon	DB	1	0	1–2	3–4	5	0
Magshot Gauss Rifle	DB	2	0	1–3	4–6	7–9	0
Tsunami Gauss Rifle	DB	1	0	1–2	3–4	5	0
Micro Grenade Launcher	DB, AI, S§	1	0	1	2	—	0
Heavy Grenade Launcher	DB, AI, S§	1	0	1	2	3	0
Light Mortar	DB, AI, S§	3	1	1	2	3	0
Heavy Mortar	DB, AI, S§	3	2	1-2	3-4	5-6	0
Light Recoilless Rifle	DB, AI§	2	0	1–2	3–4	5–6	0
Medium Recoilless Rifle	DB, AI§	3	0	1–2	3–4	5–6	0
Heavy Recoilless Rifle	DB, AI§	3	0	1–3	4–5	6–7	0
Direct-Fire Energy Weapons							
Flamer	DE, H, AI§	2§§	0	1	2	3	0
Man-Portable Plasma Rifle	DE, H	2§§	0	1–2	3–4	5–6	0
Support PPC	DE	2	0	1–2	3–5	6–7	0
Missile Weapons							
Compact Narc	M, E	**	0	1–2	3–4	5	0
LRM 1	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 2	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 3	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 4	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
LRM 5	M, C, S	1/Msl, C5/‡	6	1–7	8–14	15–21	0
MRM 1	M, C, S	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 2	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 3	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 4	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
MRM 5	M, C	1/Msl, C5/‡	0	1–3	4–8	9–15	+1
Rocket Launcher 1	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 2	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 3	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 4	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
Rocket Launcher 5	M, C	1/Msl, C5/‡	0	1–3	4–7	8–12	+1
SRM 1	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 2	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 3	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 4	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 5	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 6	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
Equipment							
Light Probe	E	—	—	—	—	3	—
Light TAG	E	—	0	1–3	4–6	7–9	—
Pop-Up Mine ††	E	4	—	—	—	0	—

ADDITIONAL CLAN WEAPONS AND EQUIPMENT FOR BATTLE ARMOR

Item	Type	Damage Value	Minimum Range	Short Range	Medium Range	Long Range	To-Hit Modifier
Direct-Fire Ballistic Weapons							
"Bearhunter" Superheavy AC	DB, AI‡‡	3	0	0	1	2	+1
Heavy Grenade Launcher	DB, C, AI§	1	0 —	1	2	3	0
Light Recoilless Rifle	DB, AI§	2	0	1–2	3–4	4–6	0
Medium Recoilless Rifle	DB, AI§	3	0	1–2	3–4	4–6	0
Heavy Recoilless Rifle	DB, AI§	3	0	1–3	4–5	6–7	0
Direct-Fire Energy Weapons							
Flamer	DE, H, AI§	2§§	0	1	2	3	0
Support PPC	DE	2	0	1–2	3–5	6–7	0
Missile Weapons							
Compact Narc	M, E	**	0	1–2	3–4	5	0
LRM 1	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 2	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 3	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 4	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
LRM 5	M, C, S	1/Msl, C5/‡	0	1–7	8–14	15–21	0
SRM 1	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 2	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 3	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 4	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 5	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
SRM 6	M, C, S	2/Msl, C2/‡	0	1–3	4–6	7–9	0
Advanced SRM 1†	M, C	2/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 2†	M, C	2/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 3†	M, C	2/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 4†	M, C	2/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 5†	M, C	2/Msl, C2/‡	0	1–4	5–8	9–12	0
Advanced SRM 6†	M, C	2/Msl, C2/‡	0	1–4	5–8	9–12	0
Equipment							
Light Probe	E	—	—	—	—	3	—

*See the Weapon and Equipment Types Table, p. 304, for abbreviation explanations, or *Weapons and Equipment*, p. 113, for complete details.
**See *Other Combat Weapons and Equipment,* p. 129
†Add +1 to the die roll when rolling on the Cluster Hits Table.
†† See p. 229 for the full rules for Pop-Up Mines.
‡See *Missile Attacks,* p. 218
‡‡Treat as Flamer on Burst-Fire Weapon Damage Vs. Conventional Infantry Table, see either p. 217 or p. 310.
§See Burst-Fire Weapon Damage Vs. Conventional infantry Table, either p. 217 or p. 309.
§§Against 'Mech/aerospace fighter/small craft targets only, every time the weapon is fired, before the to-hit roll is made, the player may announce he is applying the Damage Value as heat to the target, in place of damage (see *Heat-Causing Weapon,* p. 113).

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MOVEMENT COSTS TABLE

Movement Action/ Terrain Type	MP Cost Per Hex/Terrain Cost	Prohibited Units
Cost to Enter Any Hex	1	
Terrain Cost When Entering Any New Hex		
Clear	+0[6]	Naval vessel
Paved/Bridge	+0	Naval vessel
Road	+0[3]	Naval vessel
Rough	+1	Wheeled, Naval vessel
Light woods	+1[10]	Wheeled[9], Hover[9], VTOL[12], WiGE[12], Naval vessel
Heavy woods	+2[11]	Vehicles[12], Naval vessel
Water		
Depth 0	+0	Naval vessel
Depth 1	+1[1] (Level change MP cost not included)	Infantry[14], Vehicles[4, 7]
Depth 2+	+3[1] (Level change MP cost not included)	Infantry[14], Vehicles[4, 7], IndustrialMechs[8]
Level change (up or down)		
1 level	+1 ('Mechs, VTOLs, subs, ProtoMechs) +2 (infantry, ground vehicles)	—
2 levels	+2 ('Mechs, VTOLs, subs)	Infantry, Ground Vehicles, WiGE[13], ProtoMechs
3+ levels	+1/level (VTOLs, subs)	'Mechs, ProtoMechs, Infantry, Ground Vehicles, WiGE[13]
Rubble	+1[1]	Wheeled, Naval vessel
Light building	+1[2]	VTOL, WiGE, Naval vessel
Medium building	+2[2]	VTOL, WiGE, Naval vessel
Heavy building	+3[2]	VTOL, WiGE, Naval vessel
Hardened building	+4[2]	VTOL, WiGE, Naval vessel
Additional Movement Actions		
Facing change	1/hexside[5]	
Dropping to the ground ('Mech only)	1	
Standing up ('Mech only)	2/attempt	

[1] MP cost to move along the bottom of a water hex; Piloting Skill Roll required to prevent falling.
[2] Piloting Skill Roll required to prevent damage; infantry pays only 1 MP (except mechanized infantry, which pays 2 MP) to enter any building hex.
[3] If traveling along road; otherwise cost of underlying terrain.
[4] Hovercraft and WiGEs may enter all water hexes along the surface and may enter such hexes using flanking movement.
[5] No cost for infantry.
[6] If a wheeled Support Vehicle lacks the Off-Road chassis modification, then movement costs 1 additional MP per hex.
[7] Wheeled or tracked Support Vehicles with the Amphibious chassis modification can move through any water hex on the surface at a cost of 2 MP (see p. 56).
[8] IndustrialMechs *can* enter a Depth 2 or greater water hex. However, the IndustrialMechs must mount either a fuel cells, fission or fusion power plant *and* must mount the Environmental Sealing Chassis and Controls modification to do so. If the IndustrialMech does not meet those requirements, it is considered destroyed if they remain in a Depth 2 or greater water hex (or prone in a Depth 1 water hex) in the End Phase of the turn immediately following the turn in which they entered it.
[9] Hover and Wheeled Support Vehicles with either the Monocycle or Bicycle chassis modification can enter a light woods hex.
[10] Infantry pays only 1 MP (except permitted mechanized infantry, which pays 2 MP) to enter any light woods hex.
[11] Infantry pays only 2 MP to enter any heavy woods hex.
[12] VTOL and WiGE vehicles can enter a woods hex provided their elevation is higher than the level of the woods in the hex.
[13] This only applies to WiGE units entering a hex whose level is higher than the unit's current hex; see *Wing-In-Ground-Effect*, p. 55, for rules governing entering hexes whose level is lower than the unit's current hex.
[14] Infantry can enter a water hex of Depth 1 or deeper if they are noted as having UMU MPs.

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PILOTING/DRIVING SKILL ROLL TABLE

Situation	Modifier
Damage to 'Mech	
'Mech takes 20+ damage points in one phase	+1
'Mech fusion (or fission) reactor shuts down	+3[1]
Leg/foot actuator destroyed	+1
Hip actuator destroyed	+2
Gyro hit	+3
Gyro destroyed	Automatic fall[2]
Leg destroyed	Automatic fall[3]
Physical Attacks Against 'Mech	
'Mech was kicked	0
'Mech was pushed	0
'Mech was successfully charged/hit by death from above	+2
Unit's Actions	
'Mech missed kick	0
'Mech made a successful charging attack	+2
'Mech made death from above attack	+4[4]
'Mech entered Depth 1 water hex	–1
'Mech entered Depth 2 water hex	0
'Mech entered Depth 3+ water hex	+1
'Mech attempted to stand	0
'Mech entered rubble hex	0
Running/flanking unit moved after facing change while on pavement	See *Skidding*, p. 62

Situation	Modifier
Flanking VTOL/WiGE/Hover Vehicle moved after facing change	See *Sideslipping*, p. 67
'Mech jumped with damaged gyro or leg/foot/hip actuators	per Preexisting Damage, below
'Mech jumped with destroyed leg	per Preexisting Damage, below
'Mech ran with damaged hip or gyro	per Preexisting Damage, below
Special Cases	
MechWarrior trying to avoid damage when his 'Mech is falling	+1/every level above 1
IndustrialMech trying to avoid critical damage when falling	+1/every level above 1
IndustrialMech with ICE power plant fails PSR (see *Piloting/Driving Skill Rolls*, p. 59)	0 (no additional modifiers)
Four-legged 'Mech with intact legs	–2
Unintentional charge	+3
'Mech mounts small cockpit	+1
Preexisting Damage	
Per leg/foot actuator previously destroyed	+1
Per hip actuator previously destroyed	+2[5]
Gyro previously hit	+3
Leg previously destroyed	+5[6]

Situation	Modifier
Skidding Movement	
Hexes moved in turn	
0–2	–1
3–4	0
5–7	+1
8–10	+2
11–17	+4
18–24	+5
25+	+6
Building Movement[7]	
Unit entering/leaving light building hex	0
Unit entering/leaving medium building hex	+1
Unit entering/leaving heavy building hex	+2
Unit entering/leaving hardened building hex	+5
Hexes moved in turn	
1–2	0
3–4	+1
5–6	+2
7–9	+3
10–17	+4
18–24	+5
25+	+6

[1] Only during the phase that the reactor shuts down. If the MechWarrior must make a Piloting Skill Roll for a 'Mech with a shutdown reactor, the 'Mech automatically falls; in either case, if the 'Mech falls, the warrior automatically takes 1 point of damage (see *Falling Damage to the MechWarrior*, p. 69).
[2] The modifier for a destroyed gyro is +6 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.
[3] The modifier for a destroyed leg is +5 when making a Piloting Skill Roll to avoid damaging the MechWarrior during an automatic fall.
[4] Automatic fall if death from above attack is unsuccessful.
[5] Ignore all modifiers from previous critical hits on that leg.
[6] Do not add modifiers for other damaged actuators in the leg.
[7] To avoid damage only. Does not result in a fall if Piloting Skill Roll fails. See *Buildings*, p. 166. Add an additional +1 modifier if unit is charging or being charged (in addition to the +2 modifier normally required in that situation).

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FACING AFTER FALL TABLE

Die Roll (1D6)	New Facing	Hit Location
1	Same Direction	Front
2	1 Hexside Right	Right Side
3	2 Hexsides Right	Right Side
4	Opposite Direction	Rear
5	2 Hexsides Left	Left Side
6	1 Hexside Left	Left Side

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CLUSTER HITS TABLE

Die Roll (2D6)	Weapon Size																											
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40
2	1	1	1	1	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10	12
3	1	1	2	2	2	2	3	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10	12
4	1	1	2	2	3	3	4	4	4	5	5	5	6	6	7	7	8	8	9	9	9	10	10	10	11	11	11	12	12	18
5	1	2	2	3	3	4	4	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
6	1	2	2	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
7	1	2	3	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
8	2	2	3	3	4	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	14	15	16	16	17	17	17	18	18	24
9	2	2	3	4	5	6	6	7	8	9	10	11	11	12	13	14	14	15	16	17	18	19	20	21	21	22	23	23	24	32
10	2	3	3	4	5	6	6	7	8	9	10	11	11	12	13	14	14	15	16	17	18	19	20	21	21	22	23	23	24	32
11	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40
12	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	40

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ATTACK MODIFIERS TABLE

All Attacks: Weapons and Physical	Modifier
Attacker	
*Movement (modifiers are cumulative)**	
Stationary	None
Walked/Cruised	+1
Ran/Flanked	+2
Jumped	+3
Prone	+2 (does not apply to four-legged 'Mechs)
Skidding	+1
Terrain *(modifiers are cumulative)*	
Light Woods	+1 per intervening hex; +1 if target in light woods
Heavy Woods	+2 per intervening hex; +2 if target in heavy woods
Water**	
Depth 1	+1; see *Partial Cover,* p. 102
Depth 2	Underwater units cannot target units that are not underwater (see *Terrain Modifiers*, p. 108).
Partial Cover	+1; see *Partial Cover,* p. 102
Target *(modifiers are cumulative)*	
Prone	–2 from adjacent hex; +1 from all others†
Immobile	–4 (Includes Grounded DropShips)
Skidding	+2
Movement	
Moved 0–2 hexes	0
Moved 3–4 hexes	+1
Moved 5–6 hexes	+2
Moved 7–9 hexes	+3
Moved 10–17 hexes	+4
Moved 18–24 hexes	+5
Moved 25+ hexes	+6
Jumped/Airborne (non-aerospace units)	+1 additional
Battle armor unit (only applies to non-infantry attackers)	+1
Airborne aerospace unit at Altitude 1 (NOE) (attacker in attack/flight path)	+1
Airborne aerospace unit at Altitude 1 (NOE) (attacker not in attack/flight path)	+3

Weapon Attacks Only	Modifier
Attacker	
'Mech Damage	
Sensor hit	+2
Shoulder hit	+4 for weapons in arm, disregard other damaged actuators in arm
Upper or lower arm actuator (each)	+1 for weapons in arm
Heat	
0–7	None
8–12	+1
13–16	+2
17–23	+3
24+	+4

Weapon Attacks Only	Modifier
Making indirect LRM attack	+1
Attacker is IndustrialMech***	+1
Grounded DropShip	–2
Range and Terrain	
Range	
Short	None
Medium	+2
Long	+4
Minimum range	[Minimum] – [Target Range] +1 (see *Minimum Range Modifier*, p. 109)
Each Intervening Hex/Level between Attacker and Target (as well as target's hex) in same multi-hex building	+1 per hex/level (maximum +3); see *Combat Within Buildings*, p. 175
Target	
Secondary target in forward arc	+1
Secondary target in side or rear arc	+2
Large Support Vehicle or Grounded Small Craft	–1

Physical Attacks Only	Modifier
Attacker	
'Mech Damage	
Shoulder hit	No punching or physical weapon attack with arm; no clubbing attacks; +2 to pushing attack (each)
Upper or lower arm actuator hit (each)	+2 to punching and physical weapon attack with arm; half damage for punching attack with arm; +2 to clubbing attacks
Hand actuator hit	+1 to punching attack with arm; no clubbing attacks; no physical weapon attack with arm
Hip actuator hit	No kicking attacks
Upper or lower leg actuator hit (each)	+2 and half damage to all kick attacks
Foot actuator hit	+1 to all kick attacks
Target	
Infantry	+3 to kicking and death from above attacks
Large Support Vehicle or Grounded Small Craft	–2
Other Modifiers	
Charging attack: Modify for relative Piloting Skills (see p. 40)	
Death from above attack: Modify for relative Piloting Skills (see p. 40)	

*Does not apply to infantry units.
**See *Terrain Modifiers*, p. 107, for exceptions.
***If the IndustrialMech mounts advanced fire control, this modifier does not apply.
† Does not necessarily apply to Four-legged 'Mechs (see *Firing When Down*, p. 113).

'MECH HIT LOCATION TABLE

PAGE 119

Die Roll (2D6)	Biped (Four-legged) Left Side	Front/Rear	Right Side
2*	Left Torso [critical]	Center Torso [critical]	Right Torso [critical]
3	Left Leg (Left Rear Leg)	Right Arm (Right Front Leg)	Right Leg (Right Rear Leg)
4	Left Arm (Left Front Leg)	Right Arm (Right Front Leg)	Right Arm (Right Front Leg)
5	Left Arm (Left Front Leg)	Right Leg (Right Rear Leg)	Right Arm (Right Front Leg)
6	Left Leg (Left Rear Leg)	Right Torso	Right Leg (Right Rear Leg)
7	Left Torso	Center Torso	Right Torso
8	Center Torso	Left Torso	Center Torso
9	Right Torso	Left Leg (Left Rear Leg)	Left Torso
10	Right Arm (Right Front Leg)	Left Arm (Left Front Leg)	Left Arm (Left Front Leg)
11	Right Leg (Right Rear Leg)	Left Arm (Left Front Leg)	Left Leg (Left Rear Leg)
12	Head	Head	Head

*A result of 2 may inflict a critical hit. Apply damage to the armor in that section in the normal manner, but the attacking player also rolls once on the Determining Critical Hits Table, p. 124.

PHYSICAL ATTACK MODIFIERS TABLE

PAGE 144

Attack Type	Modifier
Charging	+0*
Clubbing	–1
Death From Above (DFA)	+0*†
Kicking	–2
Punching	+0
Pushing	–1

*Whenever one unit charges or DFAs another, compare their Piloting Skill Ratings and use the difference between the two skill ratings as a modifier to the to-hit number. If the target's skill rating is lower, add the modifier to the to-hit number. If the attacker's Piloting Skill Rating is lower, subtract the modifier from the to-hit number.

†All the normal attack modifiers apply, including the attacker's jumping movement, but the roll is not modified for terrain. For DFA attacks against infantry targets, apply an additional +3 to-hit modifier (because infantry units have no Piloting Skill, neither player needs to add a modifier for relative Piloting Skill Rating).

TERRAIN FACTOR AND CONVERSION TABLE

PAGE 112

Terrain Factor	Former Terrain	New Terrain
Heavy Woods: 90	Heavy Woods	Light Woods
Light Woods: 50	Light Woods	Rough
Rough: 0	All others	No change

DETERMINING CRITICAL HITS TABLE

PAGE 124

Die Roll (2D6)†	Effect
2–7	No Critical Hit
8–9	Roll 1 Critical Hit Location
10–11	Roll 2 Critical Hit Locations
12	Head/Limb Blown Off; Roll 3 Critical Hit Locations*

*Roll 3 critical hit locations if the attack strikes the torso.

†When rolling for damage inflicted on an IndustrialMech, add +2 to the dice roll result. Treat a modified result of 13 as a 12. On a modified result of 14, the IndustrialMech's head or limb is blown off. If the hit struck a torso location, make four critical hit rolls.

'MECH PUNCH LOCATION TABLE

PAGE 145

D6 Roll Result	Biped Left Side	Front/Rear	Right Side
1	Left Torso	Left Arm	Right Torso
2	Left Torso	Left Torso	Right Torso
3	Center Torso	Center Torso	Center Torso
4	Left Arm	Right torso	Right Arm
5	Left Arm	Right Arm	Right Arm
6	Head	Head	Head

D6 Roll Result	Four-Legged Left Side	Front/Rear	Right Side
1	Left Torso	Left Front Leg/ Left Rear Leg	Right Torso
2	Left Torso	Left Torso	Right Torso
3	Center Torso	Center Torso	Center Torso
4	Left Front Leg	Right Torso	Right Front Leg
5	Left Rear Leg	Right Front Leg/ Right Rear Leg	Right Rear Leg
6	Head	Head	Head

DIFFERENT LEVELS TABLE

PAGE 150

Target is:	Allowed Physical Attack
Standing 'Mech 1 level higher	Charge, Punch (Kick Table), Club (Kick Table), Physical Weapon (Kick Table)
Standing 'Mech 1 level lower	Charge, Kick (Punch Table), Club (Punch Table), Physical Weapon (Punch Table)
Prone 'Mech, ProtoMech, Vehicle or infantry 1 level higher	Punch, Club, Physical Weapon
Prone 'Mech, ProtoMech, Vehicle or infantry 1 level lower	None

Note: A 'Mech can always make a death from above attack if it has the necessary Jumping MP, provided the target is valid.

UNIT HEIGHTS TABLE

PAGE 99

Type	Heights*
'Mech	2 levels**
ProtoMechs, vehicles, infantry and fighters	1 level
Submarines	1 depth***
Large Support Vehicles and small craft	2 levels
Aerodyne DropShips	5 levels
Spheroid DropShips	10 levels

*A unit's height levels (or elevations, if airborne) must be included in the level of the underlying hex for determining a unit's total height; the height of aerospace units for LOS purposes is irrelevant while airborne.

**Prone 'Mechs rise one level above the level of the underlying hex.

***A vessel on the surface rises 1 level above the level of the hex.

'MECH KICK LOCATION TABLE

PAGE 147

D6 Roll Result	Biped Left Side	Front/Rear	Right Side
1–3	Left Leg	Right Leg	Right Leg
4–6	Left Leg	Left Leg	Right Leg
	Four-legged		
1-3	Left Front Leg	Right Front Leg/ Right Rear Leg	Right Front Leg
4-6	Left Rear Leg	Left Front Leg/ Left Rear Leg	Right Rear Leg

HEAT POINT TABLE

PAGE 159

Activity	Heat Points
Walking	+1 per turn
Running	+2 per turn
Jumping	+1 per hex (minimum of 3 per turn)
Attempting to stand	+1 per attempt
Weapons fire	Per Weapons and Equipment Tables, p. 303
Heat-Causing Weapons	Per Weapons and Equipment Tables, p. 303, or *Other Combat Weapons and Equipment*, p. 129
Heat sink	–1 per operational heat sink; –2 per operational double heat sink –1 additional per operational single heat sink under water (maximum 6 points) –2 additional per operational double heat sink underwater (maximum 6 points)
First engine hit	+5 per turn
2nd engine hit	+10 (total) per turn

PHYSICAL WEAPON ATTACKS TABLE

PAGE 146

Weapon Type	To-Hit Modifier	Damage Value	To-Hit Location Table	Firing Arc**	Affected by TSM	To-Hit/Damage Value Affected by Actuator Damage
Backhoe	+1	6	Standard	Arm	Yes	Yes/Yes
Chainsaw	+0	5†	Standard	Arm	No	Yes/No
Combine	–2	3†	Standard	Arm	No	Yes/No
Dual Saw	+0	7†	Standard	Arm	No	Yes/No
Hatchet	–1	1/per 5 tons††	Standard*	Arm	Yes	Yes/Yes
Heavy-Duty Pile Driver	+2	9	Standard	Forward	No	Yes/No
Mining Drill	–1	4	Standard	Arm	No	Yes/No
Retractable Blade	–2	1/per 10 tons‡	Standard*	Arm	Yes	Yes§§/Yes
Rock Cutter	+1	5	Standard	Arm	No	Yes/No
Spot Welder	+0	5‡‡	Punch	Arm	No	Yes/No
Sword	–2	1/per 10 tons +1‡	Standard*	Arm	Yes	Yes/Yes
Wrecking Ball	+1	8§	Standard	Forward	No	Yes/No

*Roll normally on the 'Mech Hit Location Table. Alternatively, when the controlling player announces the physical weapon attack, he may also announce that he will use the Punch or Kick Hit Location Table to resolve damage if the attack succeeds, in which case apply a +4 modifier in addition to all the standard modifiers, including the standard to-hit modifier for the weapon (this modifier does not apply when attacking on a Punch/Kick Location Table due to attacks from different levels; see p. 150)

**Forward: the target of a physical weapon attack can only be in the 'Mech's forward arc. Arm: the target of a physical weapon attack can be in the 'Mech's forward arc or in the side arc corresponding to the arm in which the equipment is mounted.

†1D6 against conventional infantry.

††A successful attack does 1 point of damage for every 5 tons that the attacking 'Mech weighs.

‡A successful attack does 1 point of damage for every 10 tons that the attacking 'Mech weighs (round up); +1 to that Damage Value for a sword.

‡‡Whenever the spot welder is used in a physical weapon attack, it generates 2 points of heat.

§ On any to-hit roll result of 2, the ball has successfully delivered a self-inflicted hit against the attacker rather than the target. Such a self-inflicted strike causes half the normal damage and is resolved using the Front Hit Location Table. Immediately after sustaining damage from a self-inflicted wrecking ball hit, the player must make a Piloting Skill Roll to avoid falling from being thrown off-balance by this critical failure.

§§Damage to the hand actuator (or the absence of a hand actuator) in the arm mounting this equipment does not modify the to-hit number of the attack.

LARGE GROUND SUPPORT VEHICLE HIT LOCATION TABLE

PAGE 206

	Attack Direction			
2D6 Roll	Front	Rear	Front Side§	Rear Side§
2*	Front (critical)	Rear (critical)	Side (critical)	Side (critical)
3	Right Side†	Left Side†	Front†	Rear†
4	Front†	Rear†	Side†	Side†
5	Front†	Rear†	Side	Side
6	Front	Rear	Side	Side
7	Front	Rear	Side	Side
8	Front	Rear	Side (critical)*	Side (critical)*
9	Front†	Rear†	Side†	Side†
10	Turret	Turret	Turret	Turret
11	Turret	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or 8 if the attack strikes the side) may inflict a critical hit. For each such roll result, apply damage normally to the armor in that section. The attacking player then rolls once on the Ground Combat Vehicle Critical Hits Table, p. 194. A result of 12 on this roll may inflict a critical hit against the turret. If the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction.

†The vehicle may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table, p. 193 (applying damage at the end of the phase in which the damage takes effect).

§If the attack hits the front right side, all Front Side results strike the front right side armor, while Rear Side results strike the rear right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

PROTOMECH HIT LOCATION TABLE

PAGE 185

2D6 Result	Hit Location
2	Main Gun
3	* Near Miss
4	Right Arm
5	Legs
6	Torso
7	Torso
8	Torso
9	Legs
10	Left Arm
11	* Near Miss
12	Head

*A result of 3 or 11 inflicts no damage on the target. In the case of a kick attack from a 'Mech, a Near Miss on the ProtoMech Hit Location Table does not force the attacking 'Mech to make a Piloting Skill Roll.

SPECIAL PROTOMECH HIT LOCATION TABLE

PAGE 185

2D6 Result	Hit Location*
2	Main Gun
3	Legs
4	Legs
5	Right Arm
6	Torso
7	Torso
8	Torso
9	Left Arm
10	Legs
11	Legs
12	Head

*Use Special ProtoMech Hit Location Table when determining damage under the following circumstances: area-affect weapons, building collapse, crashing aerospace units, falling and collisions with skidding units.

PHYSICAL ATTACKS AGAINST VTOL VEHICLES TABLE

PAGE 198

Difference in Levels	Type of Physical Attack Allowed
–1 or lower	None
0	All except Punch
1–2	All except Kick
3	Club and Physical Weapons only
4+	None

GROUND COMBAT VEHICLE HIT LOCATION TABLE

PAGE 193

	Attack Direction		
2D6 Roll	Front	Rear	Side§
2*	Front (critical)	Rear (critical)	Side (critical)
3	Front†	Rear†	Side†
4	Front†	Rear†	Side†
5	Right Side†	Left Side†	Front†
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side†	Right Side†	Rear†
10	Turret	Turret	Turret
11	Turret	Turret	Turret
12*	Turret (critical)	Turret (critical)	Turret (critical)

*A result of 2 or 12 (or an 8 if the attack strikes the side) may inflict a critical hit on the vehicle. For each result of 2 or 12 (or 8 for side attacks), apply damage normally to the armor in that section. The attacking player then automatically rolls once on the Ground Combat Vehicle Critical Hits Table, p. 194. A result of 12 on the Ground Combat Vehicle Hit Location Table may inflict a critical hit against the turret; if the vehicle has no turret, a 12 indicates the chance of a critical hit on the side corresponding to the attack direction.

†The vehicle may suffer motive system damage even if its armor remains intact. Apply damage normally to the armor in that section, but the attacking player also rolls once on the Motive System Damage Table, at right. Apply damage at the end of the phase in which the damage takes effect.

§Side hits strike the side as indicated by the attack direction. For example, if an attack hits the right side, all Side results strike the right side armor. If the vehicle has no turret, a turret hit strikes the armor on the side attacked.

MOTIVE SYSTEM DAMAGE TABLE

PAGE 193

2D6 Roll	Effect*
2–5	No effect
6–7	Minor damage; +1 modifier to all Driving Skill Rolls
8–9	Moderate damage; –1 Cruising MP, +2 modifier to all Driving Skill Rolls
10–11	Heavy damage; only half Cruising MP (round fractions up), +3 modifier to all Driving Skill Rolls
12+	Major damage; no movement for the rest of the game. Vehicle is immobile.

Attack Direction Modifier:	
Hit came from the rear	+1
Hit came from the sides	+2

Vehicle Type Modifiers:	
Tracked, Naval	+0
Wheeled	+2
Hovercraft, Hydrofoil	+3
WiGE	+4

*All movement and Driving Skill Roll penalties are cumulative. However, each Driving Skill Roll modifier can only be applied once. If a unit's Cruising MP is reduced to 0, it cannot move for the rest of the game, but is not considered an immobile target. In addition, all motive system damage takes effect at the end of the phase in which the damage occurred. For example, if two units are attacking the same Combat Vehicle during the Weapon Attack Phase and the first unit inflicts motive system damage and rolls a 12, the –4 immobile target modifier would not apply for the second attacker. However, the –4 modifier would take effect during the Physical Attack Phase. If a hover vehicle is rendered immobile while over a Depth 1 or deeper water hex, it sinks and is destroyed.

VTOL COMBAT VEHICLE HIT LOCATION TABLE

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2D6 Roll	Front	Rear	Side
2*	Front (critical)	Rear (critical)	Side (critical)
3	Rotors†	Rotors†	Rotors†
4	Rotors†	Rotors†	Rotors†
5	Right Side	Left Side	Front
6	Front	Rear	Side
7	Front	Rear	Side
8	Front	Rear	Side (critical)*
9	Left Side	Right Side	Rear
10	Rotors†	Rotors†	Rotors†
11	Rotors†	Rotors†	Rotors†
12*	Rotors (critical)†	Rotors (critical)†	Rotors (critical)†

*A result of 2 or 12 (or 8 if the attack strikes the side) may inflict a critical hit on the VTOL. For each such attack, apply damage normally to the armor in that section. The attacking player then immediately rolls once on the VTOL Combat Vehicle Critical Hits Table, below.

†Damage Value / 10 (round up); see *Rotor Hits*, p. 197. Additionally, damage to the rotors slows down the VTOL. Each hit reduces the VTOL's Cruising MP by 1, meaning that the controlling player must also recalculate Flank MP; multiply the new Cruising MP by 1.5 and round up. As with all damage, such movement penalties do not apply until the end of the phase in which the damage occurred.

GROUND COMBAT VEHICLE CRITICAL HITS TABLE

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	Hit Location			
2D6 Roll	Front	Side	Rear	Turret
2–5	No Critical Hit	No Critical Hit	No Critical Hit	No Critical Hit
6	Driver Hit	Cargo/Infantry Hit	Weapon Malfunction	Stabilizer
7	Weapon Malfunction	Weapon Malfunction	Cargo/Infantry Hit	Turret Jam
8	Stabilizer	Crew Stunned	Stabilizer	Weapon Malfunction
9	Sensors	Stabilizer	Weapon Destroyed	Turret Locks
10	Commander Hit	Weapon Destroyed	Engine Hit	Weapon Destroyed
11	Weapon Destroyed	Engine Hit	Ammunition**	Ammunition**
12	Crew Killed	Fuel Tank*	Fuel Tank*	Turret Blown Off

*If Combat Vehicle has ICE engine only. If Combat Vehicle has a fusion engine, treat this result as Engine Hit.
**If Combat Vehicle carries no ammunition, treat this result as Weapon Destroyed.

VTOL COMBAT VEHICLE CRITICAL HITS TABLE

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	Hit Location			
2D6 Roll	Front	Side	Rear	Rotors
2–5	No Critical Hit	No Critical Hit	No Critical Hit	No Critical Hit
6	Co-Pilot Hit	Weapon Malfunction	Cargo/Infantry Hit	Rotor Damage
7	Weapon Malfunction	Cargo/Infantry Hit	Weapon Jam	Rotor Damage
8	Stabilizer	Stabilizer	Stabilizer	Rotor Damage
9	Sensors	Weapon Destroyed	Weapon Destroyed	Flight Stabilizer Hit
10	Pilot Hit	Engine Damage	Sensors	Flight Stabilizer Hit
11	Weapon Destroyed	Ammunition**	Engine Damage	Rotors Destroyed
12	Crew Killed	Fuel Tank*	Fuel Tank*	Rotors Destroyed

*Only if the VTOL has an ICE engine. For VTOLs with fusion engines, treat this result as Engine Hit.
**If the VTOL carries no ammunition, treat this result as Weapon Destroyed.

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GENERIC CONVENTIONAL INFANTRY DAMAGE TABLE

	Maximum Weapon Damage Per Platoon Type*					
Number of Troopers	Rifle, Ballistic	Rifle, Energy	Machine Gun	SRM	LRM	Flamer
1	1	0	1	0	0	0
2	1	1	1	1	1	1
3	2	1	2	1	1	1
4	2	1	2	2	2	2
5	3	1	3	2	2	2
6	3	2	3	3	3	3
7	4	2	4	3	3	3
8	4	2	4	4	3	4
9	5	3	5	4	4	4
10	5	3	6	5	4	5
11	6	3	6	5	5	5
12	6	3	7	6	5	6
13	7	4	7	6	6	6
14	7	4	8	7	6	7
15	8	4	8	7	6	7
16	8	4	9	8	7	8
17	9	5	10	8	7	8
18	9	5	10	9	8	9
19	10	5	11	9	8	9
20	10	6	11	10	9	10
21	11	6	12	10	9	10
22	11	6	12	11	9	11
23	12	6	13	11	10	11
24	12	7	13	12	10	12
25	13	7	14	12	11	12
26	14	7	15	13	11	12
27	14	8	15	13	11	13
28	15	8	16	14	12	13
29	15	8	16	14	12	14
30	16	8	17	15	13	14

*Damage is always applied in 2-point Damage Value groupings

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INFANTRY DAMAGE IN BUILDINGS TABLE

Building Type	Damage to Infantry is:
Light	75 percent of damage to building
Medium	50 percent of damage to building
Heavy	25 percent of damage to building
Hardened	None

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INFANTRY DAMAGE FROM ATTACKS INSIDE BUILDINGS TABLE

Building Type	Damage to Infantry is:
Light	100% (building absorbs 0%)
Medium	100% (building absorbs 0%)
Heavy	75% (building absorbs 25%)
Hardened	50% (building absorbs 50%)

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SPECIAL 'MECH HIT LOCATION TABLE

Shot from Above	
Die Roll (1D6)	Hit Location (Four legged)**
1	Left Arm (Left Front Leg)
2	Front/Rear Left Torso*
3	Front/Rear Center Torso*
4	Front/Rear Right Torso*
5	Right Arm (Right Front Leg)
6	Head

Shot from Below	
Die Roll (1D6)	Hit Location (Four legged)**
1	Left Leg (Left Front Leg)
2	Left Leg (Left Rear Leg)
3	Front/Rear Left Torso*
4	Front/Rear Right Torso*
5	Right Leg (Right Rear Leg)
6	Right Leg (Right Front Leg)

*The attack hits the front if from the front or the side. It hits the rear if from the rear.
**Location in parenthesis are for a four-legged 'Mech.

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BASEMENTS TABLE

Die Roll (2D6)	Effect
2	Double basement. The unit falls 2 levels.
3-4	Basement. The unit falls 1 level.
5-8	No basement.
9	Small basement. Infantry may move into the basement as though it were a new level of the building (Sublevel 1); ProtoMechs cannot enter this level. No effect on 'Mechs or vehicles.
10-11	Basement. The unit falls 1 level.
12	Double basement. The unit falls 2 levels.

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BURST-FIRE WEAPON DAMAGE VS. CONVENTIONAL INFANTRY TABLE

BattleMechs, ProtoMechs and Vehicles	
Weapon	Damage vs. Conventional Infantry
AP Gauss Rifle	2D6
Light Machine Gun	1D6
Machine Gun	2D6
Heavy Machine Gun	3D6
Small/Micro Pulse Laser	2D6
Flamer	4D6

*Any burst-fire weapon available to battle armor but not listed on the "Battle Armor" subtable (such as the small pulse laser) defaults to the burst-fire damage listed on the "BattleMechs, ProtoMechs and Vehicles" subtable.

*Battle Armor**	
Weapon	Damage vs. Conventional infantry
Light Machine Gun	1D6/2 (round up)
Machine Gun	1D6
Heavy Machine Gun	2D6
Flamer	3D6
Light Recoilless Rifle	1D6
Medium Recoilless Rifle	2D6
Heavy Recoilless Rifle	2D6
Light Mortar	1D6
Heavy Mortar	1D6
Automatic Grenade Launcher	1D6/2 (round up)
Heavy Grenade Launcher	1D6

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NON-INFANTRY WEAPON DAMAGE AGAINST INFANTRY TABLE

Weapon Type*	Number of Conventional Troopers Hit†
BattleMech Physical Attack**	Damage Value / 10
Direct Fire (Ballistic or Energy)	Damage Value / 10
Cluster (Ballistic)	Damage Value / 10 + 1
Pulse***	Damage Value / 10 + 2
Cluster (Missile)	Damage Value / 5
Area-Effect (AE)	Damage Value / .5
Burst-Fire	See Burst-Fire Weapons above
Heat-Effect Weapons	See Heat-Effect Weapons‡

*See *Combat*, p. 113, for weapon terminology. If a weapon falls under multiple types, use the type that inflicts the most damage. For example, a rotary AC/5 is defined as a direct-fire (ballistic) and a cluster (ballistic) weapon. A cluster (ballistic) weapon does more damage than a direct-fire (ballistic) weapon, and so players should use the statistics for cluster (ballistic) weapons when determining damage against conventional infantry.
**Not including Thrashing Attacks (see p. 151).
***Except for Small and Micro Pulse Lasers, which are treated as Burst-Fire Weapons (see Burst-Fire Weapons Damage Vs. Conventional Infantry Table, p. 217).
†This equals the number of conventional infantry troopers hit and eliminated, regardless of armor protection. Attacks by non-infantry weapons against mechanized infantry double the number of troopers eliminated; round all fractions up.
‡Heat-Effect Weapon each has specific damage against conventional infantry, as noted on either the appropriate Weapon and Equipment Tables or in *Other Combat Weapons and Equipment* (see p. 129).

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BUILDING MOVEMENT MODIFIERS TABLE

1–2	0
3–4	+1
5–6	+2
7–9	+3
10–17	+4
18–24	+5
25+	+6

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BUILDING MODIFIERS TABLE

Building Type	Original CF	MP Cost Per Hex*	Piloting/Driving Skill Modifier
Light	1–15	1	0
Medium	16–40	2	+1
Heavy	41–90	3	+2
Hardened	91–150	4	+5
Cost to Enter Any Hex		*1*	

*Infantry (except mechanized infantry) pay only 1 MP to enter a building hex regardless of building type; ProtoMechs and mechanized infantry only pay 2 MP to enter a building hex.

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CHANGING FACING COST TABLE

Current Velocity	Thrust Point Cost	Current Velocity	Thrust Point Cost
0-2	1	8-9	4
3-5	2	10	5
6-7	3	11	6
		12+	+1 per point

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EVASIVE ACTION MODIFIERS TABLE

Evading Unit is:	Target's Evasive Action Modifier	Attacker's Evasive Action Modifier
Fighter	+3	N/A
Small craft, Fixed-Wing Support Vehicle	+2	N/A
DropShip	+2	+2
Airship	N/A	N/A

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STRAIGHT MOVEMENT TABLE

Minimum Straight Movement (in hexes)			
Effective Velocity	Aerospace Fighter	Conventional Fighter	Aerodyne DropShip
1–3	1	1	1
4–6	1	1	2
7–9	2	1	3
10–12	3	2	4
13–15	4	3	5
16+	5	4	6

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STRAIGHT MOVEMENT ON GROUND MAPS TABLE (AERODYNE CRAFT ONLY)

Minimum Straight Movement (in hexes)			
Velocity	Fighter	Small Craft	DropShip
1	8	8	8
2	12	14	16
3	16	20	24
4	20	26	32
5	24	32	40
6	28	38	48
7	32	44	56
8	36	50	64
9	40	56	72
10	44	62	80
11	48	68	88
12	52	74	96

Units on ground maps cannot reach a velocity above 12. If required to gain a velocity above 12 (through special maneuvers, for example) the unit remains at Velocity 12 and must make a Control Roll.

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RE-ENTRY TABLE

Situation	Modifier (Maximum 6)
Craft has engine damage	+1 per box crossed out
Craft has damage to thrusters	+1 per box crossed out
Craft has no thrust*	+6

*A craft has no thrust if it cannot generate any due to critical engine damage or lack of fuel.

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HIGH-ALTITUDE TABLE

Hex Row	Altitude (km)	Max. Safe Velocity
Ground	0–17	2
Row 1	18–35	3
Row 2	36–53	6
Row 3	54–71	9
Row 4	72–89	12
Interface	90–107	15

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ATMOSPHERIC CONTROL MODIFIERS TABLE

Condition	Control Roll
Per 20 points of damage	+1
Unit is spheroid DropShip	+1
Unit is aerodyne DropShip	0
Unit is fighter or small craft	–1

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RAMMING ATTACKS TABLE

Base To-Hit Number: 6 + (target Piloting Skill – attacker Piloting Skill)

Modifiers	
Attacker existing damage:	
Sensor damage	+1
Avionics damage	+1 per box
Target is:	
Fighter or small craft	+4v
DropShip	+2
Cannot spend thrust	–2
Attacker is:	
Fighter or small craft	–2
DropShip	–1

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CONTROL ROLL TABLE

Base Target Number: Piloting Skill	
Situation*	
Movement	
Exceed normal operational ceiling (conventional fighters, Airships and Fixed Wing Support Vehicles)	
Rolling more than once in a turn	
Using thrust in excess of current SI rating	
Unit with velocity over 2x Safe Thrust in a atmosphere hex	
Stalling	
Descending 3+ altitudes in a single turn	
Damage	
Avionics critical	
Control critical	
Sustaining damage while in atmosphere	
Modifiers	
Pilot/crew damage	+1 per crossed box
Avionics damage	+1 per crossed box
Life support damage	+1 per crossed box
Atmospheric operations	+2
Above safe thrust	+1
Above 2x Safe Thrust	+1 per velocity point above 2x Safe Thrust

*Requires a Control Roll; apply all appropriate modifiers

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FAILED BRAKING MANEUVER TABLE

Margin of Failure	Effect
1–4	Landing requires full distance. The pilot can attempt to land normally or abort the landing, circle and try again in a subsequent turn.
5	The unit must land. However, the unit becomes harder to control, adding 1 to the landing Control Roll target number.
6+	The unit must land and requires 20 hexes of runway to do so, regardless of unit type. The unit suffers 20 points of damage on the nose and the landing gear is damaged. Add 2 to the landing Control Roll target number.

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AEROSPACE UNITS HIT LOCATION TABLE

FIGHTERS				
2D6 Roll	Nose	Aft	Side	Above/Below
2	Nose/Weapon	Aft/Weapon	Nose/Weapon	Nose/Weapon
3	Nose/Sensors	Aft/Heat Sink	Wing/Gear	Wing/Gear
4	Right Wing/Heat Sink	Right Wing/Fuel	Nose/Sensors	Nose/Sensors
5	Right Wing/Weapon	Right Wing/Weapon	Nose/Crew	Nose/Crew
6	Nose/Avionics	Aft/Engine	Wing/Weapon	Wing/Weapon
7	Nose/Control	Aft/Control	Wing/Avionics	Nose/Avionics
8	Nose/FCS	Aft/Engine	Wing/Bomb	Wing/Weapon
9	Left Wing/Weapon	Left Wing/Weapon	Aft/Control	Aft/Control
10	Left Wing/Heat Sink	Left Wing/Fuel	Aft/Engine	Aft/Engine
11	Nose/Gear	Aft/Heat Sink	Wing/Gear	Wing/Gear
12	Nose/Weapon	Aft/Weapon	Aft/Weapon	Aft/Weapon

DROPSHIPS/SMALL CRAFT				
2D6 Roll	Nose	Aft	Side	Above/Below
2	Nose/Crew	Aft/Life Support	Nose/Weapon	Nose/Weapon
3	Nose/Avionics	Aft/Control	Nose/FCS	Nose/FCS
4	Right Side/Weapon	Right Side/Weapon	Nose/Sensors	Nose/Sensors
5	Right Side/Thruster	Right Side/Door	Side/Thruster	Side/Thruster
6	Nose/FCS	Aft/Engine	Side/Cargo	Side/Cargo
7	Nose/Weapon	Aft/Weapon	Side/Weapon	Side/Weapon
8	Nose/Control	Aft/Docking Collar	Side/Door	Side/Door
9	Left Side/Thruster	Left Side/Door	Side/Thruster	Side/Thruster
10	Left Side/Weapon	Left Side/Weapon	Aft/Avionics	Aft/Avionics
11	Nose/Sensors	Aft/Gear	Aft/Engine	Aft/Engine
12	Nose/K-F Boom	Aft/Fuel	Aft/Weapon	Aft/Weapon

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AEROSPACE WEAPON RANGE TABLE

Range Bracket	Hexes (Standard)	Hexes (Capital)
Short	0–6	0–12
Medium	7–12	13–24
Long	13–20	25–40
Extreme	21–25	41–50

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CAPITAL MISSILE CRITICAL HIT TABLE

Missile	Critical Hit Chance
Barracuda	11+
White Shark	9+
Killer Whale	10+
Kraken	8+

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RANDOM MOVEMENT TABLE

1D6 Result	Effect
1	Forward 1 hex, turn left 2 hexsides
2	Forward 1 hex, turn left 1 hexside
3–4	Forward 1 hex
5	Forward 1 hex, turn right 1 hexside
6	Forward 1 hex, turn right 2 hexsides

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AEROSPACE ATTACK MODIFIERS TABLE

Range	Modifier
Short	+0
Medium	+2
Long	+4
Extreme	+6
Target/Intervening Conditions	
Angle of Attack	
Attack against aft	+0
Attack against nose	+1
Attack against side	+2
Attacker is an OmniFighter flying at altitude 1 (NOE) attacking an air target	+1
Attacker is non-OmniFighter flying at altitude 1 (NOE) attacking an air target	+2
Secondary target in forward arc	+1
Secondary target in side or rear arc	+2

Range	Modifier
Target conducting air-to-ground attack this turn	–3
Target is at 0 Velocity	–2
Weapon is capital-scale	
vs. unit less than 500 tons	+5†
Firing through atmospheric hex*	+2 per hex
Firing into or out of screen hex	+2
Target is evading	Variable (see p. 77)
Attacker Conditions	
Attacker exceeded Safe Thrust this turn	+2
Attacker is out-of-control	+2
Attacker has pilot/crew damage	+1 per box crossed
Attacker has CIC or FCS critical damage	+2 per box crossed

Range	Modifier
Attacker has sensors critical damage	+1 per box crossed, or +5 if sensors destroyed
Attacker is evading	Variable (see p. 77)
Special Weapons and Equipment	
Barracuda missile (not tele-operated)	–2§

*This applies to atmospheric hexes on the high-altitude map, not to hexes on a low-altitude map, or when using Aerospace Units on Ground Mapsheets rules.
†Modifier does not apply to capital missiles, which are designed to track small targets.
§Modifier does not apply if Barracuda missiles are fired in conjunction with other capital missiles (see *Large Craft Weapon Bays*, p. 234).

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AEROSPACE FIGHTER/SMALL CRAFT HEAT POINT TABLE

Activity	Heat Points
Weapons fire	Per Weapons and Equipment Tables, p. 303
Heat-causing weapons	Per Weapons and Equipment Tables, p. 303, or *Other Combat Weapons and Equipment*, p. 129
Heat sink	–1 per operational heat sink; –2 per operational double heat sink
Engine damage	+2 per hit

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AIR-TO-GROUND ATTACK MODIFIER TABLE

Attack Type	Modifier
Strafing	+4*
Striking	+2‡
Bombing	+2†

*Aerospace units flying at Altitude 1 (NOE) also suffer a +2 to-hit modifier as described in *Movement* (see p. 80).
†Terrain and target movement modifiers (including the –4 modifier for an immobile target) do not apply to any type of bombing attack; an additional 8 hexes directly forward. fighters can make altitude-bombing attacks from any altitude, but suffer a to-hit modifier equal to their altitude (see *Altitude-Bombing*, p. 246).
‡As noted under Weapons and Equipment, rapid-fire weapons always fire at their maximum rate, and so players must check for jamming every time they fire these weapons (see p. 114).

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LANDING MODIFIERS TABLE

Condition	Modifier
Unit has damaged thrusters	+4
Unit is out-of-control	Automatic failure (assume MoF of 10)
Unit is attempting vertical landing	+1 per point of Velocity above 1
Unit is attempting horizontal landing	+1 per point of Velocity above 3
Landing gear damaged	+5

Condition	Modifier
Nose armor destroyed (fighters and aerodyne units)	+2
Unit reduced to 50% or less of starting thrust	+2
No thrust available (aerodyne)	+4
No thrust available (spheroid)*	+8
Runway too short for unit	+2
Aerospace fighter making vertical landing	+2/+0†
Conventional fighter making vertical landing	NA/NA†
Conventional fighter with VSTOL making vertical landing	+0/NA†
Fixed-Wing Support Vehicle vehicle making vertical landing	NA/NA†
Fixed-Wing Support Vehicle with VSTOL making vertical landing	+2/0†
Aerodyne small craft and DropShips making vertical landing	+2/+0†
Spheroid small craft and DropShips making vertical landing	+0/+0†
Terrain Modifiers‡	
Unit landing at manned, friendly airfield‡‡	–2
Unit landing at unmanned, friendly airfield‡‡	–1
Unit landing on road or paved hex	0
Unit landing at unfriendly airfield‡‡	+1
Unit landing in clear hex	+2
Unit landing in water hex	+3
Unit landing in rough or rubble hex (landing gear damaged, cross off 1 box)	+3
Unit landing in elevated hex (non-vertical landing)§	+3
Unit landing in building hex (non-vertical landing)§§	+3
Unit landing in light woods hex	+4
Unit landing in heavy woods hex	+5

*Only applies if spheroid unit lost thrust this turn, otherwise the unit falls and is destroyed (see *Crashes*, p. 81).
†Number on left applies to atmospheric vertical landings, number on right applies to vacuum vertical landings (see *Vacuum*, p. 55, *TO*). NA means the craft cannot land vertically; use stalling rules (see p. 84).
‡Determine all appropriate modifiers based on the hexes of the landing area and then apply only the highest modifier (if there are multiple "highest" modifiers, still only add a single hex modifier). These modifiers are halved for vertical landings.
‡‡The placement of such features, which do not appear on *BattleTech* maps, depends on the scenario being played or a designated gamemaster.
§If the hex is greater than a one level change, the unit automatically crashes in the elevated hex (see *Crashes*, p. 81); determine all damage normally, than reduce to half (round down) before applying.
§§The unit automatically crashes in the building hex (see *Crashes*, p. 81); determine all damage normally, than reduce to half (round down) before applying. If a unit makes a successful vertical landing into a building hex, immediately check for a collapse (see *Collapse*, p. 176).

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SPECIAL MANEUVERS TABLE

Maneuver	Min/Max Velocity	Thrust Cost	Control Modifier	Effect
Loop	Min 4	4	+1	The unit spends its first 4 points of velocity in the loop, though the actual velocity remains unchanged. It ends in the same hex where it started the move, then spends the remainder of its velocity normally.
Immelmann	Min 3	4	+1	The unit gains two altitudes and ends the maneuver facing any hexside. Velocity drops by 2. Remainder is spent normally.
Split-S	Any	2	+2	The unit loses two altitudes and ends the maneuver facing any hexside. Velocity increases by 1.
Hammerhead	Any	Velocity	+3	The unit remains in the hex it started, but changes facing 180 degrees.
Half-roll	Any	1	–1	The unit rolls 180 degrees, reversing left and right sides and up/down facings.
Barrel roll	Min 2	1	0	The unit rolls 360 degrees, ending with the same facing. Velocity drops by 1.
Side-slip	Any	1	0/–1*	Instead of moving into the hex directly ahead, the unit moves into the front-left or front-right hex without changing facing. (Modifier is –1 for conventional VSTOL-equipped fighters only.) When using *Aerospace Units on Ground Mapsheets* rules (see p. 91), the unit moves 8 hexes in the front-left or front-right hex direction and then an additional 8 hexes directly forward.
VIFF	Any*	Velocity +2	+2	Successfully using this "Vector in Forward Flight" maneuver, any VSTOL unit halts its forward momentum and gains one altitude.

*VSTOL units only