

**GURPS**<sup>®</sup>

Fourth Edition

TM

# MASS COMBAT



BY DAVID PULVER

STEVE JACKSON GAMES

# There Will Be War!

Hordes of orcs. Axis invaders. Starbeasts of Jupiter. Sooner or later, your campaign is likely to encounter battles too large to resolve with ordinary *GURPS* combat. The answer: *GURPS Mass Combat*!

This powerful abstract system lets you resolve land, sea, and air battles at *any* tech level with just a few die rolls. Features include:

- Rules for logistics, movement, reconnaissance, and many other things that matter to a military force even when no enemy is in sight.
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- Round-by-round resolution that puts the commander in control of dozens to tens of thousands of warriors, lets him choose his strategies, and then instantly shows him the results of his skill and cunning.
- Equal attention to the *aftermath* of battle: pursuit, casualties, looting, recovering losses, and more.

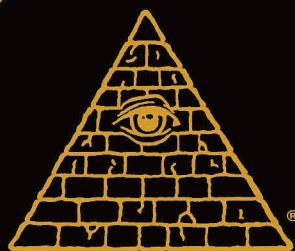
*GURPS Mass Combat* provides extensive examples, quick-reference tables, and ready-to-go stats for the strength, weaponry, and mobility of the units involved. It's all *generic*, too, covering traditional, fantastic, and superscience troops at every tech level, and providing guidelines for customizing their quality, special training, and equipment. And it never loses sight of the fact that *GURPS* is a *roleplaying* game – every hero gets a chance to shine, and the rules emphasize *what the PCs do and what happens to them*.

*GURPS Mass Combat* requires only the *GURPS Basic Set, Fourth Edition*.

By David L. Pulver      Edited by Sean Punch

Cover Art by Abrar Ajmal, Chris Dien, Bob Stevlic, Chris Quilliams, and Leo Winstead

Illustrated by Angela Bostick, Guy Burwell, Eric Hotz, and Dan Smith



**STEVE  
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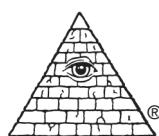
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# INTRODUCTION

**GURPS Mass Combat** contains rules for the abstract resolution of battles between armies containing from hundreds to tens of thousands of warriors. Its focus is *cinematic* – it emphasizes dramatic clashes over the duller (if no less important) business of logistics and campaigning that often win real conflicts. Nevertheless, it does provide simplified rules for moving and supplying troops, and for raising and maintaining armies.

This system is not a set of “war game” or “skirmish” rules for tactical combat, nor is it focused on grand strategy. It’s designed to resolve a big battle that features massed companies of troops *quickly* – with a few die rolls – while still giving commanders scope to make important decisions that could decide the fate of a battle, an army, or even an entire war.

These rules work best when the PCs command their side, or at least a significant portion of that force, in battle. However, they give all heroes – commanders or otherwise – *some* control over their own destiny.

## PUBLICATION HISTORY

This is the latest version of the **GURPS** “Mass Combat System.” It’s significantly revised from the rules in **GURPS Compendium II** (compiled by Sean Punch), which were themselves adapted from an article by Brett Slocum in *Roleplayer*

30. This in turn was a codification of rules first published in **GURPS Horseclans**, by Steve Jackson and Jerry Epperson, and which later appeared in various forms in **GURPS Conan**, **GURPS Japan**, and **GURPS Vikings**.

*You cannot simultaneously prevent and prepare for war.*

– Albert Einstein

## ABOUT THE AUTHOR

David L. Pulver is a freelance writer and game designer based in Victoria, British Columbia. He is the coauthor of the **GURPS Basic Set, Fourth Edition** and the author of **Transhuman Space**, **GURPS Spaceships**, and numerous other gaming products. David has a history degree from Queen’s University, and once upon a time was taking graduate courses in military history at the Royal Military College before he left to design games.

## About GURPS

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**Bibliographies.** Many of our books have extensive bibliographies, and we’re putting them online – with links to let you buy the resources that interest you! Go to each book’s web page and look for the “Bibliography” link.

**Errata.** Everyone makes mistakes, including us – but we do our best to fix our errors. Up-to-date errata pages for all **GURPS** releases, including this book, are available on our website – see above.

Rules and statistics in this book are specifically for the **GURPS Basic Set, Fourth Edition**. Page references that begin with B refer to that book, not this one.

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# CHAPTER ONE

# ELEMENTS AND FORCES

*Sir Richard? It still seemed like a dream. A blacksmith's son turned mercenary, yesterday he'd merely been a wandering adventurer and sword-for-hire. Then he and his friends had discovered Sir Strykland's assassination plot and saved the old baron . . . and he'd been knighted!*

*But it wasn't over yet.*

*"Sir Richard," the baron said, "the rebel lord Strykland and his host will likely be here tomorrow. Thanks to you, his attempt to murder me in my bed has failed, but he's decided to march before I can call up all my vassals. The captain of my guard is dead, and the rest of my household are running about like headless chickens. I need a new captain. That's you."*

*"Me? I mean . . . my lord is serious?"*

*"Indeed. Take command of my men." The old baron turned grim. "Such as they are. With the orcish mercenaries and bandits Strykland recruited, that traitor's forces may have me outnumbered. Even so, I refuse to be besieged in my own castle while his curs ravage the countryside!"*

*"My lord, I'm not afraid to face Strykland. But I've never led anything larger than a party of dungeon delvers. Adventurers."*

*"Huh. You and your friend defeated a dozen assassins." The old baron's eyes flashed. "I trust you. More important, my guard respect you."*

*Richard nodded. He'd saved their lord. Now **they** had something to prove. And anyway, what was battle but cut and thrust on a larger scale? He'd fought in wars before as a mercenary soldier. Second-guessed plenty of idiot commanders as well. Could he do worse? One way to find out . . .*

*"My lord, I accept command!" Sir Richard grinned wolfishly. "I'll bring you Strykland's head on a pike, or die trying!"*

**GURPS Mass Combat** is intended to help gamers resolve situations like the one described above, in which the PCs find themselves – whether by design or by chance – in command of a large military force. Before going into detail on troop types and battles, however, it's important to establish the basic game terms used throughout these rules.

## THE BASICS

Each side in a battle consists of a number of *elements*, each of which is trained and equipped to fight in a particular fashion. Every element has a *Troop Strength* (TS) that reflects its size, type, and quality. For the purpose of resolving a battle, all elements on a side are combined into a single *force*, with a TS equal to the sum of its elements' TS.

The force has an overall *commander*. If the GM wants to fight lower-level battles, or if part of the force is detached, it may be divided into smaller forces (*subordinate commands*) under *subordinate commanders*.

Battles are resolved using a series of Quick Contests modified by the capabilities of the forces involved. These Contests determine whether events such as surprise occur, who's winning the battle, and how many casualties are taken. At each stage, the commanders get to make tactical choices that modify how their forces perform. While force commanders make most of the decisions, other PCs who are assisting or otherwise participating in the battle also have a few choices to make – and if they get lucky, these may influence the battle's outcome.

This procedure lets the GM reduce a long battle to a few die rolls. That's because this is *not* a war game but a roleplaying aid!

## WHAT AN ELEMENT REPRESENTS

An element is the basic "building block" of a force. It may represent:

- A file or squad of soldiers on foot, nominally 10 men but possibly any number up to about 15 men. For TL0-5 armies, it's easiest to think in terms of tens of men; for higher-tech armies, it works better to regard elements as squads.
- A similar-sized lance or troop of about 10 riders and their mounts.
- A single vehicle and its crew.
- A heavy weapon or artillery piece and its crew (plus draft animals, for horse artillery).

Elements make up the *fighting force*. The rules treat rear-area *supply* forces differently and with greater abstraction. See *The Logistic Force* (pp. 13-14).



## UNITS

Elements belonging to a regular military organization may be grouped into permanent *units* – companies, regiments, battalions, cohorts, brigades, fleets, legions, corps, armies, and so on, as appropriate to the period and culture. In game terms, this means creating several smaller forces (the units) and then totaling their statistics as a single force before a campaign or a battle. Existing “unit” distinctions play no role in the rules, which deal strictly in elements and forces, but often determine what elements a particular force commander has under his control.

For instance, an NPC major might tell a PC captain:

*Captain, I want you to take your 7th Roanoke Rifles (the captain's battalion-sized unit: 16 elements), Battery A of the 2nd Artillery (another four elements), Graham's Irregulars (three elements commanded by another PC, representing a force of local partisans), and that nut with the balloon (another single element) and capture Elk's Crossing. Questions?*

In game terms, the individual elements that make up the Rifles, the attached Battery A, the local partisans, and “that nut with the balloon” (a PC inventor treated as a Hero element) constitute the captain's *force*. However, since they're existing units, the GM already has their elements worked out, so it's just a matter of adding up their statistics.

# BUILDING AND MAINTAINING YOUR FORCE

As previously mentioned, these rules distinguish between the *fighting force* (combat troops) and the *logistic force* (rear-area support). When they refer simply to the “force,” they mean the fighting force – and that's the kind of force described here. Rules for establishing and operating a logistic force come later (pp. 13-14), as the attendant complications are only relevant to lengthy operations in which PCs are in charge of supply as well as battlefield command.

## Mini-Glossary

**element:** The smallest part of a *fighting force* that's assigned game statistics – a squad of troops, a vehicle, a weapons team, etc.

**feature:** A special trait that an *element* may have; e.g., “All-Weather.”

**fighting force:** All the combat *elements* that one side has in play.

**logistic force:** An abstract representation of the supply and support capabilities and personnel that maintain a *fighting force*.

**mobility (Mob):** A classification that indicates how an *element* (and by extension, a *fighting force*) will move; e.g., “Foot” or “Fast Air.”

**special class or class:** *Elements* that aren't just foot soldiers with melee weapons may belong to one or more special classes; e.g., “Artillery” or “Recon.” *Troop Strength* superiority in a particular class can provide combat bonuses in certain circumstances.

**transport weight (WT):** An abstract measure of how bulky and massive an *element* is. Some elements are too large to transport!

**Troop Strength (TS):** A numerical measure of fighting power that is assigned to each *element* and added up for an entire *fighting force*.

## ELEMENT TYPES

*Elements* are the building blocks of a fighting force: soldiers, crewed vehicles, or weapons teams. Each element type has a name and is rated for Troop Strength (TS), special class (Class), transport weight (WT), mobility (Mob), cost to raise (Raise), cost to maintain (Maintain), and TL. Descriptions of specific elements (e.g., “Heavy Cavalry” or “Light Infantry”) appear in Chapters 2-3, along with stats in tabular format, like so:

Element	TS	Class	WT	Mob	Raise	Maintain	TL
Light Infantry	2	Rec	1	Foot	40K	8K	1

This shows that for the “Light Infantry” element type, Troop Strength is 2, special class is Recon, transport weight is 1, mobility type is Foot, and costs for each squad-sized element of 10 men are 40K (\$40,000) to raise and 8K (\$8,000) to maintain per month. The element is in use from TL1.

## Customization

You can customize stock elements by selecting the following details:

**Features:** Special features added to tailor the element (see *Optional Features*, pp. 8-11.)

**Quality:** The quality of the troops and their equipment (see *Quality*, pp. 11-12).

If you customize an element, adjust its TS, costs, and possibly other characteristics based on your decisions, as described in the associated rules. The GM may wish to create a new element record that reflects these changes and gives the element its own name and description.

For example, suppose we take the bare-bones Light Infantry element, add the Airborne, Neutralize C3I, and Night features, and then upgrade quality with both Fine equipment and Elite troops. The result is a more interesting element that we name “Airborne Ninja.” Use the following format for customized element records:

## Airborne Ninja (TL4)

### Light Infantry

These are stealthy spies and assassins equipped with hang-glider kites (to drop out of the sky from dragons or air boats) and armed with melee weapons and gunpowder bombs. Each element is 10 ninja.

TS: 6. WT: 1.

Classes: Recon. Mobility: Foot.

Quality: Fine equipment; Elite troops.

Features: Airborne; Neutralize C3I; Night.

Cost: \$186K to raise; \$24.4K to maintain.

In the above example, “Airborne Ninja” is the new name we assigned to a modified Light Infantry element. Light Infantry is the base element, which we keep track of in case we want to make later upgrades. *Classes* and *Mobility* come from the base element; *Quality* and *Features* show the choices made to customize the element; and *TS*, *WT*, and *Cost* are found by applying these choices to the base values from Chapter 2.

## Quantity

When building a force, decide how many instances of the element the force incorporates. Multiply TS, WT, Raise, and Maintain by number of elements. For example, five elements of airborne ninja have TS 30, total WT 5, and cost \$930K to raise and \$122K to maintain.

## TROOP STRENGTH (TS)

*Troop Strength* (TS) rates an element’s default fighting strength. It encompasses weaponry, protection, fighting style, ferocity, skill, and physical strength.

## Parenthetical (*Support*) TS

Some elements have a Troop Strength in parentheses; e.g., “TS (20).” This indicates a *support* TS. It means that the element’s full TS can only be used when calculating special class superiority – never when determining the TS ratio. Support TS designates troops that can perform a particular tactical role (e.g., artillery bombardment or antiaircraft fire), as indicated

## Neutralizing Classes

Some elements have the capability to neutralize special class superiority but not to achieve it on their own. For example, antiaircraft guns have the class “Neutralize Air” while antitank guns have “Neutralize Armor.” This may be an innate property of the basic element or the result of an add-on feature.

The following are the most common neutralized classes (with typical examples): Air Combat (antiaircraft weapons), Armor (antitank weapons or mines), Artillery (high-tech point-defense, counter-battery radars), C3I (special-ops forces, deep-strike weapons), Naval (naval mines, torpedo boats), and Recon (decoys, jamming). “Neutralize Fire” is rare; usually, it makes more sense to choose an element that belongs to the Armor class.

An element can’t neutralize a special class to which it belongs.

by Class, but that lack the ability to close with and destroy the enemy, and thus to win the battle on their own.

## SPECIAL CLASS (CLASS)

Many elements belong to one or more *special classes*. For example, Light Infantry (and the Airborne Ninja we based on them!) belong to the Recon class. Other elements belong to no special class at all; this is the default for Medium and Heavy Infantry armed with melee weapons.

A force that has TS superiority *in a particular class* (that is, it has “special class superiority”) may enjoy an advantage in certain battles or the lead-up to them. For example, a force achieves Recon Superiority if it has a 2:1 or better advantage in TS of elements from the Recon class. This provides an advantage in detecting and surprising the enemy.

## Air Combat (Air)

The element is capable of air combat operations. Air combat is treated abstractly; the rules make no explicit distinction between air-to-air and air-to-surface capability.

## Armor (Arm)

These are land elements with sufficiently heavy protection to ignore the attacks of most ordinary opponents. Armor elements usually have sufficient offensive power to defeat rival elements of this class, but the Armor class is *not* primarily about firepower. Far more important is the ability to ignore ordinary melee weapons, small-arms fire, and artillery fragments. Examples include tanks and other well-protected armored fighting vehicles – and giant monsters!

## Artillery (Art)

This represents batteries of large-caliber heavy weapons employed more often against areas than against point targets; e.g., siege engines, field guns, naval guns, heavy mortars, howitzers, multiple rocket launchers, and mass-driver artillery. It can also be used for supers or mages capable of large area-effect attacks. Beam weapons *aren’t* usually classed as Artillery unless they fire superscience beams that pass through solid objects.

## Cavalry (Cv)

These are fast-striking land elements that have much greater speed than a normal man on foot, which allows them to charge, pursue, and outflank the enemy; e.g., horse cavalry, relatively light tanks, jeeps with machine guns, and packs of wolves. Their advantages are limited in bad terrain or during a siege.

## Command, Control, Communications, and Intelligence (C3I)

The element enhances the commander’s situational awareness through specialized intelligence-gathering, information warfare, and/or long-range surveillance capabilities of a higher order than those of Recon elements. Examples include airborne early warning aircraft, surveillance networks, spy satellites . . . and

*An army, like a serpent, travels on its belly.*

*– Frederick the Great, King of Prussia*

psychics or oracles. High-tech headquarters command posts may also qualify as C3I elements. At TL0-5, most forces have *no* C3I elements, barring supernatural assistance.

## **Engineering (Eng)**

These are elements trained and equipped for combat engineering operations, including siege warfare, bridging obstacles, and breaching or erecting barriers.

## **Fire (F)**

These are land elements capable of providing direct battlefield firepower at greater range than that of a pistol or a thrown javelin, but with less range or area of effect than artillery. The class encompasses bowmen, musketeers, riflemen, and so on. Tanks belong to this class as well as to the Armor class if they're equipped with antipersonnel weapons (e.g., machine guns).

## **Naval (Nav)**

These are water elements capable of sustained combat on or under water; e.g., mermaids, sea monsters, warships, hovercraft, and patrol boats. Water elements not designed for sustained naval combat – e.g., small torpedo boats and minelayers – *don't* belong to this class, even if they can move and fight at sea. These are instead classed as *neutralizing* Naval. Naval also doesn't count anything whose "amphibious" capability is restricted to swimming or crossing small rivers and streams.

## **Recon (Rec)**

These are land elements trained or equipped for patrolling, raiding, and scouting operations. Infantry normally belong to this class if they operate in skirmish formation – like ancient light infantry or modern riflemen – rather than in a mass. A force that lacks Recon is easier to surprise.

## **Transport (T)**

An element with the Transport (T) capability can move other elements. The number following the T is the maximum transport weight (WT) it can carry. For example, "T2" indicates a transport that can handle two WT 1 elements or a single WT 2 element.

An element can't be carried if its *individual* WT exceeds the capacity of the *individual* carrier. For instance, a WT 4 element requires T4 or greater to move it; four T1 transports couldn't "combine" to carry it.

## **TRANSPORT WEIGHT (WT)**

*Transport weight* (WT) abstracts an individual element's bulk and mass for the purpose of determining whether another

element with the Transport (T) ability can carry it. This reflects volume and area as much as weight. An element that's rated “–” here is so large or awkwardly sized that it *cannot* be transported.

## **MOBILITY (MOB)**

*Mobility* (Mob) indicates how an element moves. An element that has "0" mobility *cannot* move unless transported by another element.

*Mobility vs. Class:* It's quite possible for an element to belong to the Air Combat or Naval special class (see *Special Class*, pp. 6-7) without having any form of air or water mobility; e.g., a tethered balloon.

### **Land Mobility**

*Foot:* Elements that move on foot using muscle power. This includes not only infantry but also slow draft animals and large, lumbering beasts.

*Mechanized (Mech):* Elements that move using *powered* tracks, legs, or highly capable off-road wheels, enabling them to traverse all but the worst terrain.

*Motorized (Motor):* Elements that move using regular powered wheels, which give high road speeds but inferior off-road capability; e.g., trucks or armored cars.

*Mounted (Mtd):* Elements that move *quickly* over ground under muscle power – notably horsemen and other four-legged or swift runners.

### **Water Mobility**

*Coastal (Coast):* Elements that travel by water but lack the provisions, endurance, stability, and/or size for extended sea voyages while carrying a militarily significant payload – boats, war galleys, mini-subs, etc.

*Sea:* Elements with sufficient seakeeping ability for "blue-water" (ocean) operations, such as most ships, full-sized submarines, and sea creatures.

### **Air Mobility**

*Fast Air (FA):* Elements capable of extended high-speed flight, like a modern airplane.

*Slow Air (SA):* Elements capable only of short-range flight, like a dragon or a helicopter.

## **COST**

Cost consists of two statistics, *Raise* and *Maintain*, that rate the expense to form the element and operate it, respectively. These values are measured in \$, but in practice – especially at low TLs – many commanders "pay" part or all of these expenses by conscripting civilians, appropriating mounts and vehicles, and foraging, pillaging, and looting.

## Cost to Raise (Raise)

This represents the combined cost of buying or making equipment (and animals, if any), recruiting manpower, and training the element – including maintaining it during training. It is paid just once. However, when replacing casualties, find the replacement cost by multiplying Raise by the percentage of casualties that need to be replaced.

## Cost to Maintain (Maintain)

This is the cost to provide the element with supplies, food, and pay for a month, either in the field or during realistic training.



## OPTIONAL FEATURES

These modifications give elements special traits – usually but not always upgrades. The GM decides which options exist in a particular setting, given its genre, TL, and so forth. Multiple justifications are often possible. For example, “Night” could represent high-tech sensors and navigational gear (along with the training to use them) . . . or recruitment from races that have Night Vision or other extended senses . . . or even cinematic martial-arts abilities for fighting in the dark!

### Customization Cost

This is expressed as a percentage of the element’s base cost to raise and/or maintain. Most features have a fixed value. However, some (e.g., Disloyal) have GM-assigned values, and vary by situation.

The percentile modifiers here and under *Quality* (pp. 11-12) are *additive*. A few are negative. The sum of all feature and quality modifiers has a floor of -80%. Treat anything worse (e.g., -100%) as -80%.

When adding features to an existing, customized element type (like the Airborne Ninja we created from Light Infantry), be sure to use the *base* cost of the original element (Light Infantry, in the example), not the modified cost.

### Airborne

#### +20% to Raise and Maintain

This feature is for land mobility elements. It means the element is trained and equipped for parachute, glider, or helicopter assaults; see Chapter 4 for rules. To use this capability, the element must be carried by a Transport element with air mobility. The GM may allow Airborne elements that also have the Sealed feature (p. 10) to deploy from orbit, representing “space marines” with reentry capsules, ablative gliders, etc.

### All-Weather

#### +20% to Raise and Maintain

This feature is only available for elements with air or water mobility, or that also have the Airborne feature. In bad weather, air and water elements *without* this feature contribute half TS to the battle, while Airborne elements *without* this feature lose the use of the Airborne feature.

### Disloyal

#### GM-Assigned

The element is composed of troops who, regardless of their quality, are reluctant to serve and hostile to the force commander. Examples include a contingent of “allies” from a subject state, a penal battalion, unhappy conscripts, unpaid mercenaries, and slaves.

If Disloyal elements make up more than 10% of a force’s TS, there’s a chance they may rebel. *After* calculating TS but *before* resolving the battle, the chance of revolt on 3d is (disloyal element’s percentage of TS/10) + 2.

Should Disloyal elements rebel, add their TS to the *other side’s* TS. In addition, a force facing a rebellion loses any bonuses for defensive terrain or fortifications, since the revolt of a large fraction of their troops counters such benefits.

The GM should assign this feature to elements based on circumstances and remove it when these change. A PC who makes appropriate Influence rolls – possibly aided by inducements such as bribery or extra pay! – may be able to prevent or foment Disloyalty.

### Fanatic

#### Special

The element is so utterly devoted to a cause or a leader that it’s willing to sacrifice everything for its victory – possibly including their lives, their commander, and other elements! As long as a fanatic element is fighting for its cause, it counts as Impetuous (p. 9). In addition, if a force is at least 10% fanatic elements by percentage of total elements *or* total TS, its commander must make a successful Leadership roll, at -1 per 10% fanatics, to choose Full Retreat or Parley. If he fails, fanatic leaders will attempt to depose or assassinate him. Fanatics are raised as if they had above-average troop quality, but at reduced cost (see *Troop Quality*, pp. 11-12).

### Flagship

#### No Extra Cost

If a force has Naval elements, *one* Naval element that transports the force commander may be designated a “flagship” (or

a “command ship,” if a small battle) at no cost. It counts as a C3I element in naval or amphibious battles only. Each force can only have one such element, but the designation may be switched between battles, if desired.

## ***Hero***

### **GM-Assigned**

The element is an individual or a small group (e.g., a party of PCs) with far more capability than numbers would otherwise indicate – usually due to vastly superior attributes or skills, exotic advantages, special equipment, magic, or the GM’s favor.

Hero elements may have *any* desired multiple to TS. This doesn’t affect cost unless the GM wishes it to! (Mercenary heroes may of course charge more for their services.) The multiple is up to the GM, and should be based on estimated effectiveness relative to an ordinary example of that element. The GM should also feel free to use this rule to increase the TS of monsters (see Chapter 2 for examples) drastically for situations where a single giant monster can battle a modern army, eat Tokyo, etc.

The GM should take into account the fact that each element represents a squad, a vehicle and its crew, or a heavy weapon. An individual PC built as a 150-point warrior might be as effective as an actual squad of Elite-quality troops; in that case, the Hero element would have identical stats to the usual squad, differing only in that it consists of one person instead of 10. On the other hand, an element that represents an entire squad-sized party of 200-point special operators may be as effective as four or five Elite squads.

The GM should also feel free to add or remove special classes, mobility types, and other features for Hero elements. If the Hero is more-than-human or otherwise enhanced already, add Super-Soldier (p. 10). If a Hero who’s ostensibly a rifleman can fly like a speeding bullet, add Fast Air mobility. If he can shoot gamma-ray laser beams from his eyes, add the Fire or possibly Neutralize Armor class. Other abilities may not affect the combat system but can be roleplayed; e.g., teleporting himself (or others) would simply let him *ignore* mobility rules.

The GM may even permit a Hero element to contribute Logistic Strength (p. 13), if the Hero’s abilities permit exceptional feats of noncombat support such as repairing, healing, feeding, or otherwise sustaining the force.

## ***Hovercraft***

### **+80% to Raise and Maintain**

Any TL7+ element that has either Coastal or Motorized mobility may be given this feature. A Hovercraft element functions as if it had whichever of Coastal *or* Motorized mobility would be most advantageous in the scenario. In addition, it treats Desert and Swampland terrain as open terrain.

*If men recognize no law superior to their desires, then they must fight when their desires collide.*

## ***Impetuous***

### **No Extra Cost**

Impetuous elements are eager to charge the enemy – with or without orders! This feature is characteristic of clan or tribal warriors, knights, fierce monsters, and similar elements. If a force contains at least 10% impetuous elements by percentage of total elements *or* total TS, the force commander gets +1 to his *first* round’s Strategy roll (only) if he chooses Attack, All-Out Attack, or Raid, as the element’s élan inspires the entire force. If he chooses any other option, though, he must try a Leadership roll at -1 per 10% of the force who are Impetuous (by number or TS, whichever is greater). Failure means he gets -2 to Strategy instead, due either to having to expend effort to restrain the impetuous elements or to those elements charging and spoiling the plan.

## ***Levy***

### **Special**

These are troops that have an obligation to serve. They aren’t raised and paid for by their commander, but are supported instead by their own leaders or communities. Examples include local militias, feudal and city levies, and civilian transport pressed into service. (Elements in which *individuals* rather than entire units are obliged to serve as conscripts *don’t* count as levies.)

Assume that the initial grant of rights, land, and/or equipment involved in establishing a levy is equal to the cost to raise an ordinary element. The GM may waive this expense if some equivalent favor was done; e.g., a town liberated from its enemies might provide an annual levy in return.

Modify cost to maintain as follows: For up to two months a year, levies will serve at *no* cost to maintain as long as they’re within two days’ journey (at their speed) of their home, or at *half* cost if further away (since the commander must pay for extra supplies). After that, they’ll want to return home or be maintained as mercenaries (p. 10). Make a reaction roll every six months. On a “Good” or better reaction, they’ll continue to serve as mercenaries; otherwise, they’ll take their pay or loot and attempt to return home (unless doing so would obviously be impossible).

## ***Marine***

### **+20% to Raise and Maintain**

This feature is for land mobility elements. It means the element is trained and equipped for amphibious assaults on beaches, defended rivers, etc.; see Chapter 4 for rules. It gets its *full* TS during an amphibious assault instead of having its TS halved. To use this capability, the element must be carried by a Transport element with water mobility.

– R. H. Tawney

## Mercenary

### Special

If a state can't afford to raise certain troops, or lacks the technological or cultural basis to do so, it may employ mercenaries. Mercenary elements are *hired*, not raised. Examples include not only actual professional mercenaries but also paid allies and independent security contractors. Some governments even rent out their own military forces as mercenaries to other governments or to international agencies.

Mercenaries are existing troops; therefore, they cost the commander or government that's hiring them nothing to *raise*. They're more expensive over the long term, though, because they aim to make a profit. The cost to hire a mercenary element is normally 1.5x the cost to maintain that kind of element. Mercenaries hired for lengthy contracts (a year or more) may be available at lower rates, typically 1.25x maintenance cost. These figures include both the cost to maintain the mercenaries and the premium for hiring them.

Other deals may be possible, especially if the mercenaries are the major troops involved or their commander is hired to run the battle. For instance, the mercenaries might be paid only their normal cost to maintain but receive a bonus if their side wins the war, after they capture a particular objective, etc.

The GM decides what mercenaries, if any, are available in the region. Remember that while their current employer didn't pay the cost to raise them, *somebody* did; thus, the GM, not a PC commander, decides how NPC-led mercenaries behave. Most treat their commissions honorably or they wouldn't stay in business for long – and in fact rulers sometimes hire mercenaries *because* they cannot trust their own troops. But mercenaries are their own men, and might be tempted to desert or change sides for a better offer or if their prospects are dire; if so, the GM may wish to treat them as a Disloyal (p. 8) until conditions improve.

## Neutralize (Class)

### +25% to Raise and Maintain

Elements may be given the ability to neutralize particular special classes. Some of these functions are built into the standard elements in Chapters 2-3. Others can be added with appropriate in-game justification. Some examples:

- *Neutralize Artillery* for high-tech laser defense systems or for magical force fields.
- *Neutralize C3I* for assassins or for missiles that home in on radio emissions.
- *Neutralize Naval* for aircraft with anti-ship missiles or mines.
- *Neutralize Recon* for dedicated area-jamming systems.

Adding Neutralize Armor, Air, Cavalry, or Fire is not recommended; these abilities should be fundamental to element types if available at all.

## Night

### +20% to Raise and Maintain

An element with this feature can scout and fight in the dark with little or no penalty – usually thanks to advantages such as Dark Vision, Infravision, Night Vision, or Scanning Sense (Radar), or equivalent equipment. Elements *without* this feature

have their TS halved at night or in low-light conditions; e.g., underground or in magical darkness.

## Nocturnal

### No Extra Cost

There's no cost for this optional feature, but it's normally innate to an element rather than something that can be added. The element treats night as if it were day – and vice versa! This is common for fantasy races that hate or fear sunlight, such as certain orcs, trolls, and undead. A Nocturnal element that buys the Night feature (then called "Day") has no penalty.

*It is only those who have neither fired a shot nor heard the shrieks and groans of the wounded who cry aloud for blood, more vengeance, more desolation. War is hell.*

– General William Tecumseh Sherman

## Sealed

### +20% to Raise and Maintain

The element can operate in environments that are otherwise completely hostile; e.g., unbreathable atmospheres or vacuum. This isn't the same as gas protection; *all* TL6+ elements are assumed to have that at no extra cost.

## Super-Soldier

### +200% to Raise and Maintain

The element has powers or abilities over and above what's "normal" for the basic troop type at its TL. For example, Super-Soldier might represent an infantry element made up of combat androids or vampires. *Double* the element's base TS; this is an advantage despite the cost because it packs more TS into the same WT. Apply the modifiers under *Quality* (pp. 11-12) to doubled TS, not to base TS. Elements with TS 0 cannot have this feature.

## Terrain (Type)

### +20% to Raise

The element has an advantage in a particular type of *difficult* terrain due to intimate knowledge, magical affinity (e.g., a dryad in the woods), or gear and training (e.g., skis and winter camouflage in the arctic). The following options are allowed:

- *Arctic* (also covers winter in cool or subarctic conditions)
- *Desert*
- *Jungle*
- *Mountain*
- *Swampland*
- *Woodlands*

# Unliving Troops

Forces may include elements made up of robots, golems, or other constructs, or of spirits or undead. Buy these as ordinary troops – but they’re likely to have such features as Sealed (p. 10) and Super-Soldier (p. 10). While they rarely desire pay and have no mothers to weep for them, they often require special effort to create, build, or maintain, so purchase and operating costs tend to even out.

Troop quality determines how well these warriors are programmed or how easy they are to command. Mindless automatons with no initiative tend to be of Inferior or Average quality, while ruthless super-intelligences are Elite. Robots are usually easier to build but harder to maintain in the field. This might not be true for extremely advanced machines, though – in which case there may be little game difference between humans and robots!

These terrain types normally impose logistical penalties if the element is operating without access to a road network and cannot fly. Elements with the correct Terrain feature suffer reduced penalties. The Terrain feature can also effectively *double* TS under some circumstances when operating in the indicated terrain; see Chapter 4.

The Terrain feature isn’t permitted for terrain types – e.g., open ground or cities – that are common enough that standard element differentiation already covers operations in them (e.g., Engineering and Recon troops in cities).

## QUALITY

Quality is rated in two steps: *equipment quality* and *troop quality*. Leave ordinary-quality troops unchanged; they require no particular notation.

### Equipment Quality

This represents the availability, construction, reliability, and so on of *gear*. At TL0-4, it represents absolute equipment quality; it’s the difference between one TL3 Heavy Infantry element being outfitted with spear, cheap shortsword, shield, padded jacket, and leather cap (Basic equipment), and another whose men have a spear and a thrusting broadsword, and who are clad neck to toe in mail (Fine equipment). At higher TLs, quality is *relative to the TL* and type of element.

Thus, especially at low TLs, equipment quality primarily represents the lavishness and construction of weapons and armor. However, it might cover anything from the quality of a soldier’s boots or horse to the availability of satellite navigation and electronic warfare systems – whatever is significant for the TL. For vehicle elements, such as tanks and aircraft, it represents the vehicles’ reliability, maneuverability, weaponry, protection, electronics, etc.

Equipment quality levels are:

- **Very Fine:** Costly, state-of-the-art equipment. Usually issued by rich states, or by less-wealthy military forces to picked units. This can also represent the personal equipment of warrior nobility and their immediate bodyguard. In peacetime, there may be complaints that the treasury can’t afford this!

- **Fine:** Expensive, up-to-date equipment – or sometimes Good-quality gear upgraded by practical, battle-tested field expedients and add-ons. It can also represent gear that’s a bit *too* state-of-the-art, with bugs that need fixing.

- **Good:** Above-average equipment. The soldiers won’t complain *too* much, and may even believe it when they’re told that they have the best kit possible . . . until they run into an opponent who was issued Fine or Very Fine gear.

- **Basic:** Enough gear to do the job, but even the least-educated soldier or civilian knows that there’s better stuff out there, and hopes that their men don’t run into it. A lot of cheap-quality technology may be used. Basic gear is common for mass-conscript armies, militia, and well-equipped insurgents.

- **Poor:** Less than the minimum expected for the TL: seriously outdated, vulnerable, improvised, unreliable, or obsolete. This can also represent early prototypes. This gear isn’t any easier to maintain than Basic equipment, but it *is* cheaper.

Few fighting forces have a uniform standard of gear. The TL5 royal guard Heavy Cavalry might have Fine equipment while the TL5 Line Infantry make do with Basic gear. And the native auxiliaries’ Horse Archers may be only TL3 but equipped with Fine kit . . . for *their* TL!

### Equipment Quality Table

Quality	TS Modifier	Raise	Maintain
Very Fine	+150%	+200%	+150%
Fine	+100%	+100%	+100%
Good	+50%	+50%	+50%
Basic	+0%	+0%	+0%
Poor	-25%	-25%	-25%

### Troop Quality

Troop quality is an abstract rating of an element’s fighting skill, training, cohesion, discipline, and morale. Quality levels are:

- **Elite:** Picked troops, seasoned by a high proportion of combat veterans. Examples are special operators, elite guard units, and troops raised from childhood as full-time soldiers. This category can also include especially heroic or fierce creatures.

- **Good:** Long-service professional soldiers, or troops from warrior backgrounds that emphasize early and realistic combat training.

- **Average:** The mass of ordinary soldiers. This can include decently trained and led conscripts; long-service soldiers in a force with indifferent leadership, training, or morale; and enthusiastic and skilled part-time militia.

- *Inferior*: Soldiers in a military force that does little realistic training and has limited combat experience. The troops might on average be good, courageous fighters as *individuals*, but as a *group* they function at below-average levels, and their technical standards (e.g., for maintenance of gear) are often bad. This encompasses “police” or “parade ground” armies mostly designed for prestige and oppressing the populace;



## RAISING A FORCE

Commanders who take over a standing army, an organized militia, or another existing military organization will already have forces available; the GM should simply decide on their composition. However, the PCs may sometimes have the time, money, and opportunity to raise some or all of their *own* troops. This is often the case for rulers, commanders of TL0-4 military forces, mercenary captains, and those leading irregulars (such as guerrillas). In that case, use these rules to determine the time and cost required.

Those in charge of managing a military campaign also have to consider how the force is fed and supplied. Every element has a monthly cost to maintain, which must be met. The PCs may have an existing budget, equal to the cost to maintain their entire force for a certain number of months. As the force takes casualties, some of the budget may need to go to replacing losses – or to raising completely *new* forces, if the conflict drags on for long enough. In addition to simply paying for the forces, the matter of getting supplies to them may become important.

### COST TO RAISE A FORCE

Raising a force involves recruiting (or reassigning) personnel, training them, and acquiring new equipment. Costs to raise elements of various types are given in Chapters 2-3. These may be modified by *Quality* (pp. 11-12) and *Optional Features*

units of well-trained but unenthusiastic conscripts; and enthusiastic but very inexperienced troops. It also includes otherwise good forces that are badly led due to a shortage of professional NCOs, or that are hampered by endemic corruption, bullying, or political or religious interference, or by mixtures of troops that lack a common language.

The *Troop Quality Table* shows the effects of quality on an element’s statistics. High-quality troops cost more to raise (primarily due to better training) and to maintain (owing to better or more regular pay and rations, as well as the expense of frequent training maneuvers, relative to sitting in barracks). While above-average troops demand a lot more effort to raise than do ordinary troops, they don’t cost *that* much more to keep. Replacing losses – which is based on cost to raise – is expensive, however.

### Troop Quality Table

Quality	TS Modifier	Raise	Maintain
Elite	+100%	+200%*	+40%
Good	+50%	+100%*	+20%
Average	+0%	+0%	+0%
Inferior	-50%	-50%	-50%

\* Halved (Good is +50% and Elite is +100%) for Fanatic troops.

(pp. 8-11). The GM decides what sorts of troops are available. Those roleplaying military leaders will usually want to raise the best troops they can, given their budget!

### TIME TO RAISE A FORCE

Raising a force also takes *time*. The minimum time to raise an individual element is determined by its cost, as shown in Chapters 2-3. For every \$10K the element costs to raise (as given by its *Raise* statistic), it takes one week to recruit, build, and train, with a minimum of 10 days regardless of cost. Multiple elements can be raised simultaneously, however!

An element can be raised in 75% of that time (minimum 7 days) by spending *twice* as much to raise it. It can be raised in 50% of that time (minimum 5 days) by spending *four times* as much.

The GM should modify these rules to suit the nature of the element. For example, he might allow a necromancer to raise an element of zombies off a corpse-littered battlefield in a matter of days – *if* the mage has the necessary skills and energy!

### Improvements

The GM may allow troops to improve in quality or acquire new special features, if events justify it. Time to retrain and reequip is then based solely on the cost of the upgrades.

## ECONOMIC CONSIDERATIONS

The GM may opt to split a budget between a “war chest” of initial funds on hand and a smaller “revenue” that arrives on a regular basis. Revenue might be monthly but is as likely to be

seasonal or annual, based on a state budget, harvest time, or taxes. The GM may further wish to make revenue collection dependent on control of revenue-generating territories – cities, mines, farmlands, trade routes, etc. In that case, it may change if holdings are lost or devastated, or gained by conquest.

# THE LOGISTIC FORCE

Military forces are followed by a “tail” of support personnel: an ancient army’s camp-followers, mules, and baggage train; a modern army’s fuel and ammunition trucks, supply centers, and rear-echelon troops; and so on. For naval and air forces, much of this tail is left in port or at air bases, but it still exists and must be accounted for.

Logistics capabilities are treated as a simplified whole rather than broken down by element. Each force is rated for up three Logistic Strength (LS) values:

- *Air*: Supply aircraft, pack-wyverns, helicopters, etc., and the troops that support them.
- *Land*: Bearers, wagons, mules, trucks, workshops, ammo dumps, etc.
- *Naval*: Supply ships, as well as maintenance facilities based at sea or in port.

## STATISTICS FOR LOGISTICS TROOPS

Logistics troops have simplified statistics:

*Logistic Strength (LS)*: The maximum total cost to maintain of *combat* troops that the logistics troops can support, expressed in thousands of \$. This represents delivering supplies, performing maintenance, and other “rear area” services (medical, cooking, etc.). Don’t count the cost to maintain the logistics troops themselves in this figure!

*Cost to Raise*: This is the cost to raise the logistic force. It is  $\$5K \times LS$ . Multiply by 2 for naval LS or by 4 for air LS.

*Cost to Maintain*: The monthly cost to support the *logistic force*. This is 10% of the cost to raise that force. It doesn’t count against LS – logistics troops are assumed to have sufficient capacity to support themselves first, with the excess supporting the fighting force.

*Class*: Logistics troops are classed as follows:

- *Air Logistics*: Can support *all* elements. Need not accompany the fighting force, but must be based at an airbase. Their LS can be divided among multiple fighting forces.

- *Land Logistics*: Can support elements on land provided that a clear supply line can be traced back to home base. They must “accompany” a specific fighting force.

- *Naval Logistics*: Can support naval elements and land elements at a port, and can also support elements on land if paired with equal strength of Land Logistics. Need not accompany the fighting force, but must be based at a port. Their LS can be divided among multiple fighting forces.

Logistic forces may also be rated for their personnel as part of their description, but this doesn’t have a direct rules effect.

It may have a major *roleplaying* effect (“We’ll convert 2,000 logistic troops into infantry!”).

*Example*: Our forces have a total cost to maintain of \$5,500K (\$5.5 million). Their supply line runs over land and water. They require a land LS of 5,500 and a naval LS of 5,500 to support them. The land LS must be with the force; the naval LS might represent some or all of the LS available from a naval base.

The force’s Land Logistics would cost  $\$5K \times 5,500 = \$27,500K$  to raise and 10% of that, or \$2,750K, to maintain. Its Naval Logistics would cost  $\$5K \times 5,500 \times 2 = \$55,000K$  to raise and \$5,500K to maintain.

## MAINTAINING A FORCE

An army may travel on its stomach, but it won’t go very far if you don’t pay it! These rules provide costs for feeding, paying, and replacing troops. An element *must* be maintained each month if it is stay functional.

First, work out the *total* cost to maintain both the fighting force *and* the logistic force. The force’s quartermaster – or whoever is in charge of its logistics – then makes an Administration roll for his force, with results as follows:

Result	Effect on Cost
Critical Success	-15%
Success by 5+	-10%
Success by 0-4	No Change
Failure	+10%
Critical Failure	+15%



Next, allocate the available funds. Pay the cost to maintain the logistic force first – the rear areas always get good supplies! After that, any remaining support goes to the fighting force, and must be delivered by a (properly maintained) logistic force, as detailed above. Thus, a fighting force that requires \$7,400K to maintain calls for both spending that money *and* having a maintained logistic force with LS 7,400 to deliver it.

You may also allocate funds to replace losses in the force (see *Force Replacements*, p. 14). This represents the medical treatment of casualties, the repair of damaged equipment, and the arrival of replacement troops.

## Reduced Readiness

It’s possible to pay less than the required amount to maintain a fighting force. This may involve skimping on pay, deferring necessary maintenance, providing substandard food or housing, or other economies. For simplicity, there are two levels of reduced maintenance:

## Super-Healing and Force Replacement

A force with access to such things as magic, superscience, or advanced nanotechnology for healing casualties might be able to do so much faster than indicated by *Force Replacements* (below)! The GM can represent this simply as an additional “free” budget per time period that’s applicable only to replacements, outside of the normal logistics rules; e.g., a heroic fantasy cleric with divine healing powers may provide the equivalent of \$10K of force replacements per day (or \$100K per 10 days, or \$300K per month). If the super-healers remain behind the lines, don’t represent them with elements; they’re part of the logistic force. On the other hand, the GM could assign this ability to a particular Hero or C3I element.

**Low Readiness:** This represents troops who are receiving only a limited allotment of pay and other supplies. Halve their cost to maintain but *also* halve their TS. The TS reduction lasts for one month after full maintenance resumes, as the troops get back up to full performance.

**No Maintenance:** If the element isn’t maintained *at all*, it experiences the above effects on TS and in addition suffers 5% casualties, representing breakdowns and desertion.

**Note:** For record-keeping purposes, it’s generally easier to maintain the entire force at the same readiness level.

## Maintaining a Force in Bad Terrain

*Arctic* (and cold, snowy winters in cool temperate or sub-arctic regions), *Desert*, *Jungle*, *Mountain*, *Swampland*, and *Woodlands* terrain impose extra logistical challenges for land elements. For troops who spend all or most of the month operating in such terrain, multiply cost to maintain by 2 (by 1.5, for *Woodlands*) unless the force remains tied to extant transportation networks – road, rail, canal, etc. – that bypass the terrain (which gives a penalty on any pre-battle recon rolls . . .).

Elements with the appropriate Terrain feature reduce these multipliers by 0.5; e.g., no extra cost in *Woodlands*, or  $\times 1.5$  cost elsewhere.

## Force Replacements

Replace casualties using the rules for raising a force. Multiply cost and time by the percentage of the force being replaced. For example, replacing 10% of a force or an

element calls for 10% of the cost and time required to raise it.

**Note:** Force replacements and casualties are simpler to track if both losses and replacements are handled for the entire force as a single unit.

## Campaigning Season

“Campaigning season” is the quarter of the year immediately before and after harvest time; on Earth, it’s typically late summer through early autumn. All TL0-5 land and air elements and TL0-5 land and air logistic forces cost only half as much to maintain during campaigning season, as they can easily forage for food. A thrifty leader can conserve resources by demobilizing during the winter-spring months and fighting when the harvest is out.

Note that this only applies in rural areas – never in desolate wastelands! Moreover, not all societies or worlds have a campaigning season (although there may be some other local equivalent).

## Disbanding Elements

An element may be disbanded, whether to save the cost of maintaining it or for other reasons (“By treaty, the vanquished kingdom must disband half of its army and all of the Royal Guard . . .”). If an element is disbanded “on campaign” in enemy or disputed territory, the owner receives *no* rebate. Assume that equipment is abandoned or absconded with, while personnel scatter.

If the element is carefully disbanded in an organized fashion in friendly territory, the owner may receive a rebate of 20% of its cost to raise. To get this, the element must spend at least two months demobilizing, and the area must have the capability to buy or repurpose the element’s equipment and/or personnel. The rebate represents materiel that’s sold or reused and troops that are retrained and reassigned to other activities.

For flavor, an element may be “converted” rather than “disbanded”; e.g., the owner of a Light Cavalry element could convert it into a Heavy Tank element by disbanding the old element and putting the 20% rebate toward raising the new one. The new element may have the same name (e.g., “2nd Troop, Royal Dragoons”), but it will have different statistics. The fact that a percentage of its personnel are the same – albeit significantly retrained for new duties – is covered by the rebate given for disbanding the original element.

*It is always easy to begin a war, but very difficult to stop one, since its beginning and end are not under the control of the same man. Anyone, even a coward, can commence a war, but it can be brought to the end only by the consent of the victors.*

– Sallust

# CHAPTER TWO

# ELEMENTS:

# TL0-5

*The best troops have been the Carthaginians under Hannibal, the Romans under the Scipios, the Macedonians under Alexander, the Prussians under Fredrick. Some day my army of Italy and that of Austerlitz may be equalled, but, surely never surpassed.*

– Napoleon Bonaparte

The period from the Stone Age to the musket-and-bayonet era is spanned by a vast range of fighting elements. Warriors march on foot or ride beasts, the accurate killing range of weapons is limited to a few hundred yards, and pitched battles fought by mutual arrangement are still commonplace.

## ORGANIZATION

Most large forces adopt company-sized units of 50-150 men (about 5-15 elements), such as the 80- to 100-strong Roman “century,” simply because that’s the largest force that any single leader can easily control at once. The armies of organized states or nomad empires often have a regular structure, with standardized units of intermediate and large size, such as Rome’s six-century cohort (about 60 elements) and ten-cohort legion (approximately 600 elements), or the decimal systems of many Middle-Eastern and Asian armies. These are often supplemented by allied auxiliaries.

Irregular forces adopt an ad-hoc organization based on clan or tribal allegiances, or have contingents of various sizes led by

the leaders of the districts, feudal fiefs, or towns that contributed them. Their ruler usually has a permanent guard of household troops, supplemented by a general call-up of part-time warriors and professional mercenaries (often foreigners) drawn by the promise of pay, booty, or lands. Battlefield formations are frequently based on marching order; e.g., the vanguard on the right, the main body in the center, and rearguard on the left.

Between TL4 and TL5, many states adopt a modern organization, as detailed in Chapter 3 – although the distinction between “platoon” and “company” remains vague (both typically refer to from five to 15 elements).

*The mightiest of rivers lose their force when split into several streams.*

– Ovid

## Cavalry vs. Infantry

Cavalry are *expensive*. Horses are costly to breed and equip, and horsemen take extra effort to train. While mounts don’t demand pay, cavalry still costs more to maintain than equivalent infantry because horses consume more provisions.

However, cavalry are useful for winning battles. Equally matched low-tech infantry forces tend to fight to a stalemate; they rarely move fast enough to enable a good general to exploit the enemy’s weaknesses. Cavalry give a

commander a maneuverable, mobile force that responds quickly to commands, and that can be used to scout, strike at vulnerable points, outflank a foe’s line, and respond rapidly to surprise attacks. If one side has more or better cavalry, this gives its leader a battle-winning advantage.

Cavalry are also valuable for screening a marching force. Infantry take a relatively long time to deploy from a marching column into a solid line of battle. Cavalry can do so in moments.

# LAND ELEMENTS

The majority of battlefield elements in a low-tech force are infantry and cavalry. Starting at TL4, these are often supplemented by an increasing proportion of artillery, thanks to the rapid evolution of gunpowder cannon.

## Artillery

**Heavy Artillery** (TL2): At TL2, this means torsion-powered stone- or bolt-throwers, which at TL3 are sometimes supplemented by counterweight trebuchets and early bombards (breachloading gunpowder cannon), usually firing stone projectiles. At TL4-5, this element consists of increasingly effective smoothbore cannon, mostly firing round shot or canister – or possibly inaccurate but impressive rockets! Heavy Artillery lacks tactical mobility, and has far less range than at TL6, but is useful in pitched battles and sieges.

**Light Artillery** (TL2): These are semi-portable torsion-powered bolt throwers such as scorpions (TL2-3), or light cannon or rockets (TL4-5).

**Horse Artillery** (TL5): This is a light field gun and its ammunition carriage, drawn by a team of horses. The gunners ride with the guns.



## Cavalry

**Heavy Chariots** (TL1): Battle carts drawn by horses or sometimes by other beasts, such as asses or – in fantasy settings – bears, tigers, or even monsters. Heavy Chariots are used to transport, support, and (if need be) retrieve an armored infantryman, who usually dismounts to fight on foot.

**Light Chariots** (TL1): Lightly built chariots, typically pulled by two fast horses and driven by a charioteer who's accompanied by a heavily armed archer or javelin thrower (often of aristocratic birth). Chariots become obsolete by TL2, as bigger horses and better equipment allow *each* horse to carry one fully equipped soldier, doubling their effective fighting power.

**Heavy Cavalry** (TL2): Big men riding heavy warhorses or similar steeds, trained for shock action, and charging in close formation with spear, lance, or sword.

**Horse Archers** (TL2): Lightly equipped riders on swift horses or similar steeds, armed with bows. They fight in a loose swarm or circulating relays, occasionally charging with sword when tactically advantageous.

**Light Cavalry** (TL2): Lightly equipped riders on small, swift mounts, usually armed with throwing spears, javelins, light lances, or swords. They prefer to skirmish rather than to charge home, but can be effective in close combat. Their principal utility is in scouting, pursuit, foraging, and raiding.

**Medium Cavalry** (TL2): Cavalry that are (expensively!) trained and equipped for both shock *and* missile action – usually on somewhat lighter horses than Heavy Cavalry, and in looser order. They're typically armed with both a bow and a sword, and sometimes with a light lance and a shield, too.

**Cavalry Pistols** (TL4): Heavy cavalry in close formation, wearing decent armor, and armed with a sword and a brace of wheel-lock pistols at TL4 (e.g., German Reiter). From TL5, they have more reliable flintlocks or short carbines.

## Infantry

**Stone-Age Warriors** (TL0): A hunting party or war band equipped and fighting as per Light Infantry (below), but with more primitive weapons; e.g., flint-tipped spears and arrows.

**Bowmen** (TL1): Soldiers trained to stand fast in formation and fire volleys with bows or crossbows. They usually carry swords or other sidearms, and will fight in melee if needed. On the defensive, they sometimes make use of large shields, wooden stakes, or other cover.

**Light Infantry** (TL1): Swift-footed soldiers who would rather skirmish by throwing missiles, striking from ambush, or making hit-and-raid raids than stand and fight. They wear little to no armor, but may carry bucklers or small shields. Usual arms include clubs, darts, javelins, long knives, short spears, short-swords, shuriken, slings, and similar light “skirmish” weapons. This troop type also includes all bowmen and TL4 musketeers who don't fire in massed formations, and most low-tech special-operations forces such as spies, assassins, and – in fantasy backgrounds – stealthy “little people” (halflings, gnomes, etc.).

## Reading the Element Statistics

**TS:** Troop Strength (p. 6). Parentheses indicate a *support* TS that only counts at full value when calculating special class superiority.

**Class:** The element's special class (pp. 6-7), if any. *Air* is Air Combat; *Arm* is Armor; *Art* is Artillery; *Cv* is Cavalry; *C3I* is Command, Control, Communications, and Intelligence; *Eng* is Engineering; *F* is Fire; *Nav* is Naval; and *Rec* is Recon. A class in parentheses is one that the element *neutralizes*; e.g., (Cv) means the element neutralizes Cavalry. *T* is transport capacity; the number is the WT that the element can carry.

**WT:** The element's transport weight (p. 7). A dash indicates that it's too large to transport.

**Mob:** The element's mobility type (p. 7). *Foot* is self-explanatory, while *Mtd* means Mounted. Naval elements have either *Coast* or *Sea* mobility. Low-tech air elements all note *SA* for Slow Air. A “0” means the element must be transported by other elements if it's to travel rather than merely defend.

**Raise and Maintain:** The costs to raise and maintain the element, respectively (p. 8). *K* means “thousands”; *M* means “millions.”

*Medium Infantry* (TL1): Lightly armored or unarmored foot soldiers who fight in looser order than Heavy Infantry (below), but prefer melee fighting to skirmishing. Weapons are similar to those of Heavy Infantry, but shields and armor are lighter. This can also represent individualistic adventurers or assassins who prefer a stand-up fight and thus wouldn't be classed as Light Infantry.

*Heavy Infantry* (TL2): Foot soldiers who fight in close formation, preferring to close with and destroy their enemies in hand-to-hand combat. They're often equipped with spears and a shield; a heavy two-handed weapon; or a heavy throwing weapon, a sword, and a shield.

*Pikemen* (TL2): Heavy infantry in close formation, equipped with 15'- to 24'-long spears wielded two-handed, so that three or more rows of pike points face toward their foes. They rely on the dense "hedgehog," and so have enough TS to defeat Heavy Cavalry or most foot troops.

*Musketeers* (TL4): Infantry with smoothbore matchlock muskets, in the era before the socket bayonet. They can pierce all but the strongest armor – but without the bayonet, they're vulnerable to cavalry attack while slowly reloading. As such, balanced forces will also contain heavy infantry ("pike and shot") and cavalry. Musketeers carry swords, and wear helmets and often a breastplate and a leather coat for protection.

*Line Infantry* (TL5): Soldiers armed with a musket with socket bayonet. They march in step and fight in close formation, forming thin lines two or three deep for musket fire, a square to meet cavalry charges, or sometimes massed columns for close assault. Line Infantry are often accompanied by drummers or other musicians to sound orders.

*Skirmishers* (TL5): Foot soldiers trained to fight in a looser skirmish formation with musket or rifle. This is light infantry at mid-TL5 and *most* infantry at late TL5. Troops with Good equipment will have rifles and those with Fine or better equipment may have *cartridge* rifles. Poor equipment likely indicates a mix of melee weapons and muskets.

## Other

*Draft Team* (TL1): This is a group of soldiers trained as teamsters, plus their draft animals.

*Mounts* (TL1): This represents enough ponies, horses, camels, or other riding beasts to transport any WT 1 Foot mobility element at Mounted speeds (but *without* granting Cavalry Superiority).

*Miners* (TL2): Foot soldiers led by an experienced engineer, trained for siege and counter-siege operations such as mining (tunneling under walls to collapse them) and preparing or defeating scaling ladders, siege towers, battering rams, boiling

## TL0-5 Land Elements Table

Element	TS	Class	WT	Mob	Raise	Maintain	TL
Balloon	(1)	Air	2	0	50K	5K	5
Bowmen	2	F	1	Foot	40K	8K	1
Cavalry							
Pistols	3*	Cv, F	2	Mtd	100K	20K	4
Draft Team	0	T2	2	Foot	10K	1K	1
Heavy							
Artillery	(2.5)*	Art	2	0	100K	10K	2
Heavy Cavalry	5	Cv	2	Mtd	200K	40K	2
Heavy Chariots	4	Cv	4	Mtd	160K	32K	1
Heavy Infantry	4	–	1	Foot	40K	8K	2
Horse							
Archers	2	Cv, F, Rec	2	Mtd	120K	24K	2
Horse Artillery	10	Art	2	Mtd	150K	30K	5
Light Artillery	(1)*	Art	1	Foot	40K	8K	2
Light Cavalry	2	Cv, Rec	2	Mtd	100K	20K	2
Light Chariots	2	Cv, F	4	Mtd	100K	20K	1
Light Infantry	2	Rec	1	Foot	40K	8K	1
Line							
Infantry	3	F	1	Foot	30K	6K	5
Medium Cavalry	3	Cv, F	2	Mtd	150K	30K	2
Medium Infantry	3	–	1	Foot	30K	6K	1
Miners	0.5*	Eng	1	Foot	30K	6K	2
Mounts	0	T1	1	Mtd	60K	12K	1
Musketeers	2	F	1	Foot	30K	6K	4
Pikemen	4	(Cv)	1	Foot	60K	12K	2
Skirmishers	2	F, Rec	1	Foot	30K	6K	5
Stone-Age							
Warriors	1	Rec	1	Foot	25K	5K	0
War Beast	20	Arm	4	Foot	400K	80K	2

\* Double TS every TL after the element first appears, through to TL5.

oil, and similar machinations. They're often armed with axes, mattocks, or hammers, and may use explosive charges at TL4+.

*War Beast* (TL2): This includes war elephants and other, similar-sized beasts – such as fantasy dinosaurs – that are trained for battle. These can panic lesser forces and withstand heavy attack by virtue of sheer bulk. The element includes the handler (*mahout*) and a platform for an infantry squad (often archers), and represents a single beast and its crew. Better-equipped elements might have armor, metal caps on tusks or claws, and/or a castle-like fighting platform. Quality may also represent *bigger* creatures!

*Balloon* (TL5): A hot-air balloon and ground team, used primarily for over-the-horizon observation. *Not* air-mobile – requires another element (e.g., Draft Team) for transport.

# NAVAL ELEMENTS

The earliest naval elements are primarily transportation. As ships and weapons become more advanced, though, the seas become a battlefield in their own right. Note that a few *late*-TL5 vessels appear in Chapter 3 (see *TL6-12 Naval Elements Table*, below).

*Boat* (TL1): A single war canoe or rowboat, capable of carrying one infantry (or similar-sized) element, plus a small crew.

*Large Boat* (TL1): A vessel larger than a Boat, with substantial seafaring capability; e.g., a Polynesian canoe, a longboat, or a small sailboat.

*Light Galley* (TL1): A fast, lightly built, oared warship such as a penteconter, with 60 crewmen and a small number of marines.

*Longship* (TL2): A Viking drakkar or equivalent vessel, capable of operating with about 70 oarsmen plus another 70 soldiers.

*Merchant Galley* (TL2): A late Classical or early medieval-era galley, heavier and with better seakeeping ability than a War Galley – and with more room – but less potent in close combat. It's often crewed by slaves at TL3+.

*War Galley* (TL2): A sleek oared warship, armed with a heavy, iron-shod ram; e.g., a Greek trireme with 170 crew (mostly oarsmen) and 10-30 marines.

*Cog* (TL3): A medieval “roundship” – a merchant vessel with detachable raised “castles” that serve as fighting platforms for archers and infantry.

*Brig* (TL4): A two-masted sailing ship armed with several cannon. Often favored by pirates!

*Galleon* (TL4): A large “man o’ war” with heavy broadside cannon armament, capable of carrying plenty of troops.

*Frigate* (TL5): A smaller three-masted fighting ship, with 30+ black-powder cannon and crew of 100-500.

*Ship-of-the-Line* (TL5): A large three-masted fighting ship, with 60+ black-powder cannon and crew of several hundred.

**TL0-5 Naval Elements Table**

Element	TS	Class	WT	Mob	Raise	Maintain	TL
Boat	0	T1	1	Coast	5K	0.5K	1
Brig	6	Nav, Art, T6	–	Sea	150K	15K	4
Cog	4	T5	–	Sea	75K	7.5K	3
Frigate	150	Nav, Art, T4	–	Sea	1M	50K	5
Galleon	30	Nav, Art, T6	–	Sea	750K	75K	4
Large Boat	0	T2	1	Coast	10K	1K	1
Light Galley	3	T1	–	Coast	70K	14K	1
Longship	3	T7	–	Coast	50K	10K	2
Merchant Galley	4	Nav, T5	–	Coast	600K	60K	2
Ship-of-the-Line	300	Nav, Art, T10	–	Sea	4M	400K	5
War Galley	10	Nav, T3	–	Coast	500K	100K	2

*If the highest aim of a captain were to preserve his ship, he would keep it in port forever.*

– Thomas Aquinas

# FANTASTIC ELEMENTS

You can create many fantastic elements simply by modifying mundane ones with *Optional Features* (pp. 8-11 and *Quality* (pp. 11-12); e.g., a “ghost ship” might be a Brig given the Super-Soldier feature and Elite troop quality to represent its ghostly crew. Another simple-but-effective approach is to take high-tech elements from Chapter 3 and invoke divergent technology to reach the TL; e.g., a bronze ornithopter might have Utility Aircraft statistics but be TL(3+4) rather than TL7, while a mechanical steam golem gets Light Tank stats but is TL(4+2) instead of TL6. However, some fantastic elements are unique:

*Amphibious Warriors* (TL0): Legged mermen, sea-elves, were-sharks, water sprites, selkies, fish-men, and similar

underwater humanoids capable of operations both on land and in water.

*Aquatic Warriors* (TL0): As Amphibious Warriors, but incapable of land operations – dolphins, tailed mermen, etc.

*Battle Mages* (TL0): A group of wizards (or clerics) armed with spells or magic items useful in mass combat – or alternatively, a single Hero mage.

*Beasts* (TL0): Sapient or trained predatory animals or monsters, such as large wolves, bears, or great cats. They can be upgraded by adding higher-quality equipment (e.g., armor and iron claws). For a single powerful monster, add the Hero feature.

## Fantastic Elements Table

Element	TS	Class	WT	Mob	Raise	Maintain	TL
Amphibious Warriors	2	Nav	1	Coast, Foot	60K	12K	0
Aquatic Warriors	2	Nav	1	Coast	30K	6K	0
Battle Mages	5	Art, C3I, F, Recon	1	Foot	200K	40K	0
Beasts	1	Cv, Rec	2	Mtd	50K	10K	0
Flying Beasts	1	Air, T1	2	SA	120K	40K	0
Flying Cavalry	2	Air, F	2	SA	600K	60K	1
Flying Infantry	2	Air, Rec	1	Foot, SA	60K	20K	0
Flying Leviathan	150	Air, T10	—	SA	10M	400K	0
Flying Mages	5	Air, Art, C3I, F, Rec	1	Foot, SA	300K	60K	1
Giant Flying Monster	15	Air	8	SA	800K	40K	0
Giant Monster	40	Arm	8	Foot	800K	40K	0
Giants	20	Arm, Art, Eng	8	Foot	800K	40K	0
Leviathan	250	Nav, T10	—	Sea	10M	400K	0
Ogres	8	—	4	Foot	80K	8K	0
Sea Monster	20	Nav, T1	—	Sea	1M	20K	0
Titan	400	Arm, Art, Eng	—	Foot	16M	640K	0

*Flying Beasts* (TL0): A squadron of eagles, giant owls, wyverns, or the like – or alternatively, a horde of smaller creatures, such as a swarm of bats. For a single powerful monster, add the Hero feature.

*Flying Infantry* (TL0): A group of angels, demons, or similar, performing much as Light Infantry but with aerial capability.

*Flying Leviathan* (TL0): An *immense* aerial monster, like an enormous dragon or a sky whale. It may carry crew.

*Giant Flying Monster* (TL0): A large dragon, roc, or similar aerial monstrosity.

*Giant Monster* (TL0): A ferocious and usually non-humanoid monster the size of a giant but lacking manipulatory ability; e.g., a house-sized spider, a 50'-long serpent, or a wingless dragon.

*Giants* (TL0): A squad of fierce, 15'- to 30'-tall humanoids – true giants, enormous trolls, demon bears, huge golems, walking trees, etc. – each with the strength of several men. They're rated for Engineering and Artillery due to their ability to act as impromptu siege engines!

*Leviathan* (TL0): An *enormous* sea serpent, floating island, or similar ship-sized aquatic terror.

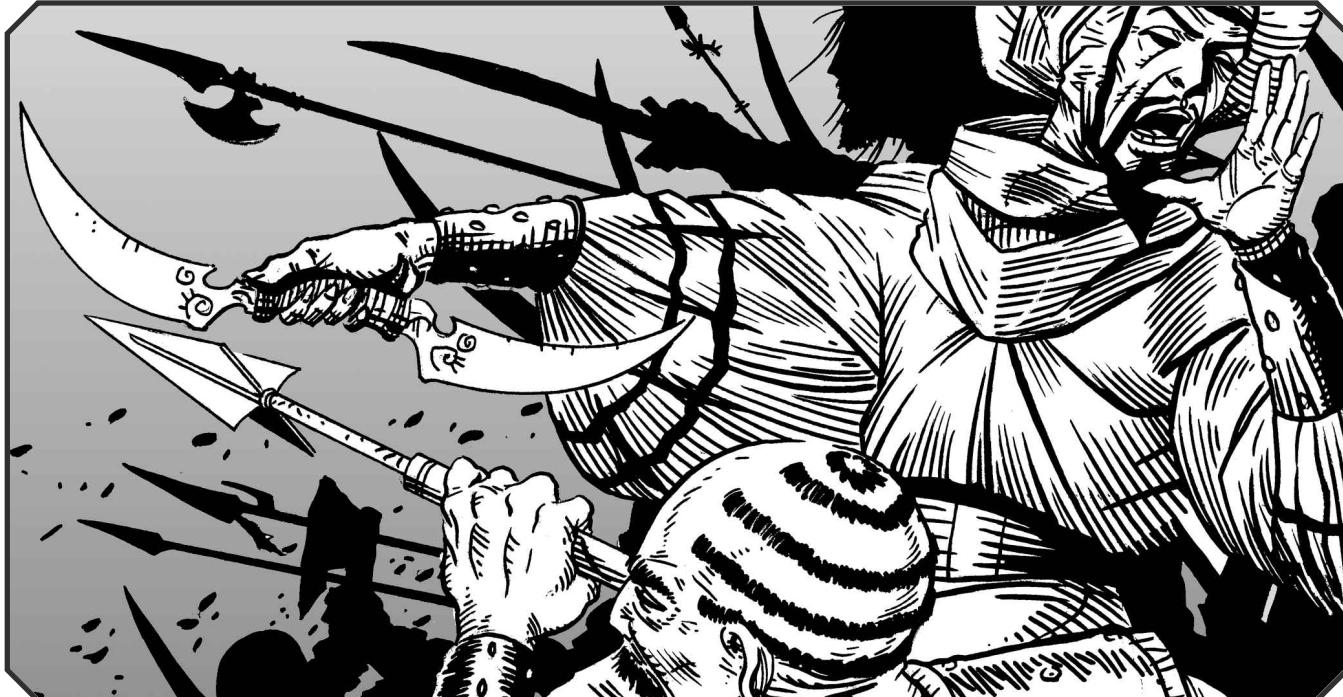
*Ogres* (TL0): A squad of powerful ogres, trolls, lesser giants, or similar monsters, typically about 50% to 100% larger than human-sized. At TL0, they're armed with massive clubs or similar gear. Higher-TL versions are possible.

*Sea Monster* (TL0): A great whale, giant sea serpent, kraken, or other monster big enough to take on a small ship.

*Titan* (TL0): A single, gargantuan land monster standing as high as a castle tower, such as a giant ape, insect, or worm, or an actual titan.

*Flying Cavalry* (TL1): Riders on flying beasts – such as knights on griffins or winged horses – or those aboard flying or levitating carpets or brooms.

*Flying Mages* (TL1): Witches on brooms, levitating mages, wizards on flying carpets or aerial beasts, and similar flying sorcerers.



# CHAPTER THREE

# ELEMENTS:

# TL6-12

*Let me give you some advice, Lieutenant. Don't become a general. Don't ever become a general. If you become a general you just plain have too much to worry about.*

— General Dwight D. Eisenhower

At TL6+, infantry continue to march, but motorized vehicles and aircraft replace cavalry and supplement artillery. On land, tanks and other armored vehicles become the primary arm of decision – at least until air power and futuristic technologies can defeat them!

## LAND ELEMENTS

Most modern forces are organized into highly standardized units. What these are *called* varies from nation to nation – and smaller militaries and irregular forces frequently omit certain levels or use other titles – but the following organization is typical:

- A *platoon* of two to eight elements (squads, vehicles, or guns). A platoon leader is usually Rank 3 (*lieutenant*).
- A *company* (cavalry *troop*, artillery *battery*) of two to four platoons. Units at this level and above also have support personnel (cooks, medics, drummers, heavy-weapons crews, etc.). As well, special-purpose troops (e.g., engineers and scouts) may be attached temporarily or permanently. A company leader is typically Rank 4 (*captain* or *major*).
- A *battalion* (or cavalry *squadron*) of two to five companies, under a leader of Rank 5 (*lieutenant-colonel*). A battalion is generally considered the smallest land force that contains all the necessary elements to look after itself for an extended period.
- A *brigade* or a *regiment* consists of two or more battalions and a leader of Rank 6 (*colonel*). Regiments are usually two or three battalions; brigades typically encompass two to five battalions. Many militaries omit one or the other.
- A *division* consists of two or more brigades or regiments, with a leader of Rank 7 (*brigadier* or *general*).

### Low-Tech Upgrades

It's possible to upgrade the TL0-5 troops in Chapter 2 with higher-TL versions of their "primitive" gear; e.g., Heavy Infantry with mail and swords made of better alloys, or Light Cavalry riding motorbikes or robot steeds. Rather than doubling each TL, add 25% to TS every TL past TL5.

- A *corps* or an *army group* consists of two or more divisions – plus attachments – with a leader of Rank 8 (*general* or *field marshal*). When an air force is subordinated to an army, it may also be considered its own corps.

### *Infantry Elements, Headquarters, and Weapons Teams*

Each of these elements represents a squad or a man-portable heavy-weapons team.

*Combat Engineers* (TL6): Also called "pioneers," these are modern versions of the sappers and miners of TL2-5 armies. They're infantry soldiers trained to overcome obstacles and fixed defenses, and are invaluable for city fighting and for siege or amphibious operations. Better equipment quality may indicate specialized close-in or anti-mobility weapons, such as flamethrowers, mines, and bunker-busting rockets.

*Command Post (CP)* (TL6): A tactical operations center, complete with staff officers and their assistants. At TL6, it's a few map tables plus some field telephones or radios; at TL8+, it may be packed with computers and bristling with antenna for radio and satellite uplinks (although the map table remains!). These are usually assigned at either company or battalion level (one for every 10-40 elements), depending on the emphasis a particular army allocates to command and control. A CP is immobile on its own; it's usually transported by truck or in an armored vehicle.

*Draft Team* (TL6): Many TL6 armies aren't fully mechanized, and still use draft animals as prime movers for Light Artillery and Antitank Guns. This element consists of a group of soldiers trained as teamsters, along with their beasts.

*Heavy Support Weapon (HSW)* (TL6): A heavy machine gun (TL6), an automatic grenade launcher (TL7), or any similar crew-served support weapon. It has a crew of two or three men. Such weapons operate in close support of infantry, or are used on their own to defend strongpoints and fortifications.

*Mortar Team* (TL6): Two to four soldiers with a light or medium mortar.

*Mounted Rifles* (TL6): Riflemen (below) riding horses, camels, or other mounts are still used at high TLs – especially in underdeveloped regions, where animals are easier to maintain than trucks. Troopers usually dismount to fight, leaving the horses at the edge of the battle area.

*Riflemen* (TL6): The poor bloody infantry! At TL6, most riflemen use bolt-action rifles and wear steel helmets. At TL7, each soldier has a semi-automatic or even automatic weapon, and there's a machine gun and/or a grenade launcher in every squad; some troops have fragmentation vests. By TL8, bullet-resistant vests are standard, and rifles may have integral grenade launchers and electronic targeting systems. At TL9, assume that body armor includes integrated fire-control and communications systems, and that most weapons can fire "smart" munitions. Troopers at TL10+ receive full suits of climate-controlled body armor, and some or all may use electromagnetic or beam weapons.

*Antitank Guided Missile (ATGM)* (TL7): A team of two to four soldiers armed with man-portable guided or homing missiles capable of killing armored vehicles.

*Man-Portable Air Defense (MANPAD)* (TL7): A team of two to four soldiers armed with antiaircraft weaponry. At TL7-8, this means shoulder-fired homing missiles. Ultra-tech equivalents may be portable lasers or railguns.

*Battlesuits* (TL9): An infantry squad in powered armor – or perhaps with full combat-cyborg bodies! They have heavy railguns or beam weapons, and also missile launchers for indirect and antitank fire.

## Towed Heavy-Weapons Elements

Each of the following elements represents a gun or other heavy weapon, plus its crew.

*Antitank Gun* (TL6): A high-velocity gun that fires armor-piercing ammunition – typically a 57mm to 90mm gun at TL6, a 105mm to 122mm gun at TL7+.

*Heavy Antiaircraft Artillery (Heavy AAA)* (TL6): A battery of towed high-velocity guns capable of both antiaircraft and antitank fire; e.g., the mobile 88mm Flak batteries used by Germany in WWII.

*Heavy Artillery* (TL6): Howitzers or rocket launchers with sufficient range to put indirect fire on over-the-horizon targets. At TL6, shells are normally shrapnel or high-explosive, and average caliber is 105mm. At TL7, artillery uses improved central fire control, and proximity-fused airburst rounds are introduced; average caliber is 155mm. By TL8, computerized

## Reading the Element Statistics

**TS:** Troop Strength (p. 6). Parentheses indicate a *support* TS that only counts at full value when calculating special class superiority.

**Class:** The element's special class (pp. 6-7). *Air* is Air Combat; *Arm* is Armor; *Art* is Artillery; *Cv* is Cavalry; *C3I* is Command, Control, Communications, and Intelligence; *Eng* is Engineering; *F* is Fire; *Nav* is Naval; and *Rec* is Recon. A class in parentheses is one that the element *neutralizes*; e.g., (Air) means the element neutralizes Air. *T* is transport capacity; the number is the WT that the element can carry.

**WT:** The element's transport weight (p. 7). A dash (or omission of WT from the table) indicates that it's too large to transport.

**Mob:** The element's mobility type (p. 7). *Foot* is self-explanatory, *Mech* means Mechanized, *Motor* means Motorized, and *Mtd* means Mounted. Naval elements have either *Coast* or *Sea* mobility. For air elements, *FA* is Fast Air and *SA* is Slow Air. A "0" means the element must be transported by other elements if it's to travel rather than merely defend.

**Raise** and **Maintain:** The costs to raise and maintain the element, respectively (p. 8). *K* means "thousands," *M* means "millions," and *B* means "billions."

fire-direction systems are in use, improved conventional munitions scatter grenades or mines, and many shells and missiles have laser or satellite guidance. Come TL9+, most guns will use advanced propellants (liquid or electrothermal) or be electromagnetic mass-drivers, and shells are likely to be "smart."

*Light Artillery* (TL6): Light towed guns, similar to Heavy Artillery but of smaller caliber; e.g., 75mm at TL6 or 105mm at TL7+. At TL8+, these often use "smart" munitions, as described for Heavy Artillery.

*Theater Air Defense Site (TAD)* (TL7): Extremely capable long-range air-defense systems, such as advanced air-search radars coupled with long-range missiles (often with anti-ballistic missile capability) – or, at higher TLs, powerful beam-weapon emplacements (laser towers, particle cannon, etc.).

## Vehicle Elements

Each element below represents a single vehicle or other machine. Most include two to five crew members.

*Armored Car* (TL6): A light, wheeled armored reconnaissance vehicle, armed mainly with cannon and machine guns. At TL8+, these vehicles are often equipped with ground radar and other advanced sensors, or equipped with mini-UAV or robot drones.

*Assault Gun* (TL6): A tracked armored vehicle that mounts a heavy gun in its chassis rather than in an enclosed turret. Assault guns provide direct fire support for infantry, but lack the full offensive capabilities of tanks.

*Do not needlessly endanger your lives until I give you the signal.*

– General Dwight D. Eisenhower

**Heavy Tank (TL6):** A slow-moving and expensive tank with a powerful gun and thick armor. Historically, the Heavy Tank fell out of use after early TL7, being replaced by the Main Battle Tank (below).

**Heavy Truck (TL6):** A rugged 6x6 or 8x8 truck, used to tow guns and to “motorize” infantry. It may have machine guns and light armor.

**Light Antiaircraft Artillery (Light AAA) (TL6):** A truck or a light armored car with multiple machine guns or rapid-fire autocannon, sometimes supplemented with missiles at higher TLs.

**Light Tank (TL6):** A tracked armored fighting vehicle weighing less than 20 tons. It fulfills a tactical role similar to that of the Armored Car.

**Light Truck (TL6):** An off-road 4x4 utility vehicle such as a Jeep, Land Rover, or HMMWV, plus its driver. It's usually used to transport or tow other elements.

**Medium Tank (TL6):** Tanks weighing 20-40 tons are the primary armored fighting force of TL6 armies. At TL7, this class also includes some main battle tanks with powerful guns but of lighter weight than usual.

**Motor Recon (TL6):** This element consists of soldiers driving an armed 4x4 utility vehicle.

**Self-Propelled Mortar (SP Mortar) (TL6):** A light armored vehicle mounting a medium or heavy mortar. More expensive designs (better equipment quality) install the mortar in a rotating turret.

**Troop Carrier (TL6):** An open-topped half-tracked or tracked APC that provides mechanized mobility but lacks full armor protection.

**Armored Personnel Carrier (APC) (TL7):** A fully enclosed armored vehicle – tracked or wheeled – that transports troops onto the battlefield. An APC is armed with a heavy machine gun or a light autocannon, but lacks the improved armor and missile armament of the Infantry Fighting Vehicle.

**Combat Engineering Vehicle (CEV) (TL7):** Basic designs are essentially olive drab bulldozers with light armor. Higher equipment quality represents a tank chassis modified with such additions as a demolition gun, a flamethrower, an anti-mine plow, or an armored bridge-layer.

**Infantry Fighting Vehicle (IFV) (TL7):** A tough APC with a turret-mounted automatic cannon and/or antitank missiles. An

## TL6-12 Land Elements Table

Element	TS*	Class	WT	Mob	Raise	Maintain	TL
Antitank Gun	(100)	(Arm)	2	0	75K	5K	6
APC	100	Arm, Cv, F, T1	4	Mech	200K	10K	7
Armored Car	40	Arm, Cv, F, Rec	4	Motor	120K	6K	6
Assault Gun	100	Arm, Art	4	Mech	300K	15K	6
ATGM	(240)	(Arm)	1	Foot	45K	9K	7
Battlesuits	800	(Air, Arm), F, Rec	1	Foot	200K	40K	9
CEV	100	Arm, Eng	4	Mech	150K	7.5K	7
Combat							
Engineers	40	Eng, F	1	Foot	60K	12K	6
Command Post	(50)	C3I	1	0	100K	20K	6
Draft Team	2	T2	2	Foot	10K	1K	6
Heavy AAA	(200)	(Air, Arm)	3	0	200K	10K	6
Heavy Artillery	(300)	Art	3	0	300K	15K	6
Heavy Tank	400	Arm, F	8	Mech	1M	40K	6
Heavy Truck	10	T3	4	Motor	30K	1.5K	6
HSW	(50)	F	0.5	Foot	50K	10K	6
IFV	200	Arm, Cv, F, T1	8	Mech	400K	16K	7
Large APC	100	Arm, Cv, F, T2	8	Mech	300K	12K	7
Light AAA	40	(Air), F	4	Motor	70K	3.5K	6
Light Artillery	(60)	Art	2	0	60K	4K	6
Light Tank	40	Arm, Cv, F, Rec	4	Mech	140K	7K	6
Light Truck	10	Cv, T1	2	Motor	25K	2.5K	6
MANPAD	(100)	(Air)	0.5	Foot	37.5K	7.5K	7
MBT	500	Arm, Cv, F	8	Mech	750K	30K	7
Medium Tank	100	Arm, Cv, F	8	Mech	300K	15K	6
Mobile SAM	(800)	(Air)	4	Motor	1M	50K	7
Mortar Team	(50)	Art	1	Foot	25K	5K	6
Motor ATGM	160	(Arm), Cv	2	Motor	140K	9K	7
Motor Recon	10	Cv, F, Rec	1	Motor	25K	2.5K	6
Mounted Rifles	20	Cv, F, Rec	2	Mtd	100K	20K	6
Riflemen	40	F, Rec	1	Foot	60K	12K	6
SP AAA	200	(Air), F	8	Mech	500K	25K	7
SP Artillery	(500)	Art	8	Mech	500K	20K	7
SP Mortar	(100)	Art	4	Mech	200K	10K	6
Super Tank	20,000	Arm, Art, Cv, C3I, F	16	Mech	6M	200K	10
TAD	(50,000)	(Air)	16	0	60M	2M	7
Troop Carrier	20	Cv, F, T1	4	Mech	80K	4K	6

\* Double TS every TL after introduction for all elements, for as long as the GM feels the type is viable (at least two TLs after introduction, and sometimes until TL12).

IFV carries a squad of infantry and supports it in battle. It can also be used independently as a hard-hitting armored-cavalry and tank-destroyer vehicle.

**Large Armored Personnel Carrier (Large APC) (TL7):** An oversized, lightly armored vehicle, usually tracked, capable of carrying multiple squads of infantry. Give it the Marine feature to represent an amphibious tractor vehicle, or the Terrain feature (especially Arctic) to represent a specialized all-terrain vehicle such as a snowcat.

**Main Battle Tank (MBT) (TL7):** A mass-produced tank that combines the Heavy Tank's firepower and armor with the Medium Tank's speed. Such tanks are the primary striking arm of TL7-9 land armies. Ultra-tech MBT elements can represent giant robots instead of tanks!

*Mobile Surface-to-Air Missile (Mobile SAM)* (TL7): A medium- or long-range surface-to-air missile battery and appropriate support elements (such as a radar truck).

*Motor ATGM* (TL7): A light 4x4 vehicle with 3-4 crewmen, equipped with a recoilless rifle or an antitank guided missile launcher.

*Self-Propelled Antiaircraft Artillery (SP AAA)* (TL7): A tracked air-defense vehicle armed with a turreted multi-barrel autocannon, Gatling gun, Gauss gun, or beam weapon. Its weaponry is coupled with optical or radar fire-control systems capable of targeting fast-moving aircraft. Its extreme rate of fire also

makes it effective against *ground* targets! Some high-tech designs have short-range missiles in addition to guns.

*Self-Propelled Artillery (SP Artillery)* (TL7): A large-caliber howitzer or a multiple rocket launcher – or, at TL9+, an electromagnetic mass-driver or railgun – mounted in an armored vehicle. It can sustain a higher rate of fire than less-mobile (e.g., towed) artillery, as it isn't as easily suppressed by counter-battery fire and can quickly move to new positions.

*Super Tank* (TL10): A super-heavy tank or giant robot (or super-heavy giant robot tank!) with exotic composite armor, powerful railguns or beam weapons, and an entire *arsenal* of missiles.

*The whole principle of naval fighting is to be free to go anywhere with every damned thing the Navy possesses.*

– Admiral Sir John Fisher

## NAVAL ELEMENTS

The organization of modern naval forces tends to be more diverse than that of armies, as port-based administrative requirements are distinct from those of ships at sea.

- *Vessels* (ships, submarines, or boats) are the basic elements, and may be deployed individually on independent operations or as part of larger forces. Depending on the vessel's size, the officer in charge is Rank 3-5 (*lieutenant, commander, or captain*).

- *Squadrons, task units, task groups, flotillas, or task forces* consist of several vessels under a single officer – usually one

of Rank 6-7 (*commodore* or *rear admiral*), unless the vessels involved are small combatants such as gunboats or torpedo boats. A flotilla, a group, or a task force is often larger than a squadron or a task unit, and can subdivide into two or more units.

- *Fleets* encompass all ships assigned to a particular sea, great lake, ocean, coastal region, or strategic mission. For example, a navy might have a Home Fleet (for defense of home waters), a Grand Fleet (to meet and destroy the enemy), or a Pacific Fleet (for operations in the Pacific Ocean). A fleet is commanded by an officer of Rank 8 (*admiral* or *fleet admiral*).

Ground and air forces may also be assigned to navies (as marines and naval aviation). These generally use army- or air force-style organization, but may be subordinate to higher-ranking naval leaders.

A large navy is sometimes administratively divided into separate services (e.g., surface warfare, naval aviation, and submarines), but these are usually subordinated to fleet commands on an operational level.

**TL6-12 Naval Elements Table**

Element	TS*	Class	Mob	Raise	Maintain	TL
Capital Ship	40,000	Nav, Art, T4	Sea	600M	24M	6†
Carrier	48,000	Nav, Air, T8	Sea	900M	36M	6
Escort Ship	1,000	Nav, Art, T2	Sea	15M	600K	6†
Fast Attack Boat	100	(Nav)	Coast	750K	30K	6†
Guided-Missile Escort	16,000	Nav, (Air), T2	Sea	100M	4M	7
Gunboat	240	(Nav), Art, T2	Coast	2.4M	96K	6†
Landing Craft	20	T8	Coast	3M	100K	6
Nuclear Submarine	48,000	Nav, T1	Sea	150M	6M	7
Submarine	3,200	Nav, T1	Sea	20M	600K	6

\* Double TS every TL after introduction for *all* elements, for as long as the GM feels the type is viable (at least two TLs after introduction, and possibly until TL12).

† A version with *half* TS is available at late TL5. At late TL5, a Capital Ship is an ironclad cruiser, an Escort Ship is a torpedo boat destroyer, and a Fast Attack Boat is a torpedo boat.

## NAVAL COMBAT ELEMENTS

Strategic sealift capability (cargo ships, assault ships, etc.) is treated abstractly, as part of the rules for logistic force support. Fighting elements include:

*Capital Ship* (TL6): Depending on quality and TL, this may be a pre-dreadnought, a cruiser, or a battleship (TL6); a fast battleship (TL7); or a large guided-missile cruiser or destroyer (TL7+).

*Carrier* (TL6): “Flattops” with embarked air wings – along with larger amphibious-warfare vessels – are the primary striking forces of late-TL6 through TL8 navies. Statistics *include* aircraft (don’t buy them separately!); details depend on the carrier’s equipment quality, with higher quality indicating a larger or more-capable air wing.

*Escort Ship* (TL6): The workhorse of a navy, with a normal crew of a couple hundred sailors. At TL6, this type includes destroyers and destroyer escorts; at TL7, corvettes and frigates armed with antisubmarine weapons and short-range missiles appear. Statistics at TL7+ may include a helicopter or two for antisubmarine warfare.

*Fast Attack Boat* (TL6): A torpedo boat (TL6), missile boat (TL7), or similar coastal craft with heavy torpedo or missile armament for its size. When bought with low quality, this type

also represents suicide-attack craft! Such vessels lack blue-water seakeeping ability and presence, and so are rated to *neutralize* naval strength rather than achieve it.

*Gunboat* (TL6): A craft used to patrol coastal waters, lakes, and rivers, often operating in concert with land forces.

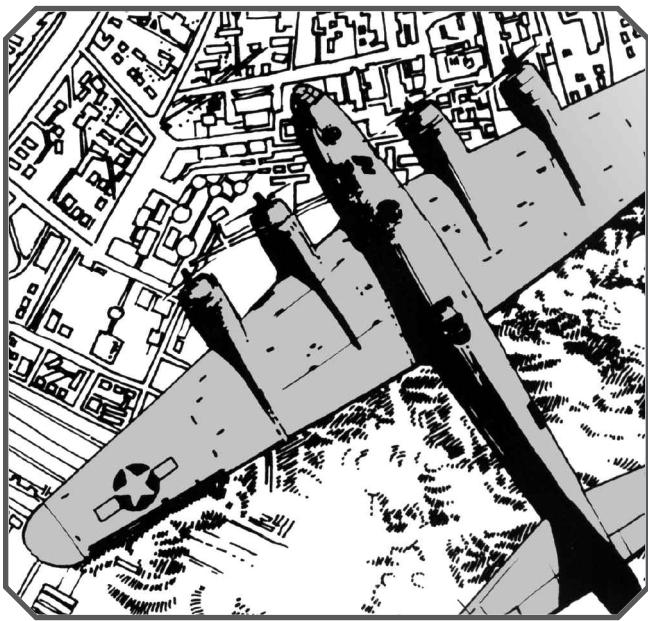
*Landing Craft* (TL6): A shallow-draft watercraft, designed to transport troops or equipment and allow them to disembark rapidly onto a hostile beach.

*Submarine* (TL6): A diesel-electric (or, at higher TLs, fuel cell-powered) submarine that can engage surface vessels with torpedoes or a deck gun, or lay mines.

*Guided-Missile Escort* (TL7): A destroyer- or cruiser-sized escort ship with powerful radars and either area-defense missiles (TL7-8) or railguns (TL9+). Statistics may include a helicopter or two for antisubmarine warfare.

*Nuclear Submarine* (TL7): A cruiser-sized nuclear-powered submarine, armed with homing torpedoes and/or submarine-launched missiles.

# AEROSPACE ELEMENTS



Organization of air-combat forces varies considerably, with some nations having independent air forces and others subordinating them to land or naval arms. A typical Western organization:

- *Squadron*: About 10-30 aircraft of the same type (sometimes less, for larger or specialized craft) deployed at the same base, commanded by an officer of Rank 4 (*major* or *squadron leader* – or a *commander*, for naval aviation).

- *Wing, group, or regiment*: A small number of squadrons trained to work together and often sharing the same base in peacetime, under an officer of Rank 5-6 (*lieutenant-colonel, wing commander, colonel, or group captain*). A group is normally larger: two or more wings.

- *Air force, air fleet, or air army*: A number of wings, groups, or regiments assigned to a particular geographic area, under a

Rank 7 officer (*general*). This level may be skipped by smaller air forces, or consolidated with ground or naval theater commands.

- *Command or arm*: All aircraft, airbases, and personnel assigned to a particular mission; e.g., Fighter Command, Strategic Air Command, Coastal Command, Naval Aviation, or Tactical Command. The commanding officer will be Rank 7-8 (*general* or *air marshal*). This level of organization may be administrative. At the highest level, an independent air force may exist, or be subordinate to an army, navy, or marine force.

## AIR ELEMENTS

Each air element normally represents a single manned aircraft (or larger drone) – or possibly a flight of two to four smaller, unmanned aircraft. As with ships, long-range strategic airlift capacity is abstracted as part of the logistic force.

*Airship* (TL6): A blimp or a zeppelin with a half-dozen or more crew, usable as a bomber but most effective as a surveillance platform.

*Medium Lift Aircraft* (TL6): A twin-engine propeller airplane or an assault helicopter, with a crew of two to four, capable of carrying around 30 troops.

*Piston-Engine Bomber (PE Bomber)* (TL6): A large, multi-engine, propeller-driven strike aircraft with a heavy bomb load – or possibly a long-range maritime-patrol aircraft or a transport port converted to a close-support gunship. Has a crew of 2-12.

*Piston-Engine Fighter (PE Fighter)* (TL6): A propeller-driven interceptor armed with machine guns and/or automatic cannon.

*Piston-Engine Fighter-Bomber (PE Fighter-Bomber)* (TL6): A propeller-driven fighter-bomber, dive bomber, torpedo bomber, or light attack aircraft, with a crew of one to three. Designs from late TL7 on are turboprop counterinsurgency aircraft.

*Scout Aircraft* (TL6): A light propeller aircraft or helicopter, used primarily for artillery spotting and aerial reconnaissance. Some carry a few machine guns or missiles. At TL8+, it’s often an unmanned drone.

*It is fatal to enter any war without the will to win it.*

– General Douglas MacArthur

*Airborne Early Warning (AEW) (TL7):* A specialized strategic aircraft with very long-range sensors and battle-management systems. Usually has a crew of 2-20.

*Close Air Support Aircraft (CAS Aircraft) (TL7):* A dedicated close air support aircraft, such as a rugged subsonic attack aircraft or a helicopter gunship heavily armed with automatic cannon, rockets, and/or antitank missiles. At higher TLs, this may be a lightly armored but well-armed ducted-fan or grav vehicle.

*Heavy Lift Aircraft (TL7):* A large, multiengine aircraft for global airlift of troops and equipment. Has a crew of three to eight.

*Jet Bomber (TL7):* A large, multiengine jet or turboprop-powered strategic bomber with intercontinental range. Has a crew of two to five.

*Jet Fighter (TL7):* A high-performance interceptor or air superiority fighter, with a crew of one or two.

*Jet Fighter-Bomber (TL7):* A modern multi-role tactical fighter or fighter-bomber capable of effective air-to-air and air-to-ground missions. Usual crew is one or two.

*Utility Aircraft (TL7):* A short-take-off-and-landing airplane, a helicopter, or a vertol capable of troop transport, light attack, and/or patrol operations. Has a crew of two or three.

*Military Satellite Constellation (MILSAT) (TL8):* This represents real-time reconnaissance, navigation, and communications support from an orbiting satellite network.

*Drop Ship (TL9):* An armed assault shuttle capable of deploying troops from orbit.

*Flying APC (TL10<sup>^</sup>):* A flying IFV (p. 22), relying on contragravity, reactionless thrusters, or super-efficient fans for lift and/or thrust, while carrying a squad of troops. Has a crew of one to three.

*Flying Battleship (TL10<sup>^</sup>):* A mobile aerial fortress or a flying aircraft carrier – or a small or medium-sized armored space warship that's capable of hovering and fighting in atmosphere. Has a crew of 20-200.

*Flying Battlesuits (TL10<sup>^</sup>):* A squad of Battlesuits (p. 21) with grav-belts or super-efficient jetpacks.

*Flying Tank (TL10<sup>^</sup>):* A flying MBT (p. 22) with a crew of one to three. It is heavily armed and armored, and uses contra-gravity, reactionless thrusters, or super-efficient fans for lift. Use the same stats for anime-style flying mecha and transformable fighters.

*Sky Troopers (TL10<sup>^</sup>):* This can represent light infantry with long-range jetpacks, ducted-fan packs, grav-belts, or *light* battlesuits capable of extended free-flight operations. It can also represent mounted scouts riding jet- or grav-bikes.

### TL6-12 Air Elements Table

Element	TS*	Class	WT	Mob	Raise	Maintain	TL
AEW	(5,000)	C3I	–	FA	120M	4M	7
Airship	20	Air, T2	–	SA	300K	10K	6
CAS Aircraft	(1,000)	Air	8	SA	5M	200K	7
Drop Ship	(1,000)	Air, T5	16	FA	40M	1.6M	9
Flying APC	800	Air, Arm, Cv, F, T1	8	SA	2M	80K	10 <sup>^</sup>
Flying Battleship	240,000	Air, Nav	–	FA	1.8B	72M	10 <sup>^</sup>
Flying Battlesuits	800	Air (Arm), F, Rec	1	SA	2M	400K	10 <sup>^</sup>
Flying Tank	1,600	Air, Arm, Cv, F	8	SA	3M	120K	10 <sup>^</sup>
Heavy Lift Aircraft	0	T9	–	FA	18M	600K	7
Jet Bomber	(3,000)	Air	–	FA	30M	1M	7
Jet Fighter	(2,000)	(Air)	8	FA	10M	400K	7
Jet Fighter-Bomber	(1,500)	Air	8	FA	15M	600K	7
Medium Lift Aircraft	0	T3	16	FA	3.75M	125K	6
MILSAT	(12,000)	C3I	–	FA	150M	5M	8
PE Bomber	(150)	Air	16	FA	3M	100K	6
PE Fighter	(100)	(Air)	8	FA	1M	40K	6
PE Fighter-Bomber	(75)	Air	8	FA	1.5M	60K	6
Scout Aircraft	40	Air	4	SA	400K	20K	6
Sky Troopers	160	F, Rec	1	SA	300K	60K	10 <sup>^</sup>
Utility Aircraft	(50)	Air, T1	8	SA	750K	30K	7

\* Double TS every TL after introduction for *all* elements.

# CHAPTER FOUR

# FIGHTING

*Consequently, the art of using troops is this:  
When ten to the enemy's one, surround him;  
When five times his strength, attack him;  
If double his strength, divide him;  
If equally matched, you may engage him;  
If weaker numerically, be capable of withdrawing;  
And if in all respects unequal, be capable of eluding him, for  
a small force is but booty for one more powerful.*

– Sun Tzu, *The Art of War*

These rules can resolve battles of nearly any size, from modest platoon- or company-level actions to major engagements

involving thousands of troops. It's up to the GM to make these fights interesting for the players – and vice versa. In particular, the GM may wish to sketch a map of the surrounding countryside to help the *players* visualize preliminary movement or strategy, especially if the PCs are in command.

Players of PCs in leadership positions may give orders to their troops once the battle has started and any enemy surprises have appeared. Those playing mere troopers can control only their own characters' fate – and then, only to a limited extent – by deciding how much bravery (or cowardice!) they'll show.

## CAMPAIGNING

This section briefly covers operational matters that precede a battle.

### TYPE OF CAMPAIGN

Where the battle(s) will be fought determines what elements can play a role:

- **Land:** A land campaign is fought on the ground. Only land elements and Air Combat elements that are in range are combatants.

- **Naval:** A naval action is fought in an ocean, a sea, or a great lake. Only Naval elements and elements that neutralize them, and Air Combat elements that are in range, are combatants.

- **Air:** A battle fought entirely in the air; e.g., the Battle of Britain in WWII or the Desert Storm air campaign during the Gulf War. Only Air Combat elements and elements that neutralize them are combatants.

- **Amphibious:** An amphibious campaign is fought along a coastline or a major river. All elements can be combatants.

*Example:* In the borderlands of the medieval realm of Caithness, Sir Richard's small army is defending his lord's fief

against the would-be usurper Ian Strykland. Sir Richard fears that Strykland's troops (including a contingent of orc mercenaries) will ravage the countryside if he just holes up in a castle. He decides to march out down the road to meet Strykland's oncoming host. This will be a land campaign, albeit a fairly simple one.

### PREPARATIONS

Determine each fighting force's makeup by element, noting in particular each element's Troop Strength (TS). For each side, total the TS of all elements to find the force's TS. Count parenthetical TS at only 10% of its value, or as 0 if the element's sole class is C3I. It's also useful to make separate note of the total TS of each *class* of element – although this may be obvious from individual element records in small battles.

If a force doesn't already have leaders, decide who's in charge:

- **Commander:** Responsible for military planning and leadership. The relevant skills are **Strategy** and **Leadership**.

- **Intelligence Chief:** Organizes scouting missions and intelligence-gathering operations, and briefs the commander on known or suspected enemy movements. The relevant skill is **Intelligence Analysis**.

- **Quartermaster:** Organizes supply and noncombat support elements. The relevant skill is **Administration**.

In all TL6+ (and some TL0-5) armies, commanders rely on their staff to advise them. This may be a formal arrangement, like a modern headquarters staff, or an informal collection of helpers. If PCs can't fill all the necessary staff roles, the GM should create appropriately skilled NPCs!

### Quick and Dirty Mass Combat

If you don't want to take the time to break down each side into its component elements, then simply estimate each force's Troop Strength and skip all rules for special class superiority!

*Example:* The GM determines the strength of the opposing forces. See Appendix A for Sir Richard's forces. Strykland's host is similar, but its numbers are swelled by orc mercenaries (Bowmen and Medium Infantry).

Sir Richard commands his force, and has Strategy-10 and Leadership-12. He assigns his friend Sheryl Navarre (another PC) to handle intelligence; she has no Intelligence Analysis skill, but her IQ 13 gives her a default of 7. An NPC, John Wyatt, serves as quartermaster; he has Administration-12.

Sir Ian Strykland serves as both commander and intelligence chief for his force. Strykland has Strategy-12, Leadership-11, and Intelligence Analysis-14. His steward, Cradoc, is his quartermaster, and has Administration-11.

## OPERATIONS

Operations involve the maneuvering of opposing military forces. The decisions of how to move and where to go are best worked out by the GM, depending on the campaign and the geography. Forces are usually trying to do one of the following:

- Seek and destroy the enemy force.
- Hide from the enemy (often while raiding his supply lines!).
- Advance toward an objective (either to capture it or to hold and reinforce it).
- Retreat from the enemy (hopefully to a more defensible location).
- Defend an objective.
- Escort a convoy or other moving force.
- Patrol or secure territory.
- Ravage inhabited territory.
- Perform field exercises that simulate any of the above (which, if performed near enemy frontiers, may either send a message or turn into the real thing!).
- Rally, rest, or train troops.

### Battling Monsters

When military forces battle a monster or a small, disorganized group of monsters, it's unrealistic to assume that the creatures would require military skills! The GM should instead assign them a simple "Cunning" value – usually equal to the monsters' IQ or Perception, whichever is higher – and use it for all relevant skill rolls.

## FORCES IN MOTION

A "force" is assumed to be a body of troops or ships operating together under a commander, with all of its elements close enough to one another to participate in any fighting. This means "within shouting distance" at low TLs; at higher TLs, a force may be spread out over several miles, and could also include supporting naval, air, or artillery elements even further away.

Elements with Fast Air mobility may be attached to a force even if they aren't based or moving with it. If several forces are operating in the region, decide which force they're supporting during any given period.

### Mobile vs. Encamped Forces

Depending on whether or not it's on the march or sailing, a force is classed as either *mobile* or *encamped* ("at anchor," for naval elements).

*Example:* Strykland's force is marching from his manor to the baron's castle, about 15 miles away, to seize it. Sir Richard is advancing to meet him. Both are following local roads – but in rural country, there's a chance that one force will get word of the other first, enabling them to prepare a surprise or an ambush. Both forces count as "mobile."

### Travel Speed of Mobile Forces

The speed at which mobile forces move depends on mobility type, and represents the *average* travel speed of a military column or formation. On land, this is limited by the logistic elements' ability to keep up, the time required to make or break camp, and the need to send out scouts or patrols to reduce the risk of ambush.

Excluding any supporting Fast Air elements, a force normally moves at the speed of its *slowest* element. However, elements with Transport (T) capability can carry other elements, to the limits of their Transport rating. Carried elements move at the speed of the transporting element. See also *Transport* (p. 7).

#### Land- (and Air-) Mobility Travel Speeds

**Foot:** 20 miles/day on roads or 10 miles/day off-road.

**Mechanized (Mech):** 80 miles/day on roads or 60 miles/day off-road. Add 25% (+20 miles/day on roads, +15 miles/day off-road) per TL past TL6.

**Motorized (Motor):** 120 miles/day on *good* roads, 60 miles/day on *dirt* roads, or 20 miles/day off-road. Add 25% (+30 miles/day on good roads, +15 miles/day on dirt roads, or +5 miles/day off-road) per TL past TL6.

**Mounted (Mtd):** 30 miles/day on roads or 15 miles/day off-road.

**Air:** *Slow Air (SA)* elements effectively move at the same speed as foot elements; this represents their forward airbase, camp, or lair being moved forward. However, they can range out to support combat within 100 miles (doubled per TL past TL6). *Fast Air (FA)* elements can provide support *anywhere* within a regional theater of operations.

**0:** No movement! Such elements must be carried by other elements if they are to move.

#### Water-Mobility Travel Speeds

**Sea:** 160 miles/day on open waters or along major navigable rivers or great lakes. Add +40 miles/day per TL past TL3.

**Coastal (Coast):** As above, but limited to a day's journey from land. That's enough to cross a narrow strait but *doesn't* allow ocean operations.

#### Factors Affecting Movement

**Bad Weather:** Poor weather may wash out roads, flood fords, block mountain passes, and otherwise alter terrain. The most common result is to treat dirt roads (extremely likely before TL6) as "off-road." At sea, bad weather prevents Coastal elements from operating and subtracts  $5d \times 10$  miles/day from the speed of Sea elements (minimum 0); neither penalty applies to elements with the All-Weather feature.

*Escorting Civilians:* Halve travel speed if escorting ordinary civilians (such as refugees), whether on land or on water. Civilians suffer *twice* the casualties that military forces do on a failed forced-march roll (see below).

*Forced March:* On land, a commander may push his force to move at up to 1.5x normal speed. For each day of forced march, the quartermaster must roll vs. Administration, at +3 for the first day but with a cumulative -1 per day past the first: at +2 on day two, at +1 on day three, and so on. Switching to normal speed or encamping erases the penalty. *Any* failure means the force takes 5% casualties – or 10%, on a critical failure – exactly if it had suffered combat losses (see *Casualties*, p. 37). This may represent injury, breakdowns, disease, desertion, straggling, or deaths. Optionally, the GM may treat any march through extremely hostile terrain as “forced”; instead of extra speed, success means no casualties were sustained.

*Night:* On land, halve off-road speed at night unless the element has the Night feature. The same is true for Nocturnal elements operating by day.

## Environmental Issues

The *Terrain*, *Weather*, and *Roads* rules on p. B351 may apply to troops marching on foot on land. Don’t worry about fatigue or Hiking skill – those things are factored into the troop mobility statistics and forced-march rules.

*Bad weather* represents heavy wind and rain, falling snow, or sandstorms. It has a variety of effects detailed in this chapter. It’s up to the GM to determine weather conditions, based on local climate and any other influences (Weather spells, etc.).

*No Security:* A commander may risk traveling without proper military security precautions. This is often done while moving through friendly territory (or if the enemy is believed to be elsewhere). The force is strung out in a very long column, and precautions such as sending out scouts and pitching proper camps are neglected. This doubles speed but gives -5 in the Reconnaissance Contest (below) should the march involve contact with the enemy.

*Recon:* On land, a force with no Recon elements at all moving through poorly mapped terrain moves at half speed.

*Splitting Forces:* A mobile force may be divided into several smaller forces with different commanders. Slower elements may even be *abandoned* outright. The disadvantage is that separate forces can be met and defeated individually.

*Example:* Both Sir Richard and Strykland have a mix of Foot and Mounted forces. As they’re moving on roads, travel speed is 20 miles/day (the speed of Foot). They started out about 15 miles apart, broke camp in the early morning hours, and headed toward each other (closing at about 40 miles/day); neither is making a forced march. The GM consults his map of the area and decides that the forces will enter the same general area just before noon.

## Posture of Encamped Forces

A land force that’s camped out or defending a stronghold, a naval force that’s anchored or in port, or an air force that’s

remaining over its base is “encamped.” This doesn’t *necessarily* mean it’s doing nothing! Possible postures are:

*Patrolling:* The force is sending out patrols to secure the surrounding area and gain intelligence of possible enemy movements.

*Bunkered:* The force is hunkered down in camp (or in harbor), alert and ready for trouble. This gives less chance of being ambushed but *no* chance of ambushing the enemy!

*No Security:* As with mobile forces, this means the force isn’t taking any but the most rudimentary security precautions. This is less excusable when encamped, but still common for forces that don’t expect trouble; e.g., during peacetime – or even in wartime, if the camp is deep within friendly territory. The GM may require the commander to roll against Leadership to keep his force from assuming the No Security posture when it’s commonly believed that there’s no real threat. Failure means his force is effectively acting as if it were in a No Security posture, even if he desired another posture!

## RECONNAISSANCE OPERATIONS

Knowing *where the enemy is and what he’s doing* can be half the battle!

Occasionally a battle begins by mutual arrangement. For example, an enemy host marches toward a defended fortress or a walled city occupying open terrain, the garrison’s lookouts spot them miles away, the defenders march out and array themselves in order of battle, and everything proceeds in an orderly fashion. Such actions have occurred throughout history, from the hoplite warfare of ancient Greece to many Age of Sail naval battles – and if the GM just wants to get down to the fighting, it can happen again!

Things aren’t always that simple, though. Patrols or entire armies can blunder into ambushes, and advancing forces can collide in hasty encounter battles in forests, night, bad weather, or sandstorms. The GM can resolve situations like these abstractly using the Reconnaissance Contest (below). Remember: This step *isn’t necessary* if the battle is occurring by mutual arrangement (GM’s decision).

### *The Reconnaissance Contest*

If the GM determines that opposing sides have moved into each other’s general vicinity but are still uncertain of their foe’s exact location, it’s time for a *Reconnaissance Contest*: a Quick Contest in which each force rolls against the *average* of its intelligence chief’s Intelligence Analysis skill and its commander’s Strategy skill (round down). Taking the average reflects the fact that a skilled intelligence chief will sift through constant reports from patrols, scouts, spies, and local inhabitants – and *existing* information on the enemy’s numbers and capabilities – to extract the nuggets that give him some idea of what the opposition is actually doing, while a competent commander will make sure that his own choices aren’t too predictable and that his forces are taking proper security precautions.

The intelligence chief makes the roll – but not yet! *Many* conditions and modifiers affect the Contest and its outcomes.

## Conditions

The GM determines what conditions prevail when opposing forces arrive in the same general area. Decide whether it's day or night, if the weather is bad, and what the terrain is like (for a list of terrain types, see the *Terrain and Surprise Table*, below). These choices affect troop capabilities and may privilege elements that have the Night, All-Weather, and/or Terrain features. They also determine the margin of victory needed to surprise the foe.

## Mobile Force Modifiers

If a force is *mobile*, apply these modifiers:

Flying: -1 if all members of your force are flying

Forced March: -1, or -2 if the forced-march roll failed (a trail of stragglers and broken-down vehicles makes it easier for the foe to track you!)

No Security: -5

Recon in Land Battle: -1 in a land battle if *none* of your force's elements are Recon, but +2 if *all* of your force's elements are Recon

Relations with Locals: +1 if your force has good relations with the locals, but -1 if the locals are hostile

Roads: -1 if using road movement, or -3 if tied to a fixed road or rail network due to logistic considerations (see *Maintaining a Force in Bad Terrain*, p. 14)

Speed: +1 if both forces are moving and you're at least 1.5x as fast as the enemy

Terrain: +1 if *any* of your elements have the Terrain feature for the terrain being traversed (this feature also improves recon TS), or +4 if *all* do

*War is based on deception.*

– Sun Tzu

## Encamped Force Modifiers

If a force is *encamped* (anchored), apply these modifiers:

Bunkered: +3, but if you win, treat your victory as a *tie*

No Security: -5

Relations with Locals: +2 if your force has good relations with the locals, but -2 if the locals are hostile

## Special Class Superiority Modifiers

Determine Recon Superiority and Air Superiority as explained in *Special Class Superiority* (pp. 31-32). A side with either may add its superiority bonuses here.

*Example:* The GM decides to require a Reconnaissance Contest to see whether either force catches the other unaware. Based on the movement decisions made earlier, he rules that Sir Richard and Ian Strykland's forces approach each other in Rural terrain, in good weather, during daytime.

Sir Richard has Strategy-10 and Sheryl Navarre has (default) Intelligence Analysis-7. Their average, rounded down, is 8. They receive the following modifiers: -1 for no Recon elements in a land battle, +1 for being popular with the locals, and -1 for marching along a road. A net -1 gives them an effective skill of 7.

The cunning Strykland has Strategy-12 and Intelligence Analysis-14; his average is 13. He gets -1 because the locals are

hostile to him (marching through human lands with orc mercenaries gives a bad impression!) and -1 for staying on the road. He has some Recon elements (a few Light Infantry) while Sir Richard has none, giving him the maximum +3 for Recon Superiority. His modified skill is 14.

Sheryl rolls well, an 8, but fails by 1 even so. Strykland rolls a mediocre 12 and still succeeds by 2, winning the Reconnaissance Contest. His margin of victory is 3.

## Results

A Reconnaissance Contest can have one of two basic outcomes, a *win* or a *tie*. Consult the *Terrain and Surprise Table* (below) for the relevant Terrain Rating and then determine the results as follows:

**Win** – If the winner's margin of victory equals or exceeds the Terrain Rating, he achieves *surprise*. If he wins by at least five more than that, he gets an *ambush*. Otherwise, he merely has *initiative*. For example, in Jungle, in daylight and good weather, a margin of 3 is needed for surprise and 8 for an ambush; in Plains, however, a margin of 8 is required for surprise and 13 for an ambush!

**Tie** – Roll 1d. A roll less than or equal to the Terrain Rating means a *pitched battle*. Anything else means an *encounter battle*. For example, on a tie in Rural terrain, a pitched battle occurs on a roll of 1-6 by day, 1-3 at night. *Exception:* If both sides critically fail in the Reconnaissance Contest, an encounter battle occurs and *both* forces start the battle *confused*.

## Terrain and Surprise Table

This table provides Terrain Ratings for the *militarily significant* terrain categories from p. B224. It omits aquatic environments that are ecologically but not militarily significant, and adds cases where the reverse is true; e.g., Hills and Built-Up Areas (cities/towns). Pick whatever best matches the area's *dominant* terrain.

Halve any Terrain Rating (round *up*) at night or underground; reduce it by 1 in bad weather; and halve it and *then* reduce it by 1 for both.

Terrain Type	Terrain Rating	Terrain Type	Terrain Rating
Arctic	6	Mountain	4
Built-Up Areas	6*	Open Ocean	8
Desert	7	Plains	8
Hills	6	Rural	6†
Island/Beach or Coastal Ocean	6	Swampland	4
Jungle	3	Underwater	4
		Woodlands	5‡

\* 3 if *both* sides started out in Built-Up Areas (that is, both were already within the town or city).

† 5 for areas with dense hedgerows (for instance, Normandy's *bocage*).

‡ 4 for trackless forest.

*Example:* The terrain is Rural, in daylight and good weather, making the Terrain Rating 6. Strykland won the Reconnaissance Contest by 3. His side wins initiative but doesn't achieve surprise.

## Reconnaissance Adventures

Reconnaissance is a task at which individual adventurers can make a *huge* difference. If agents capture the foe's battle plan, a mage reads an enemy general's mind, or a daring scouting mission discovers the route taken by the opposing army, there's no need to roll a Reconnaissance Contest! The GM is free to assume that such coups are equivalent to one side automatically winning the Contest by whatever margin of victory seems appropriate, and thus the force winning initiative or achieving surprise or ambush, as appropriate.

### Winning Initiative

If one side has *initiative*, it means that they gained better intelligence on the other – enough to set the initial pace of the action. The GM should give the winning intelligence chief a rough estimate (within ±25%) of the enemy forces and their general composition. The winning commander may then choose to deploy his forces to fight a prepared *pitched battle* or to advance immediately, resulting in a hasty *encounter battle*.

In addition, if the enemy force is bunkered, or is mobile but moving at an equal or slower speed, they winners may choose to turn back the way they came and *avoid* battle. Thus, if faster

– and in terrain that permits them to do so – they can completely bypass the rival force! Of course, this also means bypassing any objective that force was encamped around.

*Example:* Since Strykland's force won initiative, his scouts give him an estimate of the enemy force's composition and size. Confident that he has the numbers and experience, he decides to commit to a pitched battle. The GM describes the scene, taking into account the Rural terrain: "At midday, the two small armies deploy in open fields bounded by apple orchards, about a mile from the tiny hamlet of Drake's Cross." Thus, we'll refer to this as "the Battle of Drake's Cross."

### Achieving Surprise

If one side has the advantage of *surprise*, it means that they've caught the enemy unaware but haven't actually ambushed them. The advantaged force has the options detailed under *Winning Initiative* (above), with the difference that if it chooses an encounter battle, the opposing force will be *confused* on its first round.

### Achieving an Ambush

If one side achieves an *ambush*, it means that they're able to surprise the foe completely! They may act as detailed under *Winning Initiative* (above), except that even if they choose to fight a pitched battle, the enemy force will be *confused* on its first round.

# BEFORE THE BATTLE

Battle may occur by mutual arrangement or due to one side achieving initiative, surprise, or ambush and choosing to fight. Before a battle begins, calculate each force's Basic Strategy Modifier (below) and possibly its Defense Bonus (p. 32). In addition, the GM should describe the opposing force – not necessarily in game terms – to each PC commander, to give them some idea of what they're facing; see *Initial Intelligence* (below).

## INITIAL INTELLIGENCE

Except when their side enters the battle *confused*, commanders will have certain basic information about the enemy before hostilities begin:

- In an *encounter battle*, the approximate number of troops of each mobility class (within ±20%); e.g., "about 500-600 men on foot and 200-250 mounted." The GM may also identify elements that would obviously stick out, like giant monsters.
- In a *pitched battle*, the name and number of the enemy and such details as would be obvious at a glance. Heroes aren't identified as such unless they have a Reputation that would ensure recognition.

After the first round of battle, both sides usually have a *much* better idea of the situation; the GM can add additional details. However, in bad weather or at night – especially if few

or no troops have the ability to see in the dark – things may remain less-than-clear until after the fighting is over!

*Example:* The Battle of Drake's Cross is a pitched battle. Thus, Strykland will know that Sir Richard has about 30 knights (three elements of Heavy Cavalry), 50 spearmen (five elements of Heavy Infantry), 20 crossbowmen (two elements of Bowmen), and 10 dwarven miners (one element of Miners). That Sir Richard himself counts as a Hero element *won't* be obvious.

If it were an encounter battle, Strykland would know only that Sir Richard has "about 30-40 mounted troops and about 70-80 on foot."

## BASIC STRATEGY MODIFIER

A force's *Basic Strategy Modifier* is the most fundamental adjustment to its commander's Strategy skill. It's maintained from round to round even if the commander changes – only casualties can change it. Calculate the Basic Strategy Modifier for each side by comparing the forces present at the start of the battle, as detailed in the next few sections. It's the sum of these parts:

1. A bonus for relative Troop Strength, for the side with the *higher* TS. See *Relative Troop Strength* (below).

2. All relevant special class superiority modifiers. See *Special Class Superiority* (below).

3. Casualty modifiers: If a force begins with or suffers casualties, each 5% loss sustained gives -1 to the Basic Strategy Modifier. Normally, this is the only modifier that changes on a round-by-round basis. See *Casualties* (p. 37).

Other *circumstantial* modifiers may apply each round, depending on the commanders' choices and the gain or loss of Position Bonus (p. 37).

*Example:* In the Battle of Drake's Cross, Sir Richard's force has the lower Troop Strength and enjoys no special class superiority, so he has no modifiers. His rival, Strykland, gets +2 for relative Troop Strength and +1 for Fire Superiority, so his Basic Strategy Modifier is +3. See the examples below for how these modifiers were calculated.

## Relative Troop Strength

As explained under *Preparations* (pp. 26-27), determine each force's Troop Strength by summing the TS of all elements involved as combatants on that side, but counting support elements (those with parenthetical TS) as only 10% of their TS (or 0 TS if their sole class is C3I). Elements may have features that double or halve their TS under certain circumstances, such as at night or in particular terrain; see *Troop Strength Modifiers* (see boxed text).

After adding up each force's total TS, divide the *larger* TS by the *smaller* one to get an "odds factor." Look this up on the *Relative TS Table* (below) to find the associated Strategy skill bonus. This bonus goes to the commander of the *stronger* force; the weaker side has no corresponding penalty.

*Example:* Sir Richard's force has a total TS of 75.5 (see Appendix A). Strykland's force has TS 120. The odds factor for TS 75.5 vs. TS 120 is  $120/75.5 = 1.59:1$ . The *Relative TS Table* indicates that 1.5:1 or more (but less than 2:1) odds give Strykland +2 to Strategy.

## Relative TS Table

Strategy		Strategy	
Odds Factor	Skill Bonus	Odds Factor	Skill Bonus
Under 1.5:1	0	10:1 or more	+12
1.5:1 or more	+2	15:1 or more	+14
2:1 or more	+4	20:1 or more	+16
3:1 or more	+6	30:1 or more	+18
5:1 or more	+8	50:1 or more	+20
7:1 or more	+10		

## Special Class Superiority

A force may receive a Strategy bonus if it has at least *twice* the TS that the enemy has in elements of a particular special class. In a land battle, the following categories of "special class superiority" apply:

*Air Superiority:* This represents command of the skies, including the advantages of aerial reconnaissance, airstrikes, and aerial resupply. Count only the TS of Air Combat elements.

*Armor Superiority:* This represents superiority in armored breakthrough forces that are all but invulnerable to light infantry weapons. Count only the TS of Armor elements.

*Artillery Superiority:* This represents an advantage in indirect or mass firepower. Count only the TS of Artillery elements.

*C3I Superiority:* This represents superior command, control, and long-range detection systems. Count only the TS of C3I elements.

*Cavalry Superiority:* This represents superiority in fast, mobile forces that can outflank and outmaneuver the enemy. Count only the TS of Cavalry elements. However, in a battle being fought in bad terrain (Arctic, Jungle, Mountain, or Swampland – and possibly dense Woodlands or badly ruined Built-Up Areas), don't count Cavalry elements with Motorized or Mounted mobility.

*Fire Superiority:* This represents an advantage in direct battlefield firepower. Count only the TS of Fire elements.

Additional types of superiority may apply in special situations:

*Engineering Superiority:* This only matters in a pitched battle in which one side started out encamped, in a battle fought in a city, in a siege (pp. 39-40), or during an amphibious assault (p. 40). Count only the TS of Engineering elements.

*Naval Superiority:* This normally applies only in naval battles (p. 40) and amphibious assaults (p. 40). Count only the TS of Naval elements.

*Recon Superiority:* This *doesn't count at all* in battle! However, it gives a bonus in the Reconnaissance Contest (pp. 28-29). Count only the TS of Recon elements.

## Troop Strength Modifiers

Certain situations affect the TS of individual elements or an entire force. These factors modify TS for the purposes of reconnaissance, battle, and assessing special class superiority.

*Bad Weather:* Elements that have air or water mobility are at *half* TS. Elements with the Airborne feature can't use it. The All-Weather feature negates these penalties.

*Night:* If a battle occurs at night, *halve* the TS of all elements that lack the Night feature.

*River Crossings:* If one side chooses *any* defense strategy from behind a major river – even a bridged one – and the opposing force selects an attack strategy, then *halve* the TS of attacking elements that have *none* of air or water mobility, the Engineering class, or the Airborne or Marine feature. If the attacker has any Engineering elements, he may designate a number of attacking elements, equal to 5x the WT of his Engineering elements, that *won't* be at half TS.

*Defended Ford or Bridge Crossings:* Treat these as river crossings *unless* the defender is surprised. An attacker who has the advantage of surprise can capture fords or bridges, and fight without penalty.

*Terrain:* Elements with Terrain feature get *double* TS if the battle is fought in that particular terrain.

Note that superiority follows special rules in general during amphibious assaults (p. 40), naval battles (p. 40), and sieges (pp. 39-40).

If neither side has any elements within a special class, ignore that class. For example, in most TL1 (Bronze Age) battles, only Cavalry Superiority and Fire Superiority will matter.

### Calculating Superiority Bonuses

To determine the bonus for a particular type of superiority, add up each side's TS *in elements of the relevant class only*. Elements with parenthetical TS *do* count here! Then:

- If *neither* force has elements of that class, neither side gets a bonus.
- If *both* forces have elements of that class, divide the higher TS of such elements by the lower one and round down to find an "odds factor." Look up this value on the table below to find the special class superiority bonus for the side with superiority.
- If only *one* force has elements of that class, treat this as "5:1 or more" superiority on the table.

*Note:* If a force's TS in a class is less than 1% of the enemy's total TS, then that force cannot claim a superiority bonus for that class, even if the enemy has *no* elements of that class.

Odds Factor	Strategy Skill Bonus*
2:1 or more	+1
3:1 or more	+2
5:1 or more	+3

\* In an *encounter battle*, subtract one from Air Superiority, Artillery Superiority, and C3I Superiority bonuses – that is, a force needs at least 3:1 to achieve +1, while 5:1 or more gives only +2. This reflects the need for careful planning in these areas!



### Multiple Superiority Bonuses

Multiple superiority bonuses are cumulative! For instance, a force with a 5:1 edge in both Cavalry *and* Fire elements gets +3 for Cavalry Superiority *and* +3 for Fire Superiority, for a net +6.

*Example:* At Drake's Cross, neither side has Air, Armor, Artillery, C3I, or Naval elements, so superiority for these classes is irrelevant. Sir Richard and Strykland do both have Engineering elements, but there's no camp, city, siege, or amphibious assault involved, so Engineering Superiority doesn't count. Indeed, only Cavalry Superiority and Fire Superiority matter.

Sir Richard has Cavalry elements (knights) with total TS 37.5. Strykland has plenty of infantry but fewer cavalry: TS 25.

Sir Richard has the advantage, but not by 2:1 or more, so there's no Cavalry Superiority bonus.

Sir Richard has Fire elements (crossbowmen) with total TS 4. Strykland has his own crossbowmen plus orcish mercenaries armed with short bows, for a total TS 9. The TS ratio is 9/4 = 2.25, which gives Strykland a 2.25:1 advantage in Fire elements and thus +1 for Fire Superiority.

### Neutralizing Special Class Superiority

Some elements *neutralize* the superiority of the classes discussed above. For instance, antiaircraft artillery neutralizes Air Superiority. Elements like this have a class in parentheses in the tables in Chapters 2-3; e.g., "(Air)" for elements that neutralize Air Combat elements.

When figuring special class superiority, count the TS of neutralizing elements as belonging to the class in parentheses for the side with the *lower* TS of that class. However, this may never increase that side's special class TS above parity. Thus, antiaircraft guns cannot give Air Superiority but can neutralize the opposing force's Air Superiority if they would have had it.

If the neutralizing unit also belongs to a special class for other purposes, it cannot count as both. For instance, the class of Light AAA is "(Air), F." If devoted to the antiaircraft role, it doesn't count toward Fire Superiority.

## DEFENSE BONUS

A *Defense Bonus* is a conditional modifier that applies only during a round of battle on which the side possessing it chooses a defense strategy (e.g., All-Out Defense). Who gets this bonus depends on the type of battle:

- In a *pitched battle*, the side with initiative receives a Defense Bonus, based on using favorable terrain to anchor their defense.
- In an *encounter battle*, a side receives a Defense Bonus only if they were encamped and hunkered down prior to the battle (even if they're confused).

The GM sets the value of the bonus. It typically depends on terrain, with suggested values of +1 in Plains or +1d/2 (round up) in other terrain, adding an extra +1 in Hills or +2 in Mountain terrain or Built-Up Areas. In an ocean battle, a Defense Bonus is highly unlikely.

Exceptionally strong positions – massive trench lines like those of WWI, mountaintops, fortresses, etc. – require a *siege* and provide an even higher Defense Bonus. See *Sieges* (pp. 39-40).

# FIGHTING THE BATTLE

A battle is fought in a series of *battle rounds* (or simply *rounds*), each of which involves several steps. Round length depends solely on the *number of elements* in the *smaller* of the fighting forces:

Number of Elements	Round Length	Number of Elements	Round Length
1-9	15 minutes	1,000-9,999	2 hours
10-99	30 minutes	10,000+	4 hours
100-999	1 hour		

*Example:* In the Battle of Drake's Cross, Sir Richard's force consists of 12 elements, while Strykland's is made up of 20. The smallest side has 12 elements, so each round will represent 30 minutes.

Battles often last for as little as one or two rounds, but a long battle may continue from day to night or vice versa. In that situation, if *any* element in either force has the Night or Nocturnal feature, it's necessary to recalculate Basic Strategy Modifiers for *both* sides.

# 1. RISK

Each force commander and any individual PC involved in a battle must choose a *Risk Modifier* between -3 and +3. The lower the modifier, the fewer risks that person is taking relative to his position in the battle. His choice will also affect his Misfortunes of War roll later on (pp. 37-38).

*Example:* In the Battle of Drake's Cross, Sir Richard and Strykland (an NPC) must each choose a Risk Modifier, as they are force commanders. Sir Richard chooses +1, leading from the front. Strykland is more cautious; he chooses 0. One other PC is fighting in Sir Richard's force: swashbuckling swords-woman Sheryl Navarre, whom Sir Richard has assigned to command a unit of spearmen. In keeping with her impetuous nature, she chooses +3!

# 2. SIGNIFICANT ACTIONS

Any PC who accompanies the fighting or logistic force and who *isn't* the force commander may try to distinguish himself by performing a *significant action* during the battle. In mass combat, glory and heroism are the results of being in the right place at the right time – and PCs are customarily much more likely to find themselves in such situations!

Every PC other than the force commander may attempt a *Heroism* roll on 3d. The base target number is 5.

*Modifiers:* The PC's Risk Modifier; +1 if he has level 15+ in at least one skill that might logically be of some use in a battle, or if he has an especially useful advantage, spell, or piece of gear; +1 if he's personally in command or second-in-command of one or more elements; +1 if he's with an element that has the Fanatic or Impetuous feature; -1 if more than one element is involved in the fighting and he's with a support element (that is, one with parenthetical TS), or if he's with the logistic force.

Any success means the PC performed a significant action that – through chance or design – influenced the course of the entire battle. This gives +1 (+2 on a critical success) to his commander's Strategy roll this round. Failure means he may

have been heroic (if he chose a high Risk Modifier) or not (if he didn't), but with little effect on the broader course of events. Critical failure means he blundered in some egregious way that had an impact on the battle: -1 to his commander's Strategy roll this round.

The GM should weave this into the narrative of the battle, perhaps letting the players add elements that fit their PCs' personalities; see *Examples of Heroism and Blunders* (below). If a player cooks up an implausible story, the GM can say that's what the PC *believed* or *claimed* he accomplished in the heat of battle. Actual events might have been less impressive! For instance, a pilot who claims to have killed the enemy general by bombing his headquarters might only have managed to force the general to run for cover at a crucial moment.

*Example:* Sheryl Navarre chose a Risk Modifier of +3, taking a lot of chances. Her skill of Broadsword-15 is obviously useful in a battle, so that adds +1. She also commands an element of spearmen, giving her a further +1. This raises her Heroism chance from 5 to 10. She rolls a 9 on the first round – success. Her player says that she leads her spearmen from the front, hacking and slashing a path through the enemy center, inspiring the rest of the army's troops to follow her!

## Detailed Actions

When the players describe their characters doing something *especially* cinematic or clever, the GM is encouraged to shift out of the battle rules for a few moments to resolve the situation. Imagine a war movie: The camera gives us some sweeping shots of the battle, and then zooms in to focus on the main characters! It usually isn't necessary to go into a great amount of detail, but the GM may require a couple of extra skill rolls or a few minutes of roleplaying.

For example, the GM might give each PC who's attempting a significant action several turns to accomplish some goal that he deems important: kill the leader of an enemy unit, disable the crew of an artillery piece, capture the bridge of a ship, etc. If the PC accomplishes the task within the allotted time, his force commander gets +1. Otherwise . . . no bonus.

## Examples of Heroism and Blunders

*Tess Davenport* is a medic assigned to a rifle company. She chooses a Risk Modifier of +1. She has First Aid-15, which the GM agrees is a useful skill (+1), giving her a total Heroism chance of 7. Her player rolls a 7, so Tess performs a heroic action significant to the battle. Her player says that she was able to patch up a wounded officer at a crucial moment, when his element's presence was needed to turn the tide of battle.

*Quintus Petronius* is a legionary soldier fighting in the ranks of his element. He chooses a +1 Risk Modifier. He's also an exceptional swordsman with Shortsword-17, which is obviously useful, so he gets another +1. He gets lucky and rolls a 6 – success! Petronius' player suggests that he cut down one of the opposition's standard-bearers in single combat, demoralizing an important enemy formation. The GM agrees.

*Max Knoedel* is an ordinary corporal working as a truck driver in a supply company. He chooses not to be heroic. Nevertheless, he rolls a critical failure and influences the battle . . . the wrong way. Since his player can't think of anything, the GM rules that Max got lost and a much-needed ammunition convoy didn't reach a key forward artillery battery, leaving it short of shells. The commander suffers a -1 Strategy modifier. Max's blunder is never discussed.

*Corporal Norris* is an assistant orderly in the Imperial Marines. He rolls an 18 – critical failure! The player gets into the spirit of things and tells the GM that while delivering a thermos of hot coffee to General Morgan, he trips over a power cable and accidentally spills it over her and the command APC's map display. The entire battle-management system shorts out for five crucial minutes: -1 to Strategy.

This approach replaces the Misfortunes of War roll (pp. 37-38), too, since it also allows for possible *bad* outcomes! See *Examples of Heroism and Blunders* (p. 33) for some illustrative tales.

## 3. CHOOSE BATTLE STRATEGY

Every round, each force commander *secretly* selects one *battle strategy*. These are loosely grouped into four basic categories, described under *Attack Strategies* (pp. 34-35), *Defense Strategies* (p. 35), *Retreat Strategies* (p. 35) and *Raid and Skirmish Strategies* (p. 35). If a commander feels that his side is losing and about to be wiped out, he should at least consider *Parley* (p. 35) or a retreat strategy!

The GM should try to ensure that both commanders choose based solely on the knowledge of enemy TS and force composition revealed during scouting. There may also be *rules* restrictions on a commander's options. See *Reconnaissance and Battle Strategy* (below) and *Special Cases* (p. 35-36) for details.

These rules assume that there's one commander per side, but the GM may interpret this loosely. If one PC is theoretically in charge but others are offering advice, the GM should strive to involve everyone. Remember that each battle round represents a lengthy time period, so the GM may wish to allow a group to cooperate in choosing strategies – and even to take turns making the Strategy roll (see *Battle Strategy Roll*, pp. 36-37) against the skill of whoever proposed the round's strategy.

Adventurers who vehemently disagree with an *NPC* commander are free to advise him, dispute his choices, or even try to *replace* him. Resolve this using the standard rules for Influence rolls, individual combat, and so forth before proceeding.

*The greatest general is he who makes the fewest mistakes.*  
– Napoleon Bonaparte

### Reconnaissance and Battle Strategy

The results of the Reconnaissance Contest (pp. 28-29) often restrict initial battle strategy:

- *Pitched Battle*: Both sides are free to pick *any* battle strategy.
- *Encounter Battle*: Neither side may select Deliberate Attack or Deliberate Defense. A mobile force cannot choose a retreat strategy, or any defense strategy other than Mobile Defense, on the first round.
- *Confusion*: The commander of a “confused” force must choose either Rally or Full Retreat on the first round. If he chooses Rally, then he gets a Leadership roll at the end of each round; success means he rallies his force and is free to choose a strategy other than Rally or Retreat on later rounds.
- *Ambush*: The ambushers' commander may select any strategy but a defense strategy on the first round. In addition, the ambushers receive defensive bonuses, which are normally only allowed for defenses. Treat the other side as suffering from confusion (above).

*Example:* It's the first round of the Battle of Drake's Cross! Opposing commanders Sir Richard and Strykland must each secretly choose a battle strategy. It's a pitched battle, so neither commander has any restrictions on his choices.

### Selecting the Right Battle Strategy

Strategies can produce a wide variety of effects. Many give a commander a Strategy skill penalty in exchange for an advantage if victorious. These are useful to the leader who believes in the superiority of his skill or forces – or who's willing to take a risk!

Other strategies affect a force's ability to gain or retain a cumulative Position Bonus (PB). A force normally achieves a PB gain if it wins a round of battle; this represents capturing tactical objectives or maneuvering into a better position. In particular, taking a defense strategy forfeits the ability to gain PB if the round is won. See *Position Bonus* (p. 37).

Some strategies modify casualties (p. 37) or the size of the PB shift that results from winning the round.

And a few strategies give an extra bonus to the Strategy roll conditional on achieving a particular type of special class superiority. This only applies if superiority was sufficient to give a bonus of +1 or better (normally 2:1 or more). See also *Special Class Superiority* (pp. 31-32).

*Example:* Sir Richard's player and the GM each secretly choose their first round's strategies. Sir Richard is young but not reckless. He knows that Strykland must get past his force to beat him. It's his first time commanding a battle, so he sticks to the basics: a Defense strategy, for +1 to his Strategy roll.

Strykland is cunning like a fox, and his spies have told him that he's facing an amateur. He orders a complex Indirect Attack, which the GM will describe as a feigned retreat in conjunction with a flanking assault by his cavalry. Strykland's Indirect Attack has large skill penalty, but will pay off with a doubled margin of victory if he wins the round. The rebel is certain that he's much better at Strategy than some nobody like Richard, so he feels it's worth the risk. Strykland hopes that Richard will fall into his trap and be destroyed!

### Attack Strategies

*All-Out Attack*: Charge! A commander who chooses this option adds a +2 battle strategy modifier. If he wins the round, his forces also inflict +5% casualties on the enemy. But there's a cost: Unless he wins by sufficient margin to take 0% losses, any casualties *his* force takes are *doubled*.

*Attack*: This is an order to advance – or, if the forces are already in contact, to press hard against the enemy. The commander is assumed to be using all appropriate battlefield tactics for the period and troops involved. There are no special modifiers, making this a safe “default” option for any commander.

*Deliberate Attack*: This is a slow but carefully planned attack, aimed at reducing any advantage the defender has. It's an option only in a pitched battle or a siege, and *never* available to a side that starts the battle confused. Any benefits that the defender would receive from Defense Bonus (but *not* Position Bonus) are halved, rounding up. This makes a Deliberate Attack extremely useful against well-prepared defenders. The attacker also receives a +1 battle strategy modifier – and if he has Artillery Superiority, he gets an *extra* +1. However, a Deliberate Attack is slow to develop, and thus allows the other side to change its strategy; see *Special Cases* (pp. 35-36).

*Indirect Attack:* This represents the commander detaching part of his force on a wide outflanking maneuver, faking a retreat, or performing some other risky-but-cunning move. He gets a -3 battle strategy modifier (only -2 if he enjoys C3I Superiority). If he wins, *double* his margin of victory; e.g., if the attacker succeeds by 5 and the defender succeeds by 1, the margin of victory is 4, which would then be doubled to 8. This allows a good or lucky general to achieve a truly spectacular result! Repeated Indirect Attacks offer diminishing returns, however, as the foe will be wary of further tricks. On the second and subsequent Indirect Attacks, multiply the margin of victory by only 1.5 (round up); in addition, a force suffers an extra -2 battle strategy modifier if it follows one Indirect Attack with another on the *very next round*.

## Defense Strategies

*All-Out Defense:* Don't retreat an inch! A commander who chooses this option receives a +2 battle strategy modifier, and also reduces his PB loss by one should he *lose* the round. He cannot gain PB if he wins, however – and unless he wins by sufficient margin to take 0% losses, any casualties his side takes are *doubled*.

*Defense:* This is the basic defense option. A defending force gets a +1 battle strategy modifier but cannot gain PB if victorious. They may take advantage of any Defense Bonus for terrain that they began with, though.

*Deliberate Defense:* This is a well-prepared defense. It's never an option in an encounter battle or for a side that starts the battle confused. In a pitched battle, it's allowed only on the *first* round – and only to a force that has a Defense Bonus. Either side may use it freely during a siege (pp. 39-40). It gives the user a +1 battle strategy modifier – or +2 if he has Fire Superiority – plus any Defense Bonus from favorable terrain. If the defender wins or ties, his defense inflicts +5% casualties on the attacker. However, he cannot gain PB if victorious. In addition, choosing a Deliberate Defense surrenders the initiative; see *Special Cases* (pp. 35-36).

*Mobile Defense:* A "defense in depth" that trades space for lives. This choice gives the commander a +1 battle strategy modifier *if* his force has Cavalry Superiority and/or Naval Superiority. Regardless, if he loses or ties the round, the enemy gains an extra +1 PB (even if defending!) while the commander's force suffers 5% fewer casualties (minimum 0%). Like other defenses, victory doesn't allow the defender to gain PB.

*Parley:* This is an attempt to negotiate a pause in the battle to talk – often to give or demand surrender terms. The enemy decides whether to accept after the battle strategies are announced (see *Special Cases*, pp. 35-36). The GM may wish to make a reaction roll (see pp. B559-562) to determine whether the enemy commander is interested! If the other side refuses the offer, the fight continues and the side that selected Parley is assumed to have chosen Defense instead – but with an extra -1 battle strategy modifier, since the commander wasn't as focused on winning this round. If the enemy agrees to parley, the battle pauses temporarily as each side warily regards the other (and gathers any wounded). Negotiations can proceed via emissaries, radio, or other indirect channels, or face to face, and might lead to events such as a challenge to single combat.

*Rally:* This strategy is used only when a force is *confused* – for whatever reason, but typically because it was caught by

surprise – and the commander doesn't wish to order a Full Retreat. A force in this situation has either lost or never achieved proper combat formation, but the commander is trying to remedy that. He suffers a -2 battle strategy modifier, but if his force survives the round, he may attempt a Leadership roll at -2 at the *end* of the round. Success indicates that his force rallied and is no longer confused.

## Retreat Strategies

*Fighting Retreat:* This is an attempt to fall back while launching spoiling attacks to keep the enemy at bay. It gives the commander a +3 battle strategy modifier. If he wins or ties the round, his force escapes. Otherwise, it's still fighting, the enemy gains an extra +1 PB, and any casualties the retreating force sustains this round also apply to its *logistic* force! Win or lose, any casualties the *enemy* suffers are halved (round down).

*Full Retreat:* This is an attempt to withdraw as quickly as possible without the retreat degenerating into a rout. It gives the commander a +8 battle strategy modifier and his force takes 10% fewer casualties than usual, but any casualties sustained apply to both his fighting force *and* his logistic force. Regardless of who "wins" the round, the retreating force loses the battle, any survivors escape, and it inflicts *no casualties at all* on the enemy! The retreating force commander takes an extra -2 battle strategy modifier when performing a Full Retreat as a result of confusion. In any situation where retreat would be difficult – e.g., a land force must retreat over a narrow bridge – the GM may apply an additional -2 or worse.

## Raid and Skirmish Strategies

*Raid:* Hit the enemy hard, aiming to inflict losses or dislodge the foe rather than to seize new ground. Add an extra +1 battle strategy modifier for *each* of Air Superiority, Cavalry Superiority, Naval Superiority, and Recon Superiority. A winning Raid can reduce enemy PB but *not* gain PB for the raiding force. In addition, if the winner inflicts any casualties, he may opt to apply these to the enemy's logistic force *instead of* to the opposing fighting force.

*Skirmish:* Exchange harassing fire at long range, falling back if attacked. The commander receives a +2 battle strategy modifier – and if he has Air Superiority, Artillery Superiority, and/or Fire Superiority, he gets another +1 (not +1 each!). Winning with a Skirmish strategy doesn't gain PB, and the margin of victory is *halved* (round down). Win or lose, however, the skirmishing side takes 5% fewer casualties; e.g., if the outcome would normally be 15% casualties, they'd suffer only 10%.

## Special Cases

Certain combinations of battle strategies may result in special situations. These occur immediately after the strategies are revealed.

*"Deliberate" Strategies and Parleys:* If one commander chose any of Deliberate Attack, Deliberate Defense, or Parley while the other didn't (and, in the case of Parley, refused to talk), then the commander who chose such a slow-moving strategy loses the momentum. This permits his opponent to change his own strategy to something different immediately, if he wishes. A commander with Stubbornness likely won't change his mind, though!

*Parleys:* If one commander chose Parley and the other commander opted to accept, then the battle pauses while they talk; don't bother with Strategy rolls. Similarly, if both commanders chose Parley, the battle halts for a round as the sides talk under flag of truce. In either case, both sides hold position, and any Position Bonuses are retained if negotiations break down and the battle resumes.

*Stalemate:* If *both* commanders picked a defense strategy other than Parley, then change both strategies to Skirmish, as no one is serious about attacking that round.

*No Battle:* If *both* commanders picked a retreat strategy, or if one chose a retreat strategy and the other selected a defense strategy, then the battle ends and the retreating force(s) break contact and escape without any casualties this round. Future contact requires further movement and reconnaissance.

## Desperate Strategy

Desperate times make for desperate decisions! A commander whose force has suffered at least 25% more casualties than the enemy may choose the *Desperate* option in conjunction with any strategy but Deliberate Attack, Deliberate Defense, or Skirmish. For instance, he could try Desperate All-Out Attack or Desperate Full Retreat.

This typically involves part of the force performing sacrificial operations to save the rest. The commander gets an additional +4 battle strategy modifier but his side suffers an *extra* 10% casualties *automatically*, regardless of the outcome. Moreover, Misfortunes of War rolls on his side are at +1 (increasing the odds of disaster) that round.

*Example:* After a few rounds of battle, things aren't going well for Strykland. His secret choice this round is Parley, while Sir Richard chooses Attack. Then they reveal their strategies.

Since Strykland selected Parley, he has lost momentum. Sir Richard has a choice: If he wants to talk, he can agree to the Parley, in which case the battle will pause while they meet. Alternatively, he can change his strategy. He takes Strykland's Parley as a sign of weakness and orders an All-Out Attack! This automatically switches Strykland's Parley to a Defense at an extra -1, as explained for the Parley strategy.

## 4. BATTLE STRATEGY ROLL

The next step is to determine the commanders' effective Strategy skills and then resolve the battle round by rolling a Quick Contest between them. Commanders of forces consisting of one to four elements may roll against Tactics instead. For each commander, adjust skill for *all* of the following that apply:

- Basic Strategy Modifier (pp. 30-32), adjusted for casualties (p. 37). This *always* applies!
- Defense Bonus (p. 32), if he has one *and* chose a defense strategy.

- His Risk Modifier (p. 33).
- Modifiers for *other* PCs' significant actions (p. 33).
- Battle strategy modifiers for his chosen strategy (pp. 34-36, 46).
- Position Bonus (p. 37), if any.
- Special circumstance modifiers from -3 to +3 for any *other* factor the GM deems relevant; e.g., for a brilliant (or stupid!) plan actually described by the commander's player.

Then roll a Quick Contest of *effective* Strategy skills between the commanders.

*Example:* In the first round of the Battle of Drake's Cross, Sir Richard's Basic Strategy Modifier is 0. We add his +1 Risk Modifier, +1 for Sheryl's significant action, and a +1 battle strategy modifier for his Defense strategy. Sir Richard's total modifier is +3. He has Strategy-10, so his effective skill is 13.

Strykland's Basic Strategy Modifier is +3. He took no special risks, so he gets no Risk Modifier. His choice of Indirect Attack gives him -3 (it would have been only -2 if he had C3I Superiority, but he doesn't). Strykland's total modifier is 0. Strykland has Strategy-12, so that's his effective skill.

## Winning the Contest of Strategy

The force whose commander won the Quick Contest of Strategy wins the battle round. The commander's margin of victory determines how decisive the round was. Look up this margin on the *Combat Results Table* to find the casualties on each side. In addition, if the winner chose any attack strategy, he also gains or increases Position Bonus (PB; p. 37), or reduces his foe's PB; this represents successfully achieving objectives or pushing back the enemy.

## Combat Results Table

Margin	Loser's Casualties	Winner's Casualties	Winner's PB Shift*
0 (tie)	-10%†	-10%†	0
1-3	-15%	-10%	+1
4-6	-20%	-10%	+2
7-9	-25%	-5%	+2
10-14	-30%	-5%	+3
15-19	-35%	0%	+3
20+	-40%	0%	+4

\* Only if *attacking*.

† A tie means there's no clear winner or loser; *both* sides take -10% casualties.

*Example:* Sir Richard's player rolls a 9 against an effective Strategy skill of 13, succeeding by 4. Strykland rolls an 11 against an effective skill of 12, succeeding by 1. Thus, Richard wins by 3. His force *inflicts* 15% casualties and *takes* 10% casualties. A win by 1-3 would also give an attacker +1 PB, but since Richard chose a defense strategy, his force cannot gain PB this round.

Had Richard rolled a 13 and Strykland a 9, *Strykland* would have won by 3 instead. Strykland's margin would have doubled to 6 due to his Indirect Attack. Thus, he would have inflicted 20% casualties on Richard's force while taking just 10%, and gained +2 PB. Unfortunately for his ambitions, he gambled and lost . . .

## Casualties

Depending on the winner's margin of victory and the strategies each side chose, one or both forces may suffer casualties. These appear on the *Combat Results Table*, and are expressed as the percentage of a side's *starting* forces that have been killed or badly wounded, or that have fled. Thus, casualties consider morale, not just physical losses.

Casualty percentages – from the table, strategies, forced marches, or any other rule – are cumulative and simply *added*. For instance, if a force takes 10% casualties in the first round and 5% during the second, total casualties are 15%. Should casualties reach 100%, that force ceases to exist; everyone is dead, incapacitated, or captured, or has fled. It's possible to retreat or surrender first!

Similarly, any comparisons are between forces' additive casualty totals. For instance, "25% more casualties than the enemy" refers to 25% vs. 0%, 30% vs. 5%, and so on.

### Effect on Combat

Don't reduce TS for casualties *during* the battle; do that *after* the battle ends. During the battle, even relatively low casualties can have a significant effect on cohesion. For every 5% casualties suffered, the commander suffers -1 to his Basic Strategy Modifier.

*Example:* Richard's force suffered 10% casualties, so his Basic Strategy Modifier drops by 2, from 0 to -2. Strykland's side took 15%, so his Basic Strategy Modifier drops from +3 to 0.

## Position Bonus (PB)

*Position Bonus* (PB) represents possession of significant objectives such as a strategic hill or wall, or the gradual evolution of successful maneuvers such as flanking, enveloping, or surrounding the enemy. Only one force can possess PB at any given time. If a side has PB, this adds to its commander's effective Strategy skill regardless of what battle strategy he chooses.

Unlike Defense Bonus, PB may go up or down each round, as detailed below. A winning force that chose any attack strategy gains a favorable PB shift, as indicated on the *Combat Results Table*. A winning force that picked Raid *might* cause a PB shift under some circumstances. A side that selected a defense or retreat strategy, or Skirmish, never enjoys a favorable PB shift for winning – although it retains any PB it already had.

Adjustments to PB are cumulative from round to round.

### Winning with an Attack Strategy

If the loser has no PB, the winner gains the *entire* PB shift indicated on the *Combat Results Table*. If the loser has PB, subtract the PB shift from this first – and if that would reduce the loser's PB below 0, read the residue as the winner's PB instead. For example, if the attacker's margin of victory is 5, he gets a +2 shift. If the loser has +1 PB, this becomes 0 and the winner now has +1 PB. If the winner attacks and gains another +2 next round, he'll have +3 PB.

### Winning with a Raid

Raids only shift PB under certain circumstances. A winning force that chose Raid *can't* gain PB but *can* diminish the loser's PB (if any). For

example, if the winner's margin of victory is 5, he gets a +2 shift. If the loser has +1 PB, this would reduce it to 0 but *not* give the winner PB, since he chose Raid, not an attack strategy.

## 5. MISFORTUNES OF WAR

Battle inevitably brings random dangers: stray arrows, bursting shells, exploding ammo, stampeding men and beasts . . . Many a commander has been cut down at the pinnacle of his success!

To simulate such outcomes, at the end of every round, the GM makes a *Misfortunes of War* roll for each force commander and PC involved in the battle, to see if they were injured. He may also choose to roll for (or simply determine by fiat) the fate of any significant NPC who *isn't* in command. Should either commander be incapacitated, his side will have to choose his replacement.

The chance of an individual getting hurt depends on the casualties his side took during the round. This gives his base Misfortunes chance:

Misfortunes		Misfortunes	
Casualties	Chance	Casualties	Chance
5%	5	30-35%	8
10-15%	6	40%+	9
20-25%	7		

*Modifiers:* The character's Risk Modifier; +1 if his side used a Desperate strategy; +1 if he's with an element that has the Fanatic or Impetuous feature; -1 if more than one element is involved in the fighting and he's with a support element (one with parenthetical TS), or if he's with the logistic force.

If a combatant's Misfortunes of War roll fails (that is, the roll comes up greater than his modified Misfortunes chance), he escapes intact. Any "success" means he's injured or captured. Ordinary success means 2d-1 HP of injury. Critical success means he may either surrender or suffer 6d HP of injury – his choice (decide before rolling injury).

Someone reduced to 0 or fewer HP but not actually killed may be left for dead, brought back by his comrades, or possibly captured. The GM should decide this based on which side won the battle round.

If a force's commander becomes a casualty, the person who is next in command must make an immediate Leadership roll. Success means he's able to avert panic. Failure means the force is immediately *confused* and the new commander's battle strategy next round must be either Rally or Full Retreat (his choice).

The GM can always rule that someone is immune to these risks if he's sufficiently well protected that none of the random hazards of a battlefield could harm him. For example, a super with DR 40 or an insubstantial ghost wouldn't likely be injured on a TL2 battlefield. For everyone else, though, roll the dice!

*Example:* In the first round of the Battle of Drake's Cross, the GM must make three Misfortunes of War rolls: one for Sir Richard; one for the other PC fighting in the battle, Sheryl Navarre; and one for the NPC commander, Strykland.

Strykland's force took 15% casualties, so his base Misfortunes chance is 6. His Risk Modifier was 0, making his final chance 6. The GM rolls a 10 and Strykland suffers no ill effects.



Sir Richard's force took 10% casualties, so the base Misfortunes chance on his side is also 6. Risk Modifiers are +1 for Sir Richard, for a 7, and +3 for Sheryl, giving a 9. The GM rolls for each. Sir Richard gets an 11 and experiences no misfortune – but Sheryl gets an 8. As a result, she suffers 2d-1 points of injury. The GM rolls 5 points, which come right off her HP (this is *injury*, not damage!); she's hurt, but as she wasn't reduced to 0 HP, she can fight on. She might take fewer risks next round, though!

## 6. VICTORY?

If either side reaches 100% casualties, the battle is over automatically. Remember that “casualties” can represent troops who ran away as well as those who died. It is possible for both sides to take 100% casualties!

Otherwise, victory occurs if one side retreats while the other doesn't. The winner normally has possession of the field of battle – including any objectives being fought over. The losers retreat off the field (back the way they came, if they were mobile).

If victory hasn't yet occurred, fight another round of battle!

*Example:* The first round of the Battle of Drake's Cross ended in a slight advantage for Sir Richard. However, Strykland's higher Strategy skill and TS superiority could still give him the edge.

The battle lasts for three more rounds: Sir Richard goes on the offensive and ties the second round, and then decisively wins the third. Faced with heavy casualties and Richard's mounting PB, Strykland chooses to Parley, which Richard rejects, launching an All-Out Attack and crushing his enemy – and also causing Strykland to fall unconscious thanks to a Misfortunes of War roll.

Ultimately, Strykland's force suffers a cumulative casualty total of 100%, which the GM decides is partly due to the cowardly orcs fleeing. Richard's side takes only 35%. Richard is the clear victor!

*I always say that, next to a battle lost, the greatest misery is a battle gained.*

– Duke of Wellington

## Pursuing a Retreating Force

If the loser voluntary retreats with some forces intact (that is, with fewer than 100% casualties), the winning commander may make a Leadership roll. If he's successful, he's able to control his forces, and may choose one of the options listed below. Otherwise, roll 1d for his force's reaction:

**1-3 – Pursue.** Harass the enemy! This adds another 5% to enemy losses. If the winning force had Cavalry Superiority or Air Superiority, add an extra 5% for each. In addition, the retreating enemy loses 1dx5% of his logistic force.

**4-6 – Hold the Field.** Let the enemy run! Secure the battlefield, taking time to tend the wounded and rally one's own forces.

This allows more rapid medical attention for the winner's wounded: Reduce the casualties (if any) on the winning side by 5%.

## After the Battle: Casualties

The survivors of a battle can regroup afterward – although this is easier for troops on the winning side! Below, all casualty percentages refer to the figures *after* considering the effects of pursuit, where applicable.

### The Winning Side

The winning side's casualties are automatically *halved* after the battle, rounding down to the nearest 5%. This represents recovery and repair of damaged vehicles, healing of the walking wounded, and rallying of scattered elements.

*Example:* Sir Richard's force suffered 35% losses. Since his side won, this is reduced to 17.5% after the battle, which rounds down to 15%.

### The Losing Side

The losing side *doesn't* recover casualties. Assume that half are dead or dying. The rest flee (surrender, in a siege), abandoning their equipment, and no longer count as troops. For Fanatic elements, and things like robots and zombies, assume that *all* casualties are wiped out.

*Example:* Strykland's force took 100% losses. Half are dead or dying. The others run for their lives, their morale shattered.

### Mutual Annihilation

Should *both* sides simultaneously suffer 100% casualties, use the rules under *The Winning Side* for both of them. Over the next few hours, the two forces will reform several miles apart as the scattered survivors rally.

## Quick Casualty Determination

The rules for casualties are deliberately simplified to permit fighting multiple battles in succession. Detailed calculations are deferred until the series of battles is over.

After making the adjustments noted above, apply the final casualty percentage to the *total* TS of the *entire* force, rounding all losses up. For game purposes, assume that every element is reduced by this percentage across the board (and likewise, that losses are divided evenly among a force's units) – although the GM is free to rule otherwise.

*Example:* Sir Richard's force took 15% casualties after halving for victory. For a TS 75.5 force, 15% losses leave TS 64.

### Alternative Casualty Determination

Realistically, it's likely that some elements will be wiped out while others are unaffected. The GM may select elements whose individual TS equals or exceeds the total TS losses and remove them, if he prefers.

## Overrunning the Enemy's Rear Area

If using *The Logistic Force* (pp. 13-14), assume that if one side is wiped out (100% casualties), then so is its logistic force. Otherwise, the retreating logistic force sustains no losses other than those inflicted by a pursuit or by a Raid strategy that targeted the logistics force.

## Casualties and PCs or Major NPCs

Casualties *don't* affect the PCs – Misfortunes of War rolls determine their fate. Even if a PC's unit is wiped out completely, a PC who doesn't suffer misfortune gets away somehow! The GM may extend this benefit to important NPCs, too.

## After the Battle: Spoils

To the victor go the spoils, including but not limited to loot. And the locals may take *their* cut – perhaps literally!

### Loot

Many military units – *not* just mercenaries – depend largely on plunder to make life worthwhile. The booty available in even a burned-out and picked-over city can be immense, and is up to the GM to settle. However, loot left on the battlefield is also extremely valuable. The force that holds the field after a fray will be able to recover the arms and armor of all of its own casualties, as well as the equipment of most if not all of the losing side's dead, captured, and fled.

It takes 30 minutes to loot the battlefield if 1-9 elements fought there. Double this for every tenfold increase in elements involved. In *extremely* rough terms, the value of gear stripped from killed or captured troopers, or found abandoned, equals 1/5 of the cost to raise the enemy force multiplied by its final casualty percentage. For example, if a force worth \$37 million suffered 20% casualties, the total haul would be worth  $(\$37 \text{ million} \times 0.20)/5 = \$1.48 \text{ million}$ . It would sell for less – perhaps only 20% of that amount in cash – but to an army, most or all of the salvage will be useful.

For the purpose of this rule, treat an element that surrenders as having suffered 100% losses. The *survivors* of such an element might be valuable, too. Keep reading . . .

### Captives

Some cultures (e.g., feudal Japan) didn't make a practice of looting the battlefield, although many took trophies – such as heads – from their dead enemies. Battlefields were often looted by the locality's poor (bandits or peasants) before relatives of the dead could make arrangements for burial. Sometimes such scavengers also found soldiers who had been left for dead by comrade and enemy alike. In that case, make a reaction roll. Depending on the outcome, the looter might kill the warrior, ignore him, or nurse him back to health.

Especially in aristocratic societies, it was often profitable to take a noble foe as a prisoner rather than slay him outright. This wasn't universal! Fallen lords were sometimes executed, held hostage in return for relatives' good behavior, or locked away for some other fate.

And in places where slavery was practiced, even ordinary troops might be valuable alive.

Slave or ransom prices *don't* depend on the cost to raise or maintain an element. Instead, estimate the number of captives by multiplying the number of captured – usually surrendered – elements by the number of people in them (typically 10, but can vary from hundreds for a ship to a single hero or aircraft pilot), and reduce this by the force's casualty percentage. Ransom may be hundreds or thousands of \$ for a knight or a nobleman. For others, see *Slaves* (p. B518).

As noted under *Misfortunes of War* (pp. 37-38), a PC reduced to 0 or fewer HP might be captured if on the losing side. He could meet *any* of the above fates, waking up in a peasant's cottage, a rival's dungeon, or a slaver's pen instead of in the enemy camp!



# SPECIAL BATTLE SITUATIONS

Situations other than two-sided battles between conventional forces on open land require special rules.

## SIEGES

A *siege* is an attack on a "fortress," which might be *any* extremely strong position, including:

- An actual fortress or castle.
- A walled town or city.
- A fortified or ruined building complex.
- Part or all of an *unwalled* urban area – intact or ruined – if defenders have time to occupy it and erect or improvise strongpoints.
- An exceptionally strong *natural* position (e.g., a cave complex or a very narrow pass) that offers more than a mere Defense Bonus.
- Linear entrenchments, if they're strong and continuous enough that they can't be outflanked (such as those on the Western Front in WWI).

A fortress is rated for the Defense Bonus (DB) it grants, which depends on the position's strength:

*Improvised Fortifications:* Extensive trench lines, or an unwalled-but-occupied town or city, might give a DB of +4, increasing to +5 if it has plenty of stone or concrete structures (or their ruins) and/or underground tunnels.

*Permanent Fortifications:* Forts, castles, and other full-scale military fortifications offer a DB of TL+4. This is based on the TL when they were last upgraded – fortresses are often one or more TLs obsolete! Ruins of such fortifications have at least -1 or -2 to DB.

*Terrain:* In *all* cases above, add an extra +1 if the fortifications are on a small island, a hill, or other strong position – or +2 for an extremely strong position, such as a mountaintop. Moreover, on a steep hill or a mountain, a mountain pass, a cave complex, or even an ordinary village may count as a fortress with a total DB of +4 or +5.

A fortress' DB applies only if one side is encamped *and* chose to bunker themselves within – or if they retreated into the place during a battle. It doesn't benefit forces outside the fortress.

A fortress is also rated for the maximum total WT of elements that can effectively defend it (after accounting for any noncombatants). It can hold up to 1.5× this WT, but it will be overcrowded: -1 to DB. A fortress cannot hold elements that are too large to transport!

## Playing Out a Siege

Special rules apply during sieges. These refer to the fortified force as the *besieged* and to the opposing force as the *besieger*.

• *Troop Strength*: Artillery elements on *either* side may add their *entire* TS, even if parenthesized as support elements.

• *Special Class Superiority*: Cavalry Superiority doesn't count, while Engineering Superiority does.

• *Battle Strategy*: The choice of battle strategies for the besieged force is limited to All-Out Defense, Defense, Deliberate Defense, Fighting Retreat, Mobile Defense, Parley, or Raid. Raid represents a sally out of the fortress followed by a withdrawal back inside. Mobile Defense represents giving up part of the defenses and falling back deeper into the fortifications. Fighting Retreat is an attempt to break out of the fortress (see below). The besieger may choose *any* battle strategy. Otherwise, a siege is *always* considered a pitched battle.

• *Battle Resolution*: Each round represents *four times* the usual period. The attacker normally attempts to build up sufficient Position Bonus to counter the defender's Defense Bonus. If the besieger chooses Deliberate Attack (the best option against a strong DB) and the defender chooses a Deliberate Defense, then each round instead represents 24 times the usual period, and thus often extends over multiple days. In that case, don't use modifiers for weather and night (or day, for Nocturnal forces).

• *Retreat*: If the defender successfully escapes, he's outside the fortress (and its DB!). This ends the siege and starts an ordinary battle.

## AMPHIBIOUS ASSAULTS

An *amphibious assault* is an attack that must cross a significant body of water to take a defended coastline or river line. These rules assume that the side protecting the coast or river (the *defender*) is encamped while the side landing on the coast or crossing the river (the *attacker*) is mobile.

If there's only one point of crossing or one location where a landing is possible, the GM should simply assume a pitched battle. Otherwise, use *Reconnaissance Operations* (pp. 28-30) to determine surprise and initiative. In general, the attacker *won't* be able to bypass the defender, so battle will occur.

The defender receives a Defense Bonus. This is typically +3 for a minor river, +4 for a major river or a beach, or +5 for a small, rocky island or a beach with rocky cliffs. In all cases, add +1 if the defender had sufficient time to improvise defenses (e.g., trenches, mines, and other obstacles) – or +2 for *permanent* strongpoints.

• *Troop Strength*: Only elements that have water or air mobility, or that are transported by such elements, can contribute TS. Sea mobility doesn't count on inland waters! *Halve* the TS of elements transported by air unless they have the Airborne feature. *Halve* the TS of elements transported by water if they lack the Marine feature.

• *Special Class Superiority*: The attacker's Cavalry elements contribute to Cavalry Superiority only if they possess the Airborne or Marine feature. Engineering Superiority and Naval Superiority both count.

• *Battle Strategy*: The attacking commander may not choose any defense strategy until he acquires at least +1 PB. If he picks any retreat strategy, he's at -4 to Strategy skill, as he cannot easily withdraw!

## NAVAL BATTLES

A *naval battle* is a clash at sea or on another large body of water. It may be an *ocean battle* or a *coastal battle*, depending on location. Defense Bonus applies only in coastal battles, and can represent one side having superior knowledge of home waters (worth +1 or +2), or protected harbors or bases – or forcing the other side to pass through a narrow strait to attack. Position Bonus shifts normally, and represents clever tactical maneuvering or gaining the weather gauge.

• *Troop Strength*: In an ocean encounter, only elements with Sea or Fast Air mobility may participate in reconnaissance operations or in the battle itself. In a coastal battle, elements that have *any* sort of water or air mobility can participate. In either, land mobility elements that possess the Marine or Airborne feature and that are transported by water or air elements may also participate, but at *half* TS; this represents ground forces either performing boarding actions or taking strategic islands or ports.

• *Special Class Superiority*: Only Air Superiority, Artillery Superiority, C3I Superiority, and Naval Superiority count – and only when provided by participating elements.

*All delays are dangerous in war.*

– John Dryden

## THREE-SIDED BATTLES

Battles with three (or more!) sides can be fun but introduce significant complexity. A quick and dirty solution:

• *Three forces, two cooperating loosely*: Sides A and C are fighting, and so are B and C – but A and B are loosely supporting each other under separate commanders. Treat all the allies on one side (here, A + B) as a single force, but use the *average* of their commanders' Strategy skills, rounded down and with an extra -1 for limited coordination. Should the commanders pick different battle strategies, the *larger* force's strategy prevails.

• *Three mutually hostile forces*: Sides A and B are fighting, as are B and C, and C and A. Resolve *three* battles as usual. Each commander must split his resources between the two battles involving him. The outcomes of each battle affect only those resources. Split command is *difficult*, and gives each commander a total of -4 on his two Strategy rolls. He secretly chooses 0 and -4, -1 and -3, or -2 and -2, depending on which battle is most important to him.

Details such as shuffling around troops and composite battle strategies are beyond the scope of this system. Simply assume that commanders are free to reallocate resources between rounds, and that each can choose the battle strategy he likes against a given opponent (although in the first case above, this won't matter for the smaller force's commander!).

## SUBORDINATE COMMANDS

The mass combat rules are intended for situations where a PC commands a force. What if a PC commands only *part* of a

force? The simplest option is to use *Significant Actions* (pp. 33-34) to determine what impact he has, if any.

Another approach – which works well when the PC commands several elements – is to split that part of the action from the bigger battle. Decide what elements constitute the PC's "subordinate command." Then work out all appropriate statistics for them as though they were a *complete* force under the subordinate commander.

The GM can then assign an opposing force relative to the size of the PC's force. For instance, if the PC commands 1/10 of his side's troops (by number of elements), then 1/10 of the enemy's forces will fight him. The GM chooses the relevant skills – and possibly the name and personality – of the opposing subordinate commander, or designates an existing NPC.

Subtract the subordinate commands from the forces involved in the main battle *before* calculating the main forces' TS and special class superiority. Thus, these commands draw off a fraction of the main force, influencing the battle's fate. If no PCs are left in command of the main force, the GM can either roll for the results of the main battle or decide its fate by fiat.

If a subordinate commander wins his fight but the main force on his side loses the main battle, he can opt to retreat immediately or stay and fight a second pitched battle against the entire remaining opposing force. Both sides retain their casualties but lose any Position Bonus won through prior fighting.

## WEAPONS OF MASS DESTRUCTION

*GURPS* isn't a war game! Nuclear, chemical, and similar horribly deadly weapons should be major *plot devices* in an RPG. Below are suggestions for integrating them into mass combat, if the GM desires.

### Chemical Weapons

At TL6+, assume that elements with Basic or better equipment quality have countermeasures appropriate to their TL – whether this means gas masks, NBC suits, or ultra-tech gear. Those with Poor-quality gear lack even these basics. Elements with the Sealed feature are protected *regardless* of quality.

When a force is attacked with chemical weapons, all troops with Poor-quality gear and all elements of lower TL than the attacker (regardless of quality) – in both cases, except for Sealed elements – suffer 40% casualties immediately. Moreover, they're disrupted, with low-quality units in disarray and high-quality ones "buttoned up" in NBC gear, giving their commander -2 to Strategy skill. Resolve chemical weapons use prior to battle, and then recalculate TS and fight on. *Both* sides can use chemical weapons, canceling the Strategy effect (but not the casualties).

### Nukes

The GM answers questions like "How big is the blast?", "Who's caught in it?", and "What if they have *lots* of nukes?" Generally, a force simply loses if caught unprepared for nuclear war and the enemy strikes first. If *both* sides use nukes, they'll ruin each other's transport networks and so forth, destroying each other's logistic systems. Assume that 90% of all forces are eliminated (only 40% of those with the Sealed feature).

In backgrounds where tactical nukes and armor capable of withstanding them are widespread – like the *Ogre* universe –

multiply TS and all costs to raise and maintain by 10 for nuke-capable elements. *Don't* change transport weight, number of troops or vehicles, etc. This makes smaller units deadlier. Ordinary militias may exist and be equally effective if you buy 10 times as much, but you'll need 10 times the vehicles to transport them!

### Military Nanomachines

In sci-fi settings where nanites can eat people or make them sick, treat them as TL10+ chemical weapons. If they can actually reduce the battlefield to "gray goo" in minutes, treat them as nukes instead.

## EXCEPTIONAL POWERS IN BATTLE

Magic, psionics, super-powers, and other exceptional abilities can affect combat in many settings. Some capabilities are exceedingly *direct*: Supers with potent offensive and defensive powers fight as soldiers, contributing a suitably large Troop Strength. Those capable of blasting the enemy – as well as fireball-chucking wizards and others who can strike from afar – should also add the Artillery or Fire class to their usual stats. For suitable features and advice, see *Hero* (p. 9) and *Super-Soldier* (p. 10).

Another less-than-subtle trick, favored by magic-workers, is animating or conjuring spirits, demons, or undead – perhaps using spells like Create Elemental and Zombie from *GURPS Magic*. The GM might represent this as part of a mage element's TS, making it unimportant in game terms whether wizardly TS is due to summoning fire elementals or hurling fireballs. Alternatively, he may allow wizards to raise certain elements for free! The classic example is using necromancy to reanimate dead warriors. The GM decides how easy this is: A necromancer might be able to raise zombie hordes from a recent battlefield at no cost . . . or the time and expense involved in animating and equipping them could be great as for raising troops from scratch. At TL0-3, zombies certainly cost nothing to *maintain*; at TL4+, they're only 50% less costly to maintain, as ammunition and fuel are usually necessary even if the undead desire neither food nor pay. See also *Unliving Troops* (p. 11).

Other capabilities are more subtle: disabling enemy leaders, scouting opposing forces, shaking the foe's morale, etc. In the case of information-gathering abilities such as precognition, divination, and mind reading, the GM may opt to leave the process abstract, assigning the powered element the Recon class and giving it a high but parenthetical TS. Alternatively, he could have success with such gifts *substitute* for successful reconnaissance; see *Reconnaissance Adventures* (p. 30) for suggestions.

The GM is encouraged to make a roleplaying opportunity out of the PCs' use of subtle abilities for spying missions, assassinations, and so on. Game it all out before the battle begins and then factor the results into the action. For example, assassinating the enemy commander immediately before a fight could result in his side starting the battle confused, as if ambushed, while reading his mind might reveal his "secret" battle strategy!

See *Super-Healing and Force Replacement* (p. 14) for notes on another common special power.

# APPENDIX A

# SAMPLE FORCES

*Civil wars expose all the quirks in a feudal system. Knights or nobles on either side may have lordings in enemy territory; some may even owe feudal loyalties to both factions.*

— **GURPS Banestorm**

This chapter offers two brief examples of force composition from two different tech level ranges. Each force includes descriptions of elements and units, along with other relevant details.

## AN YRTH MILITARY FORCE

This is the force under Sir Richard's command throughout the running example in Chapter 4. Sir Richard hails from Yrth, the TL3 fantasy world of **GURPS Banestorm**. The barony he's defending lies on the northern edge of feudal Caithness. Its forces are typical of a back-country barony: 30 knights in plate (the baron's guard), 50 spearmen in leather armor with shields, and 20 crossbowmen. As well, 10 dwarves from Zarak were visiting the castle to install a new gate, and by emphasizing the hated orcs that Sir Strykland has in his host, Richard convinces *them* to take up arms, too. Finally, Richard himself is a good fighter (a 400-point character!), and the GM decides that he's worth at least a squad of men.

### Elements and Units

The GM decides not to bother organizing this force into units. Instead, he assigns Sir Richard the following elements. As none of them differ much from the baseline forces in Chapter 2, the GM skips calculating how much each one costs — that won't be relevant to *this* battle. Only *combat* statistics (such as TS) will matter.

**Knights:** The GM represents the 30 knights as three Heavy Cavalry elements. They're Good-quality troops with Fine-quality equipment — but like many knights, they have the Impetuous feature. Heavy Cavalry are TS 5; thus, three elements have TS 15. Good troops get +50% to TS, while Fine equipment adds another +100%. Final TS is 37.5.

**Spearmen:** The GM deems the 50 spearmen to be five Heavy Infantry elements, each with TS 4. They're Average troops with Basic equipment, so there's no modifier. Total TS is 20.

**Crossbowmen:** These are two elements of Bowmen, with TS 2 apiece.

They, too, are Average troops with Basic equipment, so net TS is 4.

**Dwarves:** The GM treats the Zarak contingent as one element of Miners with Fine equipment. Miners are one of the few TL0-5 troop types whose TS changes with TL, doubling every TL after they first appear at TL2. As the dwarves are TL3, their base TS 0.5 doubles to TS 1. The Fine equipment adds +100%, for TS 2.

**Sir Richard:** Sir Richard is an effective fighter who in the past has shown that he can take on 10 to 15 normal men — and win! However, while he's a knight, he usually fights on foot. The GM therefore rules that Sir Richard is a Hero element who fights as if he were a single element (that is, a 10-man squad) of Heavy Infantry, but with Elite troop quality and Fine equipment. Thus, Richard has base TS 4, raised by +100% for Elite quality and another +100% for Fine equipment, giving TS 12.

### Yrth Military Force Roster

The GM makes a quick record sheet in which he notes these elements' TS, special classes, mobility, and features. He finds force TS by summing the TS of all elements:  $37.5 + 20 + 4 + 2 + 12 = 75.5$ . (If Richard's force incorporated elements with parenthetical TS, such as artillery, we'd use 10% of their TS.) To speed up calculations in combat, the GM also decides to note the TS of each of the three special classes represented in the fight: Cavalry, Engineering, and Fire.

Elements	Total TS	Classes	Mobility	Features
3 Knights (Heavy Cavalry)	37.5	Cavalry	Mounted	Impetuous
5 Spearmen (Heavy Infantry)	20	—	Foot	—
2 Crossbowmen (Bowmen)	4	Fire	Foot	—
1 Dwarves (Miners)	2	Engineering	Foot	—
Sir Richard (Heavy Infantry)	12	—	Foot	Hero
<i>Cavalry TS</i>	37.5			
<i>Engineering TS</i>	2			
<i>Fire TS</i>	4			
<b>Force TS</b>	<b>75.5</b>			



# A MODERN MILITARY FORCE

There's an invasion from another dimension pouring through a magical gateway in downtown Poughkeepsie! One of the PCs facing it, Elizabeth Hunter, is a U.S. Army captain. She commands "Charlie Company": a TL8 mechanized infantry force, and one quarter of a U.S. Army combined arms battalion task force.

Checking a reference (a U.S. Army field manual), the GM determines that Hunter's force consists of 13 M2 Bradley infantry fighting vehicles, an M113 armored personnel carrier, a Hummer, and three platoons of infantry. He also decides that a Stinger missile team is attached from the battalion, for air defense. Numerous logistics vehicles support the fighting force, but we won't worry about those for now.

## Elements and Units

To build Hunter's force, the GM consults Chapter 3 and chooses from among the elements there, assigning them all TL8. He decides to represent each M2 Bradley with an IFV element, the M113 with an APC element, the Hummer with a Light Truck element, the infantry with a mix of Riflemen and HSW elements, and the Stinger team with a MANPAD element. He divides these into units as follows:

*1st platoon:* Four IFV elements, three Riflemen elements, and one HSW element. The IFVs transport the infantry.

*2nd and 3rd platoons:* Identical to the first platoon.

*Company HQ:* Two Command Post elements, one MANPAD element, one APC element, one Light Truck element, and one IFV element.

All high-tech land elements double in TS for every TL after introduction. Thus, TS for the APC, IFV, and MANPAD elements (all introduced at TL7) is x2. The Command Post, HSW, Light Truck, and Riflemen elements (all introduced at TL6) now have x4 TS.

The GM customizes the elements as follows: All are Good-quality troops with Very Fine equipment. The U.S. Army is well-provided with night vision gear, so all of them get the Night feature, too.

The GM is planning a lengthy military campaign against the invasion, in which logistics and other considerations may eventually come into play. He therefore decides to work out each element in detail, including the costs. He ends up with the following element records.

### U.S. Army M2A3 Bradley (TL8)

#### IFV

A tracked infantry fighting vehicle (IFV), armed with wire-guided TOW missiles and a 25mm Bushmaster cannon, and operated by three crewmen.

TS: 1,200. WT: 8.

Classes: Arm, Cv, F, T1. Mobility: Mech.

Quality: Very Fine equipment; Good troops.

Features: Night.

Cost: \$1,680K to raise; \$46.4K to maintain.

There are 13 Bradleys in the force – four in each of three platoons, plus one in the company HQ – so they contribute a total of  $13 \times \text{TS } 1,200 = \text{TS } 15,600$ . We decide that 12 of them carry infantry squads and one carries a Command Post element.

### U.S. Army Rifle Squad (TL8)

#### Riflemen

A dismount squad of six or seven U.S. Army infantrymen who ride in each M2 Bradley.

TS: 480. WT: 1.

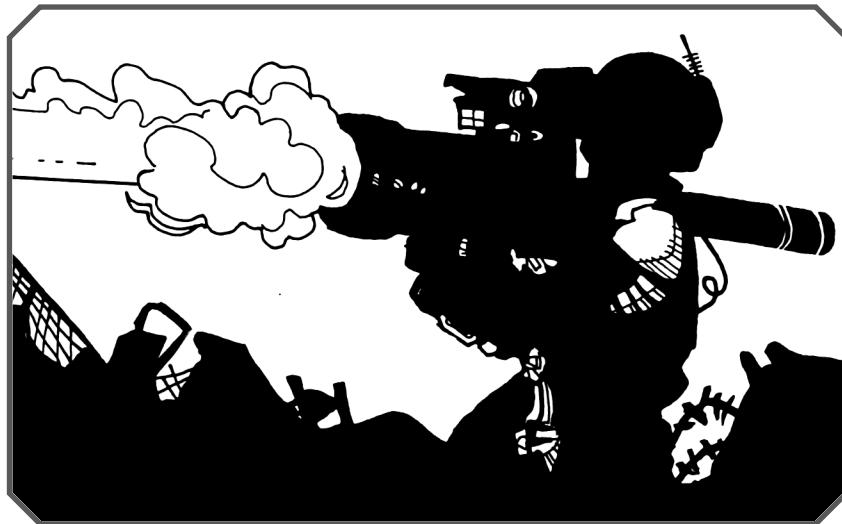
Classes: F, Rec. Mobility: Foot.

Quality: Very Fine equipment; Good troops.

Features: Night.

Cost: \$252K to raise; \$34.8K to maintain.

There are three platoons with three rifle squads each, so the nine rifle squads contribute  $9 \times \text{TS } 480 = \text{TS } 4,320$ .



### U.S. Army Infantry Heavy Weapons Team (TL8)

#### HSW

This represents infantrymen assigned to operate 7.62mm general-purpose machine guns or shoulder-fired rocket launchers.

TS: (600). WT: 0.5.

Classes: F. Mobility: Foot.

Quality: Very Fine equipment; Good troops.

Features: Night.

Cost: \$210K to raise; \$29K to maintain.

There are three platoons with one heavy weapons team each, so the three teams contribute  $3 \times \text{TS } (600) = \text{TS } (1,800)$ . The TS is parenthetical, which means it adds only 180 to the force TS – full TS counts only when determining Fire Superiority.

## U.S. Army Infantry Headquarters Element (TL8) Command Post

This represents the company commander or executive officer, their staff, and communications gear, usually carried in an armored personnel carrier.

TS: (600). WT: 1.

Classes: C3I. Mobility: 0.

Quality: Very Fine equipment; Good troops.

Features: Night.

Cost: \$420K to raise; \$58K to maintain.

The company HQ has two headquarters elements, which contribute  $2 \times \text{TS} (600) = \text{TS} (1,200)$ . The parentheses indicate that this TS only counts toward C3I Superiority.

## U.S. Army Infantry Stinger Team (TL8)

### MANPAD

A pair of soldiers armed with a shoulder-fired Stinger missile system.

TS: (600). WT: 0.5.

Classes: (Air). Mobility: Foot.

Quality: Very Fine equipment; Good troops.

Features: Night.

Cost: \$157.5K to raise; \$21.75K to maintain.

The company HQ has one stinger team.

Its full TS (600) only counts toward neutralizing enemy Air Superiority. If the alien invasion has neither aircraft nor flying monsters, all but 10% of this TS will be wasted!

## U.S. Army M113 APC (TL8)

### APC

A tracked armored personnel carrier with a two-man crew, assigned to the company HQ. It's usually configured to carry one of the two Command Post elements.

TS: 600. WT: 4.

Classes: Arm, Cv, F, T1. Mobility: Mech.

Quality: Very Fine equipment; Good troops.

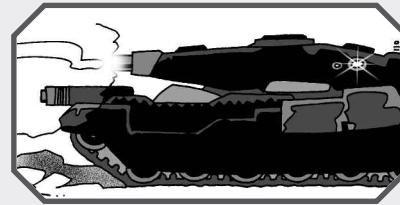
Features: Night.

Cost: \$840K to raise; \$29K to maintain.

## Modern Military Force Roster

The GM makes a force roster, noting these elements' TS, special classes, mobility, and features. He then adds up all the TS values (parenthetical, non-C3I ones count at 10%) to find the force TS. To save time during battle, he also calculates the TS of each special class; e.g., Armor TS considers only sum of the TS of the M2 Bradleys and the M113, since these are the only elements that belong to the Armor class.

Elements	Total TS	Classes	Mobility	Features
13 M2A3 Bradleys (IFV)	15,600	Arm, Cv, F, T1	Mech	Night
9 Rifle Squads (Riflemen)	4,320	F, Rec	Foot	Night
3 Heavy Weapons Teams (HSW)	(1,800)	F	Foot	Night
2 Infantry Headquarters (Command Post)	(1,200)	C3I	0	Night
1 Stinger Team (MANPAD)	(600)	(Air)	Foot	Night
1 M113 APC (APC)	600	Arm, Cv, F, T1	Mech	Night
1 HMMWV (Light Truck)	120	Cv, T1	Motor	Night
<i>Armor TS</i>	<i>16,200</i>			
<i>C3I TS</i>	<i>1,200</i>			
<i>Cavalry TS</i>	<i>16,320</i>			
<i>Fire TS</i>	<i>22,320</i>			
<i>Neutralize</i>				
<i>Air TS</i>	<i>600</i>			
<i>Recon TS</i>	<i>4,320</i>			
<b>Force TS</b>	<b>20,880</b>			



There's one of these elements in the company HQ, adding TS 600.

## U.S. Army HMMWV (TL8)

### Light Truck

An up-armored military Hummer with two crewmen (driver and gunner), assigned to the company HQ. We decide that it usually transports the Stinger team.

TS: 120. WT: 2.

Classes: Cv, T1. Mobility: Motor.

Quality: Very Fine equipment; Good troops.

Features: Night.

Cost: \$105K to raise; \$7.25K to maintain.

There's one of these in the company HQ, which adds TS 120.

*Perhaps my dynamite plants will put an end to war sooner than your congresses. On the day two army corps can annihilate each other in one second, all civilized nations will recoil from war in horror.*

– Alfred Nobel

# APPENDIX B

# TABLES

## FEATURES AND QUALITY TABLE

See *Optional Features* (pp. 8-11) and *Quality* (pp. 11-12).

Trait	TS	Raise	Maintain
<b>Features</b>			
Airborne	N/A	+20%	+20%
All-Weather	N/A	+20%	+20%
Disloyal	N/A	GM Assigns	GM Assigns
Fanatic	N/A	Special*	N/A
Flagship†	N/A	+0%	+0%
Hero	GM Assigns	GM Assigns	GM Assigns
Hovercraft	N/A	+80%	+80%
Impetuous	N/A	+0%	+0%
Levy	N/A	Special	Special
Marine	N/A	+20%	+20%
Mercenary	N/A	Special	Special
Neutralize (Class)	N/A	+25%	+25%
Night	N/A	+20%	+20%
Nocturnal	N/A	+0%	+0%
Sealed	N/A	+20%	+20%
Super-Soldier	×2	+200%	+200%
Terrain (Type)	N/A	+20%	+0%

## Equipment Quality

Very Fine	+150%	+200%	+150%
Fine	+100%	+100%	+100%
Good	+50%	+50%	+50%
Basic	+0%	+0%	+0%
Poor	-25%	-25%	-25%

## Troop Quality

Elite	+100%	+200%*	+40%
Good	+50%	+100%*	+20%
Average	+0%	+0%	+0%
Inferior	-50%	-50%	-50%

\* Halve cost to raise Good- or Elite-quality Fanatic troops.

† Naval only; maximum one Flagship per force.



## TRAVEL SPEED TABLE

See *Travel Speed of Mobile Forces* (pp. 27-28). Travel speeds are in miles per day.

Mobility	Road	Off-Road	Water	TL Modifier
Coastal or Sea	N/A	N/A	160	+25% per TL past TL3
Foot	20	10	N/A	N/A
Mechanized	80	60	N/A	+25% per TL past TL6
Motorized	120*	20	N/A	+25% per TL past TL6
Mounted	30	15	N/A	N/A

\* Halved on dirt roads.

*Slow* Air elements can support combat within 100 miles (doubled per TL past TL6).

*Fast* Air elements can support combat anywhere within a regional theater of operations.

## RECONNAISSANCE CONTEST

For each force, find the *average* of its intelligence chief's Intelligence Analysis skill and its commander's Strategy skill. Round down. Apply all relevant modifiers below. Then roll a Quick Contest between intelligence chiefs.

### Mobile Force Modifiers

If a force is *mobile*, apply these modifiers:

Flying: -1 if all members of your force are flying

Forced March: -1, or -2 if the forced-march roll failed

No Security: -5

Recon in Land Battle: -1 in a land battle if *none* of your force's elements are Recon, but +2 if *all* of your force's elements are Recon

Relations with Locals: +1 if your force has good relations with the locals, but -1 if the locals are hostile

Roads: -1 if using road movement, or -3 if tied to a fixed road or rail network

Speed: +1 if both forces are moving and you're at least 1.5x as fast as the enemy

Terrain: +1 if *any* of your elements have the Terrain feature for the terrain being traversed, or +4 if *all* do

### Encamped Force Modifiers

If a force is *encamped* (anchored), apply these modifiers:

Bunkered: +3, but if you win, treat your victory as a *tie*

No Security: -5

Relations with Locals: +2 if your force has good relations with the locals, but -2 if the locals are hostile

### Special Class Superiority Modifiers

Add any Recon Superiority and/or Air Superiority bonuses.

## Results

**Win** – If the winner's margin of victory equals or exceeds the Terrain Rating, he achieves *surprise*. If he wins by at least five more than that, he gets an *ambush*. Otherwise, he merely has *initiative*.

**Tie** – Roll 1d. A roll less than or equal to the Terrain Rating means a *pitched battle*. Anything else means an *encounter battle*. If both sides critically fail in the Reconnaissance Contest, an encounter battle occurs and *both* forces start the battle *confused*.

## Terrain and Surprise Table

Halve any Terrain Rating (round *up*) at night or underground; reduce it by 1 in bad weather; and halve it and *then* reduce it by 1 for both.

Terrain		Terrain	
Terrain Type	Rating	Terrain Type	Rating
Arctic	6	Mountain	4
Built-Up Areas	6*	Open Ocean	8
Desert	7	Plains	8
Hills	6	Rural	6†
Island/Beach or Coastal Ocean	6	Swampland	4
Jungle	3	Underwater	4
		Woodlands	5‡

\* 3 if *both* sides started out in Built-Up Areas.

† 5 for areas with dense hedgerows.

‡ 4 for trackless forest.

## RELATIVE TS TABLE

See *Relative Troop Strength* (p. 31).

Strategy		Strategy	
Odds Factor	Skill Bonus	Odds Factor	Skill Bonus
Under 1.5:1	0	10:1 or more	+12
1.5:1 or more	+2	15:1 or more	+14
2:1 or more	+4	20:1 or more	+16
3:1 or more	+6	30:1 or more	+18
5:1 or more	+8	50:1 or more	+20
7:1 or more	+10		

## SPECIAL CLASS SUPERIORITY TABLE

See *Special Class Superiority* (pp. 31-32).

Odds Factor	Strategy	Skill Bonus*
2:1 or more		+1
3:1 or more		+2
5:1 or more		+3

\* In an *encounter battle*, subtract one from Air Superiority, Artillery Superiority, and C3I Superiority bonuses. A force needs at least 3:1 to achieve +1, while 5:1 or more gives only +2.



## BATTLE LENGTH TABLE

Round length depend on the *number of elements* in the *smaller* of the fighting forces.

Number of Elements	Round Length	Number of Elements	Round Length
1-9	15 minutes	1,000-9,999	2 hours
10-99	30 minutes	10,000+	4 hours
100-999	1 hour		

## BATTLE SEQUENCE

1. *Risk* (p. 33).
2. *Significant Actions* (pp. 33-34).
3. *Choose Battle Strategy* (pp. 34-36).
4. *Battle Strategy Roll* (pp. 36-37).
5. *Misfortunes of War* (pp. 37-38).
6. *Victory?* (pp. 38-39).

## BATTLE STRATEGIES TABLE

See *Choose Battle Strategy* (pp. 34-36).

Strategy	Category	Skill	Strategy
All-Out Attack	Attack	+2	Inflict +5% casualties on win; suffer double casualties
All-Out Defense	Defense*	+2	Reduce own PB loss by 1; suffer double casualties
Attack	Attack	0	None
Defense	Defense*	+1	None
Deliberate Attack	Attack	+1†	Halve defender DB; surrenders initiative
Deliberate Defense	Defense*	+1†	Inflict +5% casualties on win/tie; surrenders initiative
Fighting Retreat	Retreat	+3	Escape on win/tie; logistic casualties and give enemy extra +1 PB on loss; halve enemy casualties
Full Retreat	Retreat	+8†	Escape; suffer 10% fewer casualties; take logistic casualties; inflict no casualties
Indirect Attack	Attack	-3†	Double margin on win; repeated attempts penalized
Mobile Defense	Defense*	0†	Enemy gains extra +1 PB; suffer 5% fewer casualties
Parley	Defense*	0	Surrenders initiative; Defense at -1 if rejected
Raid	Raid and Skirmish	0†	Can only reduce enemy PB; may inflict logistic casualties on win
Rally	Defense*	-2	Allows Leadership-2 roll to end confusion
Skirmish	Raid and Skirmish	+2†	Halve margin on win; can't gain PB; suffer 5% fewer casualties

\* Defense strategies allow DB but cannot gain PB.

† Modified for special class superiority and other factors; see description.

## BATTLE STRATEGY ROLL

Resolve the battle round with a Quick Contest of Strategy. Commanders of only 1-4 elements may use Tactics. Adjust skill for *all* of the following that apply:

- Basic Strategy Modifier (pp. 30-32), adjusted for casualties (p. 37).
- Defense Bonus (p. 32), if commander chose a defense strategy.
- Commander's Risk Modifier (p. 33).
- Modifiers for PCs' significant actions (p. 33).
- Battle strategy modifiers for commander's strategy (pp. 34-36).
- Position Bonus (p. 37).
- Special circumstance modifiers from -3 to +3 (GM's decision).

Find the winner's margin of victory on the *Combat Results Table* to determine the round's outcome.

## COMBAT RESULTS TABLE

See *Casualties* (p. 37) and *Position Bonus* (p. 37) to interpret.

Margin	Loser's Casualties	Winner's Casualties	Winner's PB Shift*
0 (tie)	-10%†	-10%†	0
1-3	-15%	-10%	+1
4-6	-20%	-10%	+2
7-9	-25%	-5%	+2
10-14	-30%	-5%	+3
15-19	-35%	0%	+3
20+	-40%	0%	+4

\* Only if *attacking*.

† No winner or loser! *Both* sides take -10% casualties.

## MISFORTUNES OF WAR TABLE

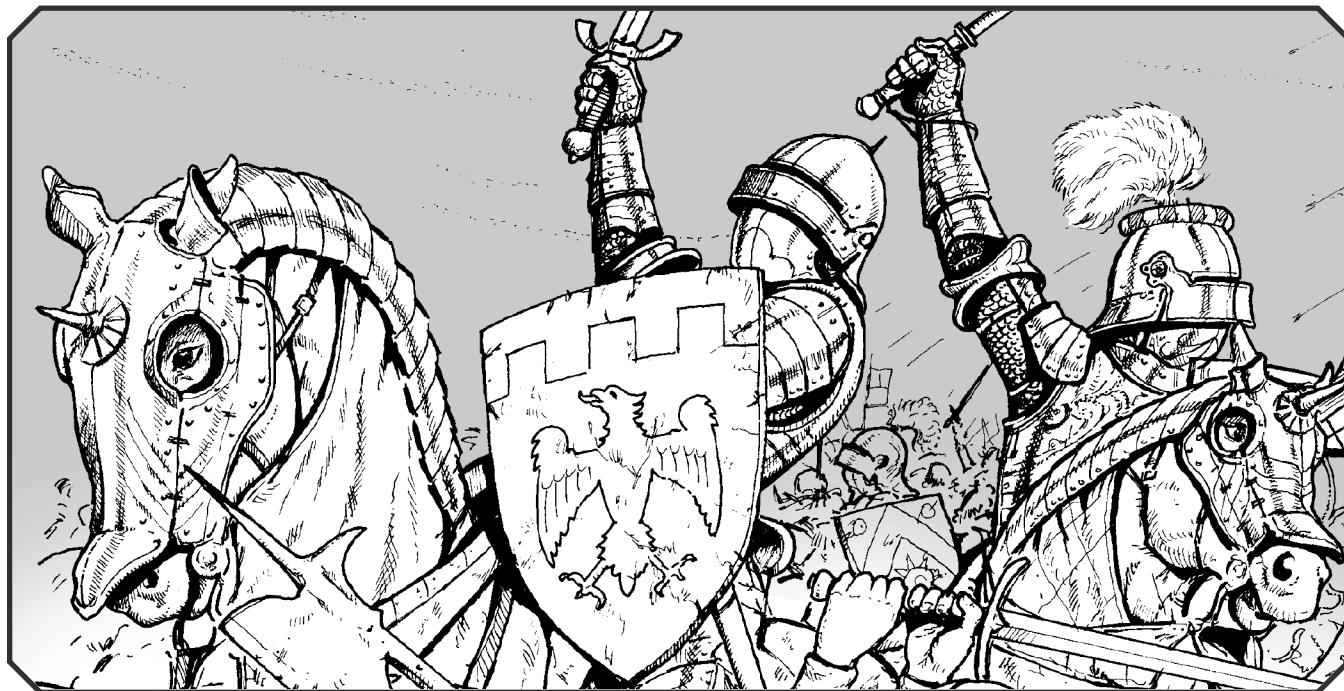
See *Misfortunes of War* (pp. 37-38).

Misfortunes	Casualties	Chance	Misfortunes	Casualties	Chance
	5%	5		30-35%	8
	10-15%	6		40%+	9
	20-25%	7			

*Modifiers:* The character's Risk Modifier; +1 if his side used a Desperate strategy; +1 if he's with an element that has the Fanatic or Impetuous feature; -1 if more than one element is involved in the fighting and he's with a support element (one with parenthetical TS), or if he's with the logistic force.

*War educates the senses, calls into action the will, perfects the physical constitution, brings men into such swift and close collision in critical moments that man measures man.*

— Ralph Waldo Emerson



# BIBLIOGRAPHY

Any good library or bookstore will have numerous works of inspirational military history, biography, and fiction. Rather than a long list of classics and personal favorites, this is a *brief* list of books that have proven indispensable.

Dunnigan, James F. *How to Make War* (Harper, 2003). A very readable breakdown of what goes into a modern military force. Before his current career as a military analyst, Dunnigan was president of SPI, the legendary military boardgame company; as such, more than many writers, he tends to include the sort of information gamers find useful.

Jones, Archer. *The Art of War in the Western World* (University of Illinois Press, 1987). A meaty study of how warfare developed from the ancient world to the present, covering land, sea, and air conflict. Less of a history of what happened

than an examination of what commanders did in different eras – and *why*.

Keegan, John. *The Face of Battle* (Penguin, 1983). In this slim but highly influential volume, one of the world's leading military historians looks closely at three battles – medieval Agincourt (TL3), the Napoleonic endgame at Waterloo (TL5), and the bloody 20th-century trench warfare of the Somme (TL6) – and discusses what it might have been like to have fought as a soldier in each.

Ropp, Theodore. *War in the Modern World* (Collier Books, 1962). Another excellent one-volume survey of warfare through the ages.

Sun Tzu (Thomas Cleary, translator). *The Art of War* (Delacorte Press, 1983). The oldest existing treatise on military strategy, definitely still worth reading.

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