MILLENNIUM'S END

v 2.1

Modern Roleplaying in the Technothriller Genre

by

Charles Ryan

HERO GAMES

MILLENNIUM'S END V2.1
Modern Roleplaying in the Technothriller Genre

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INTRODUCTION

A technothriller is a work of modern action fiction in which technology's role in society plays a major part in the plot, or at least the background. The term was coined in the eighties, largely because Tom Clancy's popular novels could not be cubbyholed into any existing category. Many works since then have incorporated technothriller elements, even if they haven't been called such. The movie *Diehard*, for example, is driven by the bad-guys' efforts to defeat a computer-controlled vault. In *Rising Sun*, video technology is behind the solution—and the source—of the mystery. Even *Jurassic Park* has a technological breakthrough at the heart of its premise, and its resolution.

But technology is a fact of life is today's world, and the mere fact that it finds its way into a work of fiction doesn't make it a technothriller. Technothrillers have other unique characteristics. Their protagonists are invariably intelligent, lucid and resourceful—but not superhuman. Unlike the espionage novels from which they evolved, technothrillers focus on terrorism, hate-crime and drug-trafficking—problems unique to the modern world. And they are meticulously accurate in the details.

Millennium's End is a techno-thriller roleplaying game. Set just a couple of years in the future, it is high-tech without being science-fiction. Its conflicts arise from the problems of our world—the problems we see everyday on the news and on the streets. It's characters are capable and skilled, and hopefully resourceful and smart—but that's up to you.

What is a roleplaying game?

A roleplaying game is an interactive experience in which a group of players work together to develop characters and guide them through adventures. It's a group effort at making up a story as it goes along, with each player controlling one major character. There are no boards or playing pieces—all of the action unfolds in the players' imaginations. The rules keep things moving smoothly and consistently, but are really just guidelines. The only equipment needed is a game system (such as this book), and some pencils, paper, and dice.

Roleplaying games require one person to act as the referee—called, in this system, the Game Master or GM. The GM sets up the plots, conflicts, mysteries and settings for the adventures. He or she controls all of the non-player characters (NPCs), arbitrates the rules, controls the pace of the game, and is in short the final authority on all events within the imaginary plotline. Being a GM requires patience, judgement, and creativity, plus a little extra time and energy—but offers a rewarding payoff as carefully-crafted adventures unfold to the delight of the other players.

The other players contribute less to the overall world, focussing their attention instead on a single character each. These characters move through the world set up by the GM, unraveling mysteries and solving

adventures. Like the characters of novels, movies, or any other form of fiction, roleplaying characters have distinct personalities, backgrounds, capabilities, strengths and weaknesses. When characters are well-developed and defined, the interaction between them is often as entertaining as the action and intrigue of the adventure.

Roleplaying adventures generally take one or more sessions of several hours each to play through. They are not competitive, so there are no winners or losers. Adventures can be linked together into a campaign, running indefinitely, with the characters honing their skills and abilities as they grow. Of course, every campaign has its setbacks, including injury or even death for some of the characters. Nevertheless, campaigns offer many rewards, not the least of which is a sense of continuity and the opportunity to develop characters in great depth.

Millennium's End v2.0: the game and text

If you've played first edition *Millennium's End*, this text won't hold too many surprises for you. Most of the first edition game mechanics and campaign have not been changed, but there has been fine-tuning, and a great deal of new material has been added. If you've never played *Millennium's End* before, you will find it a unique and powerful game. At the core is the skill system. Skills are arranged in a two-step hierarchy, allowing a single skill to cover a broad range of tasks—a character may be better at some than at others. The percentile scale gives players a strong intuitive sense of their characters' abilities.

Much more revolutionary are the combat systems. Hit determination, which is skill-based, uses overlays to indicate not just if an attack hit its target, but where, all in a single roll. This keeps combat fast-paced and flexible, and more realistic than any other game system. Damage effects are measured in real-world terms, with no ablative hit points.

Millennium's End uses ten-sided dice (referred to as d10) to randomize game events. Whenever a result calls for several dice to be rolled and the results totalled, the number of dice needed precedes the d10 symbol—so if you read "3d10," roll three dice and total the results. Skill rolls require percentile results (indicated by the "d%" symbol). Roll two dice, assigning the tens result to one and the ones result to the other. If, for example, you roll a six and an eight, read sixty-eight. A zero result on a single die means ten; a double-zero on percentile dice means 100. In play, low results are generally desirable.

This book is divided into four main chapters. To make quick references easy, the most basic and important rules are boldfaced. Watch out, however, because circumstances that might alter the use of the rule may not be boldfaced. Examples and notes appear in the sidebar as needed—examples are italicized for easy recognition.

The first three parts of this book explain the rules governing character creation, general game mechanics, and combat, respectively. The fourth chapter covers background information on the unique *Millennium's End* background. Use of that background (or any of the rules, for that matter), is optional—feel free to modify it as you desire.

Millennium's End v2.0 is compatible with all first-edition supplements. If you do find an occasional conflict between second-edition material and first-edition works, give precedence to the former. You can identify a first-edition supplement by its publication number (on the back and spine)—if the first three digits are "011," it's a first-edition supplement.

Good luck, and welcome to *Millennium's End*.

Chapter One
Character Creation

In a role-playing game like *Millennium's End*, the character is the most important element of play. Suspense, action, intrigue and drama all contribute to the excitement and thrill of roleplaying, but in the end it is the personalities and interactions of the characters that make for really memorable roleplaying campaigns.

Every player runs a character, who has a distinct personality and abilities, and who, guided by the player, moves through the fictitious world set forth by the GM. Your character will exist primarily in your imagination, and in the imagination of your GM and the other players in your group. Over the course of the game, however, you will need to resolve your character's actions consistently and realistically. For that reason, and to help you develop your character fully and concisely, you must define your character's attributes and abilities for use with the game system. That's where the character creation system comes in.

The *Millennium's End* character creation system is driven by the players' concepts of their characters. It is largely a point-based system, meaning players allot points to various skills and abilities to "build" the characters they imagine. There is a random element to the procedure, however—the Attributes, which are the most fundamental definitions of a character's abilities, are derived from a hybrid process that combines point allocation with dice rolling. This randomization adds an element of the unpredictable to character development, encouraging players to take risks and deviate a little from the types of characters they might usually play. At the same time, it allows enough control to let players turn a strong, creative concept into a fun and interesting character.

The rules in this section cover character generation comprehensively. If you are an experienced *Millennium's End* player, or you want to start playing as quickly as possible, check out *Character Generation at a Glance*, on page 10, which summarizes all character generation steps. Also, have a look at the Character Frames, starting on page 28. Character Frames are partially-generated characters, that you can flesh out in about half the time needed to create a character from scratch.

Character Generation

Before play can begin, each player must create a character. Character creation usually takes about an hour, maybe more if there are many players. Because of its relative complexity—in terms of both game mechanics and typical adventure subjects—*Millennium's End* is best played as a long-term campaign game, so you don't want to take the generation process too lightly. On the other hand, a strong character

concept can take a long time to fully develop, so you don't want to get bogged down in minutiae at this stage. As your character is played, many small details of his or her personality will emerge on their own.

The bulk of this chapter is devoted to a standard character generation process which works well for experienced players and offers total flexibility in character concept. If you are an inexperienced player, or if you don't want to spend too much time on your character and are less concerned about flexibility, check out the Character Frames at the end of the chapter. The process for building a character from a Frame is identical to building one from scratch, except that the Frame takes a lot of work out of the process. Of course, Character Frames offer somewhat less flexibility in character concept and background, but ten different frames are offered, and each can be heavily customized to fit the character you have in mind.

Concept

The first step in the generation process is concept. Character concept is two-fold: it defines both your character's personality and his or her abilities. Personality and background are important—ultimately, it is your character's personality that will make him or her engaging and fun to play. But personality can emerge on its own, as your character is played. The character creation process you are about to go through focuses on the other side of character concept: abilities.

Characters in *Millennium's End* work for BlackEagle/BlackEagle Security and Investigations Corporation, a private organization of respected troubleshooters who hire out for investigative and para-military services all around the globe (individual campaigns vary according to the tastes and vision of individual GMs—if your GM doesn't want to run a campaign around BlackEagle, ignore this paragraph). BlackEagle places no parameters on the types of people it employs—so long as your character is resourceful, reliable, and has a few useful skills, he or she will fit right in. There's more information on BlackEagle in the sidebars of this section, and in Chapter Four. For the moment, however, just know that your character choices are up to you—there is no type or class to which your character must conform.

The information you are about to put on paper is simply a representation—and a shallow one at that—of the abilities of the imaginary character you are developing. Nevertheless, you cannot proceed with developing your character's Attributes and skills without some rough mental picture on which to base your decisions. So before you put pencil to paper, ask yourself a few questions about your character. Is he or she cerebral, or action-oriented? What kinds of activities does he or she find interesting, and what is he or she good at? What kind of background brought these skills about? Has your character travelled much? Has he or she had much education? How about military experience? A professional background? And most importantly, why is your character a BlackEagle operative? How did your character get to where he or she is today? The answers to these questions will guide you in making basic decisions on your character's abilities, strengths, and weaknesses as you generate the paper representation of your character concept.

You don't have to stop with those relatively utilitarian queries. Developing a rough idea of your character's personality as you bring his or her paper representation into being adds depth and sophistication to the result. Is your character outgoing or reserved? Foolhardy or calculating? What

were the major influences on his or her life? What were his or her formative experiences? What does he or she do for fun? What are your character's goals and desires? And what could happen during the upcoming campaign to make this a truly successful character for you? There's no need to kill yourself over these questions if the answers don't come easily. But if you think about these and other issues as you put your character together, you can't go far wrong.

Don't create your character in a vacuum. BlackEagle operatives are organized into "cells," groups that always work together. The company tries to arrange things so that each cell has a broad spectrum of skills—so that the oper-ative's capabilities compliment one another. Even if you aren't playing a Black-Eagle campaign, you want a group of characters that is pretty well-rounded. As you build your character concept, talk with your GM and the other players, so that you put together a group that will work well as a whole.

What is BlackEagle?

In 1990, Clifton and Sheppard BlackEagle founded a small investigations company in their home town of Atlanta, Georgia. A typical P.I. firm at first, the two quickly developed a reputation in Atlanta's business community as men who would take on unusual cases, and who reliably got the job done quickly, correctly, and discretely. Crime, terrorism, a cutthroat corporate ethic and an impotent government were all providing BlackEagle/BlackEagle with as much business as they could handle, and in 1993 the company opened its second office in Washington, D.C. Since then the company has continued to grow in size, scope, and reputation.

1999 marks B/E's tenth year of operation. Hundreds of operatives carry out BlackEagle contracts big and small from offices around the world. The BlackEagle reputation for success is widespread, with operatives occasionally making headlines for rescuing diplomats, solving crimes, and dying in ongoing feuds with international terrorist networks. But the company is also known for discretion, and those assignments that make CNN are just the tip of the iceberg as BlackEagle operatives ply their dangerous trade in the rocky post-cold-war world.

All measurements in *Millennium's End* use the metric system. An English/Metric conversion table appears on page 73.

The Character Sheet

You will want to obtain a Character Sheet—a form or piece of paper on which to record character information. The one at the end of this book has spaces for all of the information you will need during play, in a logical and easy-to-use format. You may photocopy it, or make your own if you prefer. Later, you might want some sort of notebook or folder, to keep track of the notes, equipment lists, character information, and other bits of essential riff-raff that will inevitably build up during a lengthy campaign.

Having obtained a character sheet (or at least a clean sheet of paper), fill it in as you move through the character creation steps described in this chapter.

Attributes

When you know more or less what you want in your character, the next step is to define the Attributes and get them down on paper. This is often referred to as "rolling up" the character, because the Attributes are determined in part by rolling dice. These Attributes are the most rudimentary representations of your character, describing his or her most fundamental physical and mental capabilities. With the exception of the character's personality and background, every other aspect of the character is in some way dependent on them. And although Skills are the primary means of determining what your character can and cannot do, rolls against Attribute levels are sometimes made during play.

There are ten Attributes: Intelligence, Sensibility, Agility, Coordination, Constitution, Strength, Personality, Appearance, Bravado, and Willpower.

Intelligence
This attribute represents the intellectual capabilities of the character. It includes learning ability, abstract and mathematical reasoning, and tactical and strategic logic. It is not a measure of creativity or thoughtfulness. A character's intelligence level affects his or her talent for skills in the Academic, Medical, and Scientific skill groups (talent levels, skills, and skill groups are explained later). During play, rolls against intelligence are made when circumstances in the game world might present a character with an idea not obvious to the player, or when the character is attempting to make a connection that the player cannot. A successful roll allows the GM to provide additional clues or other ideas.

Sensibility
Sensibility is your character's "common sense," perceptiveness, and short-term memory (absent-mindedness being one sign of low sensibility). Sensibility levels affect talents for Creative, Domestic and Technical, Medical, Natural, and Reflexive skills, and Sensibility also directly affects perception. Sensibility rolls might be made when a character attempts to remember something, or when the GM thinks a character's actions defy common sense. Success allows forgotten information to be remembered, or for the GM to point out a more sensible approach to the player.

Agility
Agility is a combination of reflexes, grace, and balance. Skills in the Physical and Reflexive skill groups are affected by this attribute, as is a character's initiative response in combat. Agility rolls might be used when a character is attempting a tricky maneuver (like crawling across a fallen log over a raging river), or reacting to a physically unpredictable situation (like trying to stand in a wildly careening vehicle).

Coordination
This attribute governs your character's eye-hand coordination and manual dexterity. It affects the Creative, Domestic/Technical, and Medical skill groups. Coordination rolls are made whenever a character attempts an action that tests eye-hand coordination, but which does not fall under a specific skill.

Constitution
Constitution represents your character's health, endurance, and brawn. It affects a his or her weight and size (although this is mostly up to you), ability to recover from bodily damage, and talents for Domes

Roselyn wishes to create a Millennium's End character. She has a rough idea that she's been mulling over: a BlackEagle operative named Laenna O'Donnell—gutsy, self-sufficient, fairly tough and combat-effective. As Roselyn thinks through her initial character concept, Laenna begins to develop a history and personality. She has a military background, perhaps having cut her teeth in U.N. service in Bosnia, Palestine, or Angola. She's well-travelled, aggressive and clever. A capable operative, she joined BlackEagle to use her well-honed military skills in a more independent (and better-paying) organization. She loves Miami's warm climate, and spends most of her off-hours on the beach. Roselyn figures she'll emphasize intelligence, agility and strength while generating Laenna's Attributes, and look for skills covering firearms, some first aid, languages, and hand-to-hand fighting.

What kind of person works for BlackEagle?

BlackEagle/BlackEagle employs almost 400 operatives from its sixteen offices in seven countries. These operatives, organized into teams or "cells" of three to six members each, have a broad range of skills and come from a wide variety of backgrounds. A recent study by the company's Administrative Branch found the following trends:

– BlackEagle operatives are savvy: 58% speak two or more languages. 76% consider themselves "computer literate." Almost two-thirds have a college degree, and almost all have had some college education. Most say they are well-informed about world events.

– BlackEagle operatives are high-speed: 22% have had SWAT or military Special Operations training or experience. 17% have advanced degrees. More than half came in with professional-level experience, and of those that didn't, most have a high degree of competence in one or more critical skills.

– B/E ops are hip: 71% are under the age of thirty, and 89% are younger than forty. Most rank the high-profile lifestyle as one of their favorite aspects of the job. Almost all say they take great pride in their professionalism.

– BlackEagle operatives are resourceful: 97% of veteran operatives can recount a moment when they faced grave danger alone, or when their assignment or life depended on sound, split-second decisions.

But in some ways, BlackEagle operatives just can't be cubbyholed. For example, B/E ops come from a staggering variety of backgrounds. In one cell, a retired FBI agent might work side-by-side with an ex-gang-banger. A computer jock fresh out of school might work with a combat veteran of Bosnia and Angola. BlackEagle operatives include soldiers and cops, medics, pilots and investigators, people with computer and covert skills, regardless of their history. They all have one thing in common though. BlackEagle operatives are all clever, independent, resourceful and reliable.

Character Creation at a Glance

Character generation in *Millennium's End* is a fairly straighforward process. All of the instructions and data needed are covered on this two-page spread. Check out the main text if you have never created a *Millennium's End* character before. Also, the tables here are trimmed-down versions of those in the main text—if you need an extreme value out of the range of a table here, check the originals elsewhere in this chapter.

1 Concept

Details of your character's background and personality will emerge and refine themselves over the course of a lengthy campaign. A well-defined character concept isn't crucial to the character creation process, but a strong idea of where you are going helps in making the decisions outlined below.

2 Attributes

Determining Attribute levels is a three-part process. Before beginning, you must decide whether your character is male or female, and which Attributes are most important to your character concept. Follow these steps:

1: Allocate twenty-five points among the ten Attributes, giving each at least one point but no more than four.

2: For each Attribute, roll a number of dice equal to the number of points allotted. In other words, if you gave **Int** four points, roll four dice. Total the result, and multiply the total by two. Do this for each Attribute.

Base Attributes Table

Base Levels for Attributes

	Male	Female
Intelligence	20	20
Sensibility	20	20
Agility	15	20
Coordination	20	20
Constitution	20	25
Strength	20	15
Personality	20	20
Appearance	20	20
Bravado	25	20
Willpower	20	20

3: Add the Base Attribute levels from this table. Record the final totals on your Character Sheet.

Don't like the results? Start the process over again from scratch, or keep your point allotments but re-roll all the levels. Some Attributes (**Str** and **Agl**) can be improved through skills.

Weight and Height Table

Recommended Weight for a Given Height and Physique

Height (cm)	Total of Character's Constitution and Strength Attribute Levels 55	70	85	100	115	130	145
	Weight (kg)						
160	40	43	46	50	54	61	66
165	43	46	50	54	61	66	72
170	46	50	54	61	66	72	79
175	50	54	61	66	72	79	87
180	54	61	66	72	79	87	95
185	61	66	72	79	87	95	102
190	66	72	79	87	95	102	108
195	72	79	87	95	102	108	113
200	79	87	95	102	108	113	118

3 Character Information

Most of the information in the upper left of the Character Sheet is not critical to the character generation process, and can simply be made up according to your character concept. A few items, however, must be determined now before you can move on to other steps. Do the following:

Determine your character's available cash by rolling three dice, multiplying the total by $1000, and adding an additional $5000. Write the total on the back of your character sheet.

Decide how much post-high-school education your character has. Spend $2500 of your character's starting money for each year of higher learning. Write the number of years of higher education on your character sheet.

Decide how old your character is. For every two years over the age of thirty, subtract one point from his or her **Con** and **Agl** Attribute levels.

Choose a height for your character. Then, using the Weight and Height Table below, determine his or her weight. You may deviate a little from the result on the table, especially if your character is overweight.

Roll percentile dice to determine whether your character is right-handed, left-handed, or ambidextrous. A result of 90 or less indicates right-handedness, 91 through 99 left-handedness, and 00 ambidextrousness.

Fill in the remaining information in the upper left of your Character Sheet according to your character concept.

4 Secondary Attributes and Mass Factor

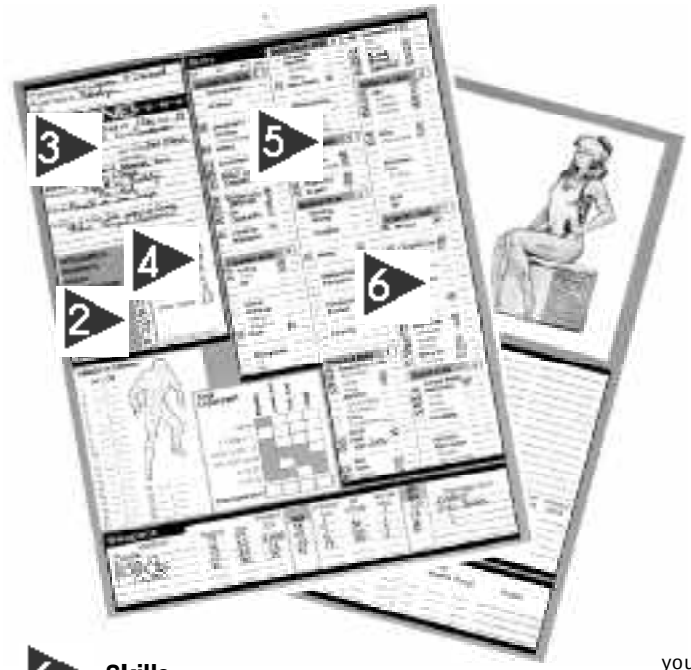
Determine your character's Secondary Attributes from the Secondary Attributes Table, below. Find your character's Mass Factor on the Mass Factor Table, also below. Record all of these numbers on your Character Sheet, to the immediate right of the Attribute levels. Some Secondary Attributes (Perception, Base Speed, and Endurance) can be improved through skills.

Mass Factor Table

Mass (kg)	Mass Factor
46-49	1.4
50-53	1.3
54-58	1.2
59-64	1.1
65-71	1.0
72-80	0.9
81-92	0.8
93-108	0.7
109-124	0.6

5 Talent Bases

The Talent Base Table lists formulas for determining your character's Talent Bases from his or her Attributes. Compute the Talent Bases and record them in the Skills section on your Character Sheet.



Talent Base Table

Formulas for Determining Talent Bases

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom./Tech.	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

See Also:

Skill packages	p. 20
Skill list	p. 42
Skill descriptions	p. 43
Equipment descriptions	p. 176
Weapons Tables	p. 192
Vehicle Table	p. 194
Armor Table	p. 195

6 Skills

Defining your character's skills is the longest and probably most important part of character creation. Follow these steps:

1: Compute your character's skill points according to the following formula:

((years of higher education) x 2 x **Int**) + (Age x 15) + 300.

2: Purchase skill packages. You must purchase one of the two education packages, and the BlackEagle Entry Training Course too, if your character is a B/E operative. Additional packages are optional. As you buy the packages, copy the skill levels onto your Character Sheet.

3: After purchasing all the skill packages you want, have a look at the Bottom Line skills listed on p. 21. Purchase individually (at the rates below) any skills listed there that you did not get through your skill packages.

4: Use any remaining skill points to purchase additional skills your character should have, or to increase the level of skills bought in packages. The cost for buying individual skills is:

For levels 1 through 25	1 pt each
Levels 26 through 40	2 pts each
Levels 41 through 55	3 pts each

You may not buy any skill level over fifty-five. Subskills may not exceed more than half the level of their parent skills.

If you have purchased Athletics/Bodybuilding, Athletics/Gymnastics, Kata, Perception, or Run skills, either individually or as part of a package, you may be able to increase some of your character's Attributes or Secondary Attributes. Check the skill descriptions in Chapter Two.

Secondary Attributes Table

Attribute level	Perception (based on **Sen**)	Base Speed (based on **Agl**)	Endurance (based on **Con**)	Recovery (based on **Con**)	Dam. Rtg (based on **Str**)
26-30	26	11	6	4	3
31-35	29	12	7	4	4
36-40	32	13	8	6	4
41-45	35	14	9	6	5
46-50	38	14	10	8	5
51-55	41	15	11	8	5
56-60	44	15	12	10	6
61-65	47	16	12	10	6
66-70	50	17	13	12	6
71-75	53	18	13	12	6
76-80	56	19	14	14	6
81-85	59	20	14	14	7

7 Possessions

Use your character's remaining cash to purchase weapons, equipment, and other possessions now or during play. When you buy weapons, vehicles, or body armor, check the tables at the end of the book and copy the information there onto the appropriate boxes on your Character Sheet.

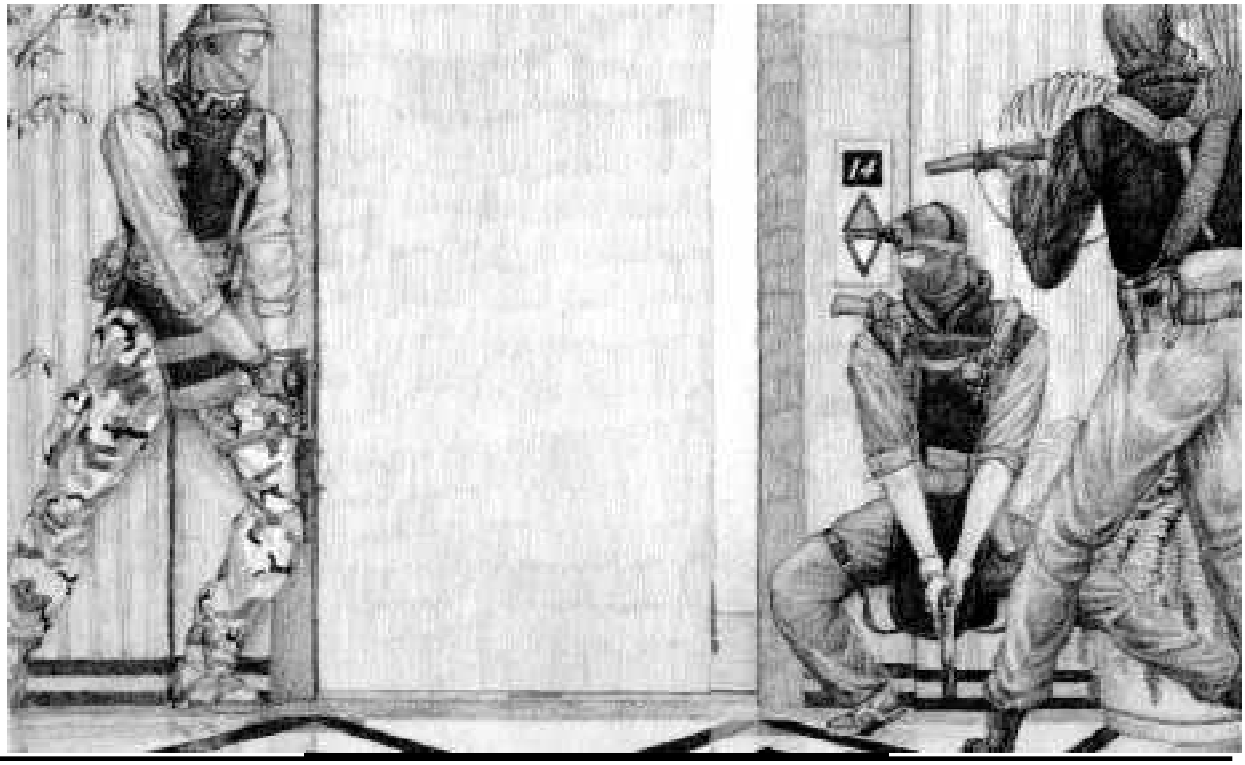
tic/Technical and Physical skills. Rolls against Constitution are made when a character's health is tested.

Strength
Strength refers to your character's muscle power. It affects talents for Physical skills and determines the damage done in hand-to-hand combat. Strength rolls are made when a character attempts feats of strength.

Personality
This attribute measures people's initial reaction to your character—the type of first impression he or she tends to make. It can be an important attribute if your character deals with people a lot, through the government, through business, or on the street. However, this attribute has no bearing on the kind of person the character really is—a low score does not mean your character is shallow or dull. Personality affects skills in the Social skill group. A personality roll might be made in a social situation, in which a character would like to impress or capture the attention of another.

Appearance
The appearance attribute measures how strangers react to your character on basis of looks, physical features, and bearing. Appearance rolls are made to measure another's reaction to a character based solely on these aspects.

Bravado
This attribute represents your character's capacity for putting up a front, lying straight-faced, and effectively intimidating others. It affects Social skills. Rolls are made when a character tries to mix with an unfamiliar crowd.



Willpower
Willpower measures your character's self-control, and the ability of his or her rational mind to control the irrational. Willpower affects talent for skills in the Academic and Social skill groups. Rolls are made when attempting to improve skills through practice or study, to resist mind- or personality-altering effects of drugs or alcohol, to avoid panic when drowning, and to push to physical and mental extremes.

Rolling the Attributes

Determining your character's Attribute levels is a two-part process. As mentioned above, it involves both decision-making on your part (the allocation of points), and dice rolling to randomize the result.

Every character is allowed twenty-five Attribute points. Assign these points to the Attributes, distributing them in whole numbers and giving each Attribute at least one and no more than four points. The more points you give an attribute, the higher its level is likely to be, and high numbers represent strong Attributes.

Record character information in pencil or another erasable form, especially at this point. The Attribute points are temporary (you won't need to keep them once Attributes are determined), and some of your character's Attribute levels may change later.

Once you have allocated all twenty-five Attribute points, **roll one d10 for each point given to an attribute, and multiply the total by two.** In other words, if you assigned a given attribute two points, roll two dice, add the resulting numbers, and multiply the total by two. **Add these results to the appropriate Attribute Base levels** (listed on the Base Attributes Table to the right) and record the total. This number is the Attribute level. Once you have determined all ten Attribute levels, discard the Attribute points, as they are no longer needed.

The higher an Attribute level, the better the character will be with that quality. Attributes range in level from twenty to one-hundred (actually, a couple can be as low as seventeen or as high as 105, but those extremes are very rare). Numbers in the mid- to upper forties are average, and most deviation is within about twenty points—from the upper twenties to the upper sixties. If after making all of your rolls you are not happy with your character's Attribute levels, erase the lot and roll them all over again.

Base Attributes Table

Base Levels for Attributes

	Male	Female
Intelligence	20	20
Sensibility	20	20
Agility	15	20
Coordination	20	20
Constitution	20	25
Strength	20	15
Personality	20	20
Appearance	20	20
Bravado	25	20
Willpower	20	20

With Laenna's concept in mind, Roselyn begins to put her character on paper. She starts by allocating her twenty-five Attribute points as follows: four points each for Intelligence and Agility, three each for Sensibility, Strength, Appearance and Bravado, two for Constitution, and one each for Coordination, Willpower, and Personality.

Next she rolls the dice. She starts with Intelligence, rolling four dice and getting a total of 27—a good start. She doubles this (getting 54), and adds it to the 20 she found on the Base Attributes Table. Laenna has an Intelligence of 74.

Roselyn repeats this process for Sensibility, rolling just three dice (the number of points she allocated to this Attribute). This time the results total 14. Laenna's Sensibility is 48 (14 x 2 + 20 = 48).

Attribute-affecting Skills
Some skills improve Attribute levels. Keep this in mind when buying skills for your character (the last major step in character creation). There are two categories of data which depend on Attribute Levels: Talent Bases and Secondary Attributes (both will be explained a little further on). **Talent Bases are determined from your character's original Attribute levels, and never change.** Secondary Attributes, on the other hand, may change whenever the Attributes do. Furthermore, some skills directly improve Secondary Attributes, without changing the Attribute levels.

Skills which improve Attributes or Secondary Attributes are Athletics/Bodybuilding (which improves the Attribute Strength and affects weight), Athletics/Gymnastics (which improves Agility), Kata (improves the Secondary Attribute Base Speed), Perception (improves the Secondary Attribute of the same name), and Run (improves the Secondary Attribute Endurance). Descriptions of these skills can be found in Chapter Two.

Roselyn continues with Laenna's Attributes, obtaining the following results: Intelligence 74; Sensibility 48; Agility 54; Coordination 26; Constitution 55; Strength 47; Personality 36; Appearance 56; Bravado 52; Willpower 28.

Roselyn has now outlined her character's most basic qualities. Looking at the Attribute levels, Roselyn can see that her character is quite smart and pretty down-to-earth, that she's quick on her feet but doesn't have a lot of eye-hand coordination, that she's reasonably strong and pretty tough, and that while she's not outgoing or very self-possessed, she is good-looking and gutsy.

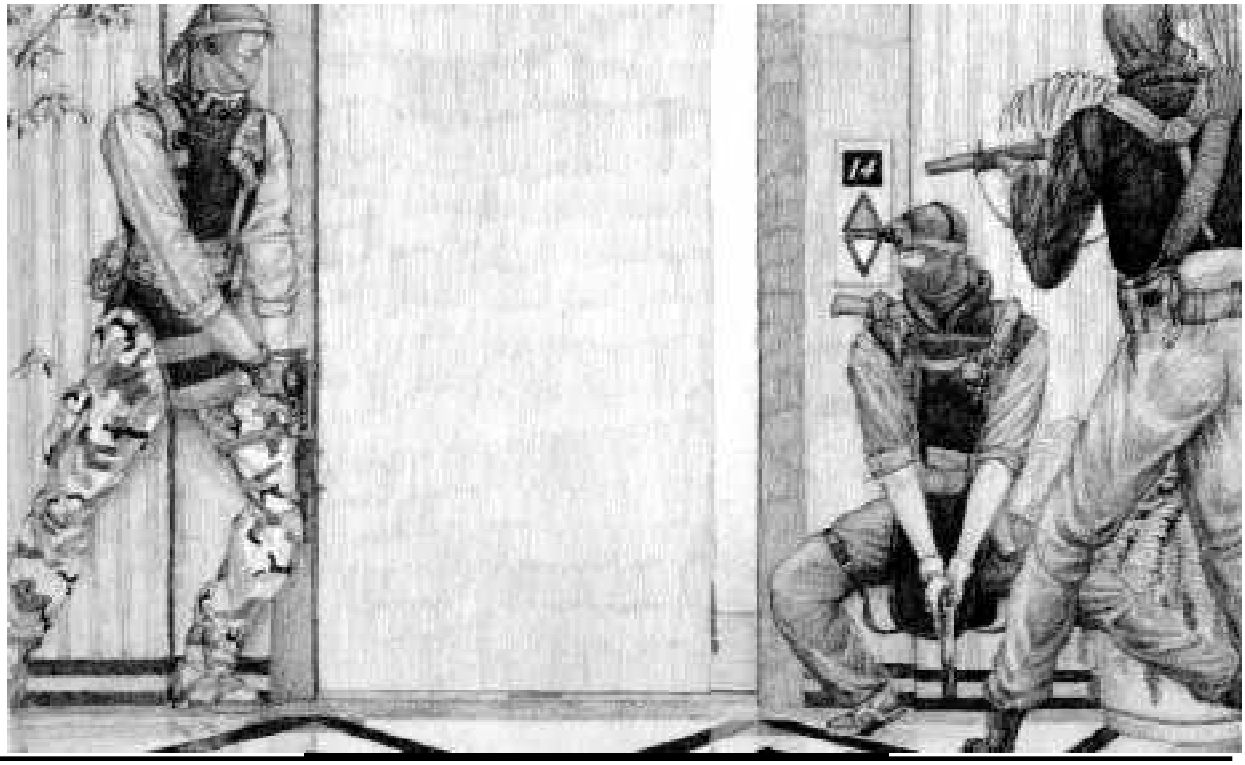
tic/Technical and Physical skills. Rolls against Constitution are made when a character's health is tested.

Strength
Strength refers to your character's muscle power. It affects talents for Physical skills and determines the damage done in hand-to-hand combat. Strength rolls are made when a character attempts feats of strength.

Personality
This attribute measures people's initial reaction to your character—the type of first impression he or she tends to make. It can be an important attribute if your character deals with people a lot, through the government, through business, or on the street. However, this attribute has no bearing on the kind of person the character really is—a low score does not mean your character is shallow or dull. Personality affects skills in the Social skill group. A personality roll might be made in a social situation, in which a character would like to impress or capture the attention of another.

Appearance
The appearance attribute measures how strangers react to your character on basis of looks, physical features, and bearing. Appearance rolls are made to measure another's reaction to a character based solely on these aspects.

Bravado
This attribute represents your character's capacity for putting up a front, lying straight-faced, and effectively intimidating others. It affects Social skills. Rolls are made when a character tries to mix with an unfamiliar crowd.



Willpower
Willpower measures your character's self-control, and the ability of his or her rational mind to control the irrational. Willpower affects talent for skills in the Academic and Social skill groups. Rolls are made when attempting to improve skills through practice or study, to resist mind- or personality-altering effects of drugs or alcohol, to avoid panic when drowning, and to push to physical and mental extremes.

Rolling the Attributes

Determining your character's Attribute levels is a two-part process. As mentioned above, it involves both decision-making on your part (the allocation of points), and dice rolling to randomize the result.

Every character is allowed twenty-five Attribute points. Assign these points to the Attributes, distributing them in whole numbers and giving each Attribute at least one and no more than four points. The more points you give an attribute, the higher its level is likely to be, and high numbers represent strong Attributes.

Record character information in pencil or another erasable form, especially at this point. The Attribute points are temporary (you won't need to keep them once Attributes are determined), and some of your character's Attribute levels may change later.

Once you have allocated all twenty-five Attribute points, **roll one d10 for each point given to an attribute, and multiply the total by two.** In other words, if you assigned a given attribute two points, roll two dice, add the resulting numbers, and multiply the total by two. **Add these results to the appropriate Attribute Base levels** (listed on the Base Attributes Table to the right) and record the total. This number is the Attribute level. Once you have determined all ten Attribute levels, discard the Attribute points, as they are no longer needed.

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whether your character notices something subtle in his or her environment, which could go unnoticed. A complete explanation of the Perception score can be found in the description of the skill of the same name, in Chapter Two (p. 55). Your can boost your character's Perception score substantially through the purchase of this skill.

Base Speed reflects your character's agility in a combat or athletic situation. It is used in determining initiative—which combatant can capitalize the most on the actions of others—during combat. This is discussed in Chapter Three. Base Speed is derived from Agility, with typical scores in the low to mid 'teens. Quick and agile characters have high Base Speeds.

Endurance and Recovery Modifier are both derived from your character's Constitution level. Endurance is used in determining the effects of fatigue, and the time a character can continue running or performing heavy labor. Its use is explained in Chapter Two. The Recovery Modifier affects your character's rate of recovery from wounds or illness, and is discussed in Chapter Three. As with Base Speed, high scores are better than low.

Your character's Damage Rating is a measure of the damage he or she can inflict due to physical strength. The application of this is explained in Chapter Three. The Damage Rating is based on Strength, and is generally between three and six. Again, higher scores are better.

Roselyn determines Laenna's Secondary Attributes by consulting the Secondary Attributes Table. With a Sensibility level of 48, she determines that Laenna's natural Perception score is 38. With her Agility of 54, Laenna's Base Speed is 15. Roselyn continues this process and ends up with the following results: Perception 38; Base Speed 15; Endurance 11; Recovery 8; and Damage Rating 5. She looks up Laenna's Weight on the Mass Factor Table, getting a Mass Factor of 1.2.

Mass Factor differs from the other Secondary Attributes in several ways. First, it is not determined from an Attribute level, but from your character's weight (so it's found not on the Secondary Attribute Table but on the Mass Factor Table to the right and with *Character Generation at a Glance*). Mass Factor affects the severity of damage a character sustains. Its use is explained in Chapter Three. A score of one point zero is typical, and low scores are good.

The Secondary Attributes and Mass Factor tables below and opposite are duplicated, in digest form, on the *Character Generation at a Glance* spread on pages 10 and 11. Remember that some Secondary

Secondary Attributes Table

Attribute level	Perception (based on **Sen**)	Base Speed (based on **Agl**)	Endurance (based on **Con**)	Recovery (based on **Con**)	Damage Rating (based on **Str**)
1-20	20	9	4	0	2
21-25	23	10	5	2	3
26-30	26	11	6	4	3
31-35	29	12	7	4	4
36-40	32	13	8	6	4
41-45	35	14	9	6	5
46-50	38	14	10	8	5
51-55	41	15	11	8	5
56-60	44	15	12	10	6
61-65	47	16	12	10	6
66-70	50	17	13	12	6
71-75	53	18	13	12	6
76-80	56	19	14	14	6
81-85	59	20	14	14	7
86-90	62	21	15	16	7
91-95	65	22	15	16	7
96-100	68	23	16	18	7
101+	71	24	16	20	7

Attributes areaffected by skills which improve them either directly or by improving the Attribute levels on which they are based (see Attribute-Affecting Skills, above).

Talent Bases

In *Millennium's End*, every skill is categorized into one of nine different skill groups. Each skill group has a Talent Base, which reflects your character's aptitude for skills in that group. When you make skill rolls, you will add the appropriate Talent Base, which is a small bonus of up to ten points, to your character's skill level.

There are nine Talent Bases. They cover the Academic, Creative, Domestic/Technical, Medical, Natural, Physical, Reflexive, Scientific, and Social skill groups. Each is determined by a brief formula, which averages certain Attribute levels and divides the result by ten. Check the Talent Base Table for the exact formulas.

As mentioned above, the purchase of some skills will improve Attribute levels, and age can also have an effect. Use the original Attribute levels for determining your character's Talent Bases, even if you have changed them due to age or skills. Talent Bases never change during play, no matter what happens to your character's Attribute levels.

Although determined by the Attributes, the Talent Bases are recorded in the Skills section of the Character Sheet. Record each Talent Base level to the right of the skill group heading, in the white box.

Mass Factor Table

Mass (kg)	Mass Factor
32-33	2.0
34-35	1.9
36-37	1.8
38-39	1.7
40-42	1.6
43-45	1.5
46-49	1.4
50-53	1.3
54-58	1.2
59-64	1.1
65-71	1.0
72-80	0.9
81-92	0.8
93-108	0.7
109-124	0.6
125+	0.5

Skills

The Skill section keeps track of everything your character knows how to do. In determining the skills your character possesses, you will probably want to understand what each skill covers. Chapter Two has descriptions

Roselyn next turns her attention to Laenna's Talent Bases. She starts with Academic Skills. The formula on the Talent Base Table is ((Intelligence level + Willpower Level) / 20). This gives Laenna an Academic Talent Base of 5 ((74 + 28 = 102) / 20 = 5). Continuing for the other Talent Bases gets these results: Academic 5; Creative 4; Domestic/Technical 4; Medical 5; Natural 5; Physical 5; Reflexive 5; Scientific 7; and Social 4.

of individual skills. This section will cover the process of defining your character's initial skills.

Skill selection is the longest part of character creation, and it's probably also the most important. In play, the vast majority of the rolls you make will be against your character's skills. These skills will improve over the course of your campaign, and new skills can be added, but your initial choices will have a major impact on the things your character can do and how well he or she can do them.

Skill points

Every character is allotted a certain number of points with which the player will build his or her skills. All of these points must be spent during the creation of the character. During play, skills can only be advanced through experience or practice, in a process described in Chapter Two (see *Character Improvement*, p. 70). A character's skills represent the sum total of all he or she has learned during life up to the point at which the

Talent Base Table

Formulas for Determining Talent Bases

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom./Tech.	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

campaign begins—through formal education, vocational training, military service, and life's experiences in general. The number of skill points with which you may buy your character's skills is derived from three variables: age, education level, and intelligence.

To determine the total number of skill points your character receives, multiply the number of years of post high-school education (determined above), **by twice his or her Intelligence Attribute level. Multiply his or her age by fifteen. Add these two numbers together, then add another 300 points.** The total, which can vary widely but averages around 900, is the number of points available for the purchase of skills.

Roselyn now tallies Laenna's skill points. Laenna has three years of university education under her belt, her Intelligence Attribute level is 74, and her age is twenty-eight. She thus has 1164 skill points ((3 x 2 x 74) + (28 x 15) + 300 = 1164).

Buying Skills

Skills are rated in increments of one, from level 1 on up past 100, with high numbers indicating high degrees of competence. **Unmodified, a character's percent chance to succeed in a task is equal to his skill level plus the appropriate Talent Base.** Of course, many skill rolls will be made with modifiers, based on the difficulty of the task and the conditions of the attempt. This is covered in Chapter Two, on page 39 (*Rolls and Modifiers*).

Subskills are specializations within a particular skill. Every subskill modifies a specific parent skill—some skills have many subskills, while others have few or none. Like their parents, subskills are ranked in increments of one starting at level one and going up without ceiling. The only restriction to **a subskill's level** is that it **may not exceed half the level of its parent skill.** When a subskill is used, its level is added to that of its parent, with the roll being made against the total. The advantage to using subskills is that they allow a high degree of competence, while not costing much to purchase or to advance during play. On the other hand, subskills apply to a much narrower set of tasks than skills, so they aren't as useful.

After buying a few skill packages (covered in the next example), Roselyn looks at additional skills and subskills. She wants Laenna to be a good driver of all sorts of vehicles, especially cars. She purchases "Drive" skill at level 35, costing her 45 skill points: ((25 x 1) = 25), for levels 1 through 25, + ((10 x 2) = 20), for levels 26 through 40. Laenna now has a level of 35 for driving any sort of vehicle covered by the Drive skill.

Roselyn also wants Laenna to have some specialization in Automobile, a subskill which only applies to cars and small trucks. The highest level Laenna can have is 17—half the level of the parent skill, Drive. Roselyn buys 15 levels. This costs just 15 skill points, far less than the cost of raising the Drive skill by another 15 points.

Later, after buying all of Laenna's skills, Roselyn goes back and determines the required roll for each. Laenna's Drive skill roll is equal to her Drive skill level of 35 plus her Reflexive Skill Talent Base of 5. This gives her a roll of 40 when trying to drive any vehicle covered by the skill and its subskills. When in a car, however, she can add her Automobile subskill of fifteen, bringing her total to 55.

There is no ceiling to the level your character may eventually attain in any skill. There are restrictions during character creation, however. **When buying skills, the first twenty-five levels cost one skill point per level. From level twenty-six to level forty, the cost is two points per level. From level forty-one to level fifty-five, the cost is three points per level. Starting skill levels above fifty-five are not allowed.** The scale for buying subskills is the same, except that they have a maximum initial level of twenty-seven (since they can't exceed half the level of their parents). The Skill Cost Table on the next page lists costs for skill levels according to the above formula.

In general, a character may be considered familiar with a skill if he or she has a level of 20 or greater. A level of 40 or more is considered competent, while a character with a level of 70 or higher is something of an expert. These standards can be applied to a skill by itself, or to the total of a skill and subskill. In other words, if a character has a level fifty in the skill Engineering, he or she is fairly competent in all aspects of engineering. If he or she also has a level of twenty-five in the Electrical subskill (a skill/subskill total of seventy-five), then the character is an electrical engineering expert. He or she is still just competent in, for example, mechanical engineering. These distinctions are not important to game rules, but should help give you a feel for the skill system.

When buying skills, you may want to start by buying one or more skill packages (below). Then move on to the Bottom Line skills (also below), making sure that you meet at least the minimum requirements.

Skill Cost Table	
Level	Skill Point Cost
10	10
15	15
20	20
25	25
30	35
35	45
40	55
45	70
50	85
55	100

Before purchasing individual skills (see the last example), Roselyn has a look at the skill packages. She starts with two mandatory packages: the BlackEagle Entry Training Course and the Advanced Education package. These cost her 130 and 210 points, respectively. Then she goes on the buy the Field Medic package, to fulfill her BlackEagle training requirement. That costs her another 185 points. Finally, she adds the U.S. Army Basic Training Package, in keeping with her character's military background, for another 150 points. Unfortunately, some of these skills overlap with the BlackEagle and Medic packages. She copies the hand-to-hand skills and their subskills onto her character sheet, as they are not duplicating anything she has already bought. For the Aim skill, however, she treats the listed 30 levels as skill points, using them to buy up the Aim skill from the BlackEagle package from its original level 30 to level 43 (it costs twenty points to go from 30 to 40 at two skill points per level, then nine points for levels 41 through 43, at three skill points each—the remaining point is lost). She does the same thing for the Aim subskills, and for the Military Science skill. Her Medicine skill level from the Medic package is already 55—the maximum for a beginning character, so the extra levels from the U.S. Army package are lost. Roselyn has spent 675 skill points.

Satisfied with her skill packages, Roselyn looks at the Bottom Line skills list. She's already got the Aim and Medicine requirements met, so she buys the remaining skills to the listed levels at normal cost.

Finally, check or write down all additional desired skills on your character sheet or a piece of scratch paper, and go back and divvy up your remaining skill points amongst them.

The Skills box on the character sheet lists most of the skills and subskills available. Occasional blank spaces provide room for writing in skills and subskills not printed on the sheet. There are three spaces adjacent to every skill and subskill listing. Write the skill level you have purchased in the space to the immediate right of each listing. When you're done purchasing skills, go back and determine the actual roll required, and write it in the space to the left of the skill listing. For skills, the roll is simply the skill level plus the Talent Base (listed in the grey bar at the top of each skill group). For subskills, add the subskill level to the roll for the parent skill. The third space, to the far right, is for recording skill uses, needed for advancing your character's skills over the course of the game. This is discussed under *Experience* (p. 70), in Chapter Two.

Skills Packages and Bottom Line Skills

There are certain skills which any character living in contemporary society should have. In addition, a character may have undergone a training regimen or other program that will have provided him or her with certain skills. Listed over the next few pages are several Skill Packages—bundles of skills that reflect specific packages of training or knowledge. Skill Packages are offered at reduced prices (listed with the packages as "Package deals"), but you only get the cheap price when you buy a Package in its entirety. Of course, you can always go back and use left-over skill points to increase individual skills that were bought in a Package.

Many of the Skill Packages overlap with one another. When that's the case, buy the package with the highest levels of the overlapping skills first. When you buy the second Package, count the listed skill level for the overlapping skill as skill points, and use those points to increase the level of the skill. Keep in mind, however, that the maximum skill levels quoted above still apply—any skill levels over fifty-five are lost. So buying too many overlapping packages may not be to your advantage, even with the "package deal" discounts.

Buy as many Skill Packages for your character as you like, within the limits of your total skill points. Before you get started on the optional packages, however, you must buy either the Basic or Advanced Education package. The BlackEagle Basic Training Package is also mandatory for all BlackEagle operatives. Once you have purchased as many packages as you desire, use your remaining skill points to purchase additional skills or to increase the levels of package skills.

Before finishing up, check out the Bottom Line skills (listed as a package, although they really aren't). The Bottom Line package is a checklist of skills that your character, as a member of modern society, must have. Chances are you will have covered most or all of the skills when buying your character's packages. You aren't required to buy the Bottom Line skills as a package, but only to ensure that your character has each of the skills at a minimum of the listed level.

The packages and skills listed assume a campaign set in or around the year 1999. If your campaign is set at an earlier or later date, the GM and players may have to alter the packages, to account for the changing times and different technologies.

The skills contained in the following packages, and all other skills available, are described in detail in Chapter Two.

Basic Education

This package represents a basic high school level of education. If your character has little or no post high school education, buy this package. If, on the other hand, he or she has substantial higher education, you may want to purchase the Advanced Education package (below) instead. Either way, you must buy one or the other.

Total cost: 195 skill points.

Package deal: 80 skill points. Every character must purchase either this or the Advanced Education package below.

Geography	20
History	20
Literature	10
Math	30
Native Language Group	50
Native Language	25

Advanced Education

College programs vary greatly in scope and depth. There is a core curriculum common to nearly every degree, however. These skills represent that curriculum. The fact that your character has some post high school education, or even an advanced degree, does not make this package mandatory. It is a recommended basis, however, for any well-educated character. And if your character has a degree, especially an advanced degree, invest additional points in a particular skill that reflects your character's field of study.

Total cost: 340 skill points.

Package deal: 210 skill points (spend additional points on a major course of study). Every character must purchase either this or the Basic Education package above.

Anthropology, Biology, or Psychology	30
Art, Music, or Philosophy	30
Geography	20
History	20
Journalism	20
Research	10
Literature	20
Math	45
Native Language Group	50
Native Language	25

Bottom Line Skills

This package is a list of skills that every character living in modern society will have. Don't buy these skills as a package—instead, buy your other packages first, then go back and fill in any of the Bottom Line skills you still don't have.

Total cost: 135 skill points.

Package deal: 135 skill points.

Aim	20
Diplomacy	20
Drive	30
Automobile	15
General Mechanics	15
Medicine	10
Swim	20

BlackEagle Entry Training Course

All BlackEagle operatives go through a six-week training regimen upon employment with the company. The Entry Training Course, held at a company facility near Atlanta, Georgia, familiarizes operatives with their company and its resources. It ensures that all ops, regardless of background, have the basic skills necessary for survival and success. This package represents the first half of the course. The combat skills are all self-explanatory. The Military Science skill represents a familiarization with basic combat tactics.

During the second half of the course, operatives are trained in one of many more specialized topics. If your character is a BlackEagle operative, you must purchase not only this package, but also one of the following: Covert Entry Training, Demolitions Training, Field Medic Training, Flight School, Hacking Skills, Investigations Training, Personal Security Training, or Surveillance Training, or your character must have a level of fifty in Parachuting or a foreign language.

Total cost: 145 skill points.

Package deal: 130 skill points. Mandatory for B/E operatives.

Aim	30
Autofire	10
Longarm	10
Smallarm	15
Military Science	20
Tactics	10
Unarmed Hand to Hand	30
Punch	10

Covert Entry Training

This package represents any training a character may have had in bypassing security systems to break into buildings or secure areas. The Locksmithing subskill is used in picking locks. The Computer Operations knowledge may be used to defeat computer-controlled security systems (this is not the same as negotiating secure computer networks), and the Electronics to bypass electronic security hardware. Your character may have come across this training through law enforcement experience, a criminal past, or through legitimate commercial locksmithing courses.

Locksmithing	20
Computer Operations	20
Civil Systems	10
Electrics	30
Electronics	15
Miniature Mechanics	40

Total cost: 155 skill points.

Package deal: 140 skill points.

Demolitions Training

This package trains a character to construct explosives and use them effectively in the destruction of structures. The Electrics skill is used for the wiring of fuse systems and electronic timers. The Chemical Engineering is for the construction of explosives, and the Civil Engineering is for their effective placement for maximum effect. This is a basic package, and anyone who deals with such a dangerous pastime may desire an even higher level of training to avoid disastrous accidents. A character with specialized education or a background in EOD (Explosive Ordinance Disposal—the bomb squad) or military special operations may have had demolitions training.

Electrics	30
Electronics	10
Engineering	40
Chemical	20
Civil	10

Total cost: 130 skill points.

Package deal: 110 skill points.

Field Medic Training

A character who has been a civilian or military medic, or who has educational background in medicine, may have received Field Medic training. The skills in this package are largely self-explanatory. The high level of training reflects the fact that field medics, paramedics, and EMTs often deal with severe injuries under difficult circumstances.

Medicine	55
Emergency Medicine	25
Pharmacy	30
Surgery	40

Total cost : 215 skill points.

Package deal: 185 education skill points.

Flight School

The skills listed are the absolute minimum training for any licensed pilot. Any character competent with helicopters, jets, or other types of aircraft must have the appropriate additional Pilot subskills. A character may have received flight training through his or her education, through civil or commercial flight schools, or through a military background.

Navigation	30
Air	15
Pilot	50
Single-engine airplane	25
IFR	10

Total cost: 170 skill points.

Package deal: 150 skill points.

Forgery Training

These are the skills used by forgers to create convincing phony documents. All of these skills are used when creating documents electronically, using powerful drawing software packages and high-end imagesetters. The Art skills are also used alone when documents are created by hand. Training in forgery skills is almost always illicit, and comes from a character's shady past.

Art	50
Drafting	20
Drawing	20
Computer Operations	30
Civil Systems	15

Total cost: 175 skill points

Package deal: 155 skill points

Hacking Skills

Skills in computer hacking rarely come from specific training programs, but rather from a character's interest and education in computer operations, combined with contacts and tips from other hackers. The Networks and Security subskills in this package are used to navigate cyberspace, locate data, applications, and site addresses, and to circumvent security measures. The Civil Systems and Programming subskills are used in various supporting tasks.

Computer Operations	50
Civil Systems	10
Networks	20
Programming	5
Security	25

Total cost: 145 skill points.

Package deal: 135 skill points.

Investigations Training

This package equips a character for investigative work. Diplomacy and Acting help the character to obtain information discretely, while Law and Police Science help him or her gather and process evidence and to understand the implications of crime. This is a minimal package—a successful investigator will probably need many more skills, including self-defence skills and the Surveillance Training Package, below. Additionally, anyone with a background in police investigations would probably have much higher levels in Law and Police Science. Investigations training generally comes from background or training in law enforcement.

Acting	20
Con	10
Diplomacy	40
Prying	20
Law	15
Criminal	5
Police Science	40
Forensics	20

Total cost: 200 skill points.

Package deal: 175 skill points.

Martial Art—Aikido

These are the minimum skill level requirements for a blackbelt in Aikido. This martial arts school is explained under the Kata skill/Aikido subskill in Chapter Two (see p. 58).

Total cost: 200 skill points.

Package deal: 175 skill points.

Kata	40
Aikido	20
Unarmed Hand-to-Hand	40
Combat Throw	20
Dodge	20
Grapple	20
Kick	10

Martial Art—Jui-jitsu

These are the minimum skill level requirements for a blackbelt in Jui-jitsu. This martial arts school is explained under the Kata skill/Jui-jitsu subskill in Chapter Two (p. 58).

Total cost: 200 skill points.

Package deal: 175 skill points.

Kata	40
Jui-jitsu	20
Unarmed Hand-to-Hand	40
Block	20
Combat Throw	10
Dodge	10
Grapple	20
Punch	10

Martial Art—Karate

These are the minimum skill level requirements for a blackbelt in Karate. This martial arts school is explained under the Kata skill/Karate subskill in Chapter Two (p. 58).

Total cost: 200 skill points.

Package deal: 175 skill points.

Kata	40
Karate	20
Unarmed Hand-to-Hand	40
Block	20
Dodge	10
Kick	20
Punch	20

Martial Art—Tae Kwon Do

These are the minimum skill level requirements for a blackbelt in Tae Kwon Do. This martial arts school is explained under the Kata skill/Tae Kwon Do subskill in Chapter Two (p. 58).

Total cost: 200 skill points.

Package deal: 175 skill points.

Kata	40
Tae Kwon Do	20
Unarmed Hand-to-Hand	40
Block	20
Combat Throw	10
Kick	20
Punch	20

Mechanical Training

This package covers training for mechanics, obtained through education, vocational training, or work experience. The skills and subskills are used for a wide variety of repair and maintenance tasks.

Total cost: 170 skill points.

Package deal: 150 skill points.

Electrics	20
General Mechanics	45
Internal Combustion Engines	20
Mechanical Systems	20
Metalworking	30
Milling	5

Personal Security Training

This package represents training for professional bodyguards and other security experts. Driving skills are stressed, because protectees are vulnerable when on the move. The Tactics subskill helps when planning security arrangements and routes of travel. A character may have picked up these skills through past work as a private bodyguard, or with a government agency such as the Secret Service. This is a fairly minimal package, and a well-trained operative will want to complement it with a few good combat skills.

Total cost: 220 skill points.

Package deal: 190 skill points.

Drive	50
Auto	25
Military Science	40
Tactics	20
Perception	30

Surveillance Training

This package complements the Investigations Training package, above. Its skills come from a background or education in law enforcement or espionage. The Electronics subskill allows the character to utilize the plethora of available bugging, recording, and tracking devices. The Hiding skill allows him to plant these devices where they won't be found, as well as to follow a subject. Photography is used to discretely record a subject's actions visually.

Total cost: 190 skill points.

Package deal: 170 education skill points.

Electrics	40
Electronics	20
Hiding	35
Shadowing	15
Photography	40

U. S. Army Basic Training

These are the most basic skills which any character that has been in the U. S. Army will have acquired. Of course, the army offers additional training, and a military veteran is not restricted to this package. This package may also be used for other military services.

Total cost: 175 skill points.

Package deal: 150 background skill points.

Aim	30
Autofire	5
Longarm	10
Armed Hand to Hand	20
Thrust	10
Swing	10
Medicine	20
Military Science	20
Hardware	10
Unarmed Hand to Hand	30

Armor, Impairment, and Body

Your character sheet has a space on the front for recording information on armor worn. Next to it is a small matrix dealing with impairment your character may suffer due to injury. On the back is a box labelled "Body," where injuries are recorded.

The Armor Coverage section has a small diagram of your character's hit zones, and a list of these zones with a space for Armor Value (AV) and Conversion Number (CN) for each. If your character purchases body armor (equipment is covered below), copy the AV and CN values for the zones covered from the Armor Table in the Appendix.

Next to the Armor Coverage section is the Impairment matrix, used to keep track of impairments from injuries. Above it is a box marked Armor Speed Modifier. If you've purchased body armor for your character, copy its Speed Modifier from the Armor Table there.

Use the Body box, on the back of the character sheet, to keep track of any injuries your character sustains. It too lists all of your character's Body Zones, and has space for recording types of wounds, Trauma Levels (TL), and impairments for each zone. Whenever you record or change an impairment in the Body box, copy it over to the Impairment matrix, recording the impairment level on the row marked with the appropriate Body Zone number.

The use of the Impairment matrix, and the meaning of all of these terms—AV, CN, and Impairment—will be explained later, in Chapter Three. For now, just keep in mind that AV and CN represent how well body armor protects your character, and the higher the number, the better. Impairment, on the other hand, is a negative modifier applied to skill rolls, so high numbers are bad.

Character Frames

Having read through (or at least glanced over) the preceding sections, you may want a shortcut in character generation, especially if this is your first time through. Character Frames are partially-generated characters, which you can flesh out and individualize much faster than building a character from scratch. Experienced players will probably want to build their characters from the ground up, as working from a Frame does restrict starting options somewhat. But for newer players, or those with little time, Character Frames make the generation process fast and easy.

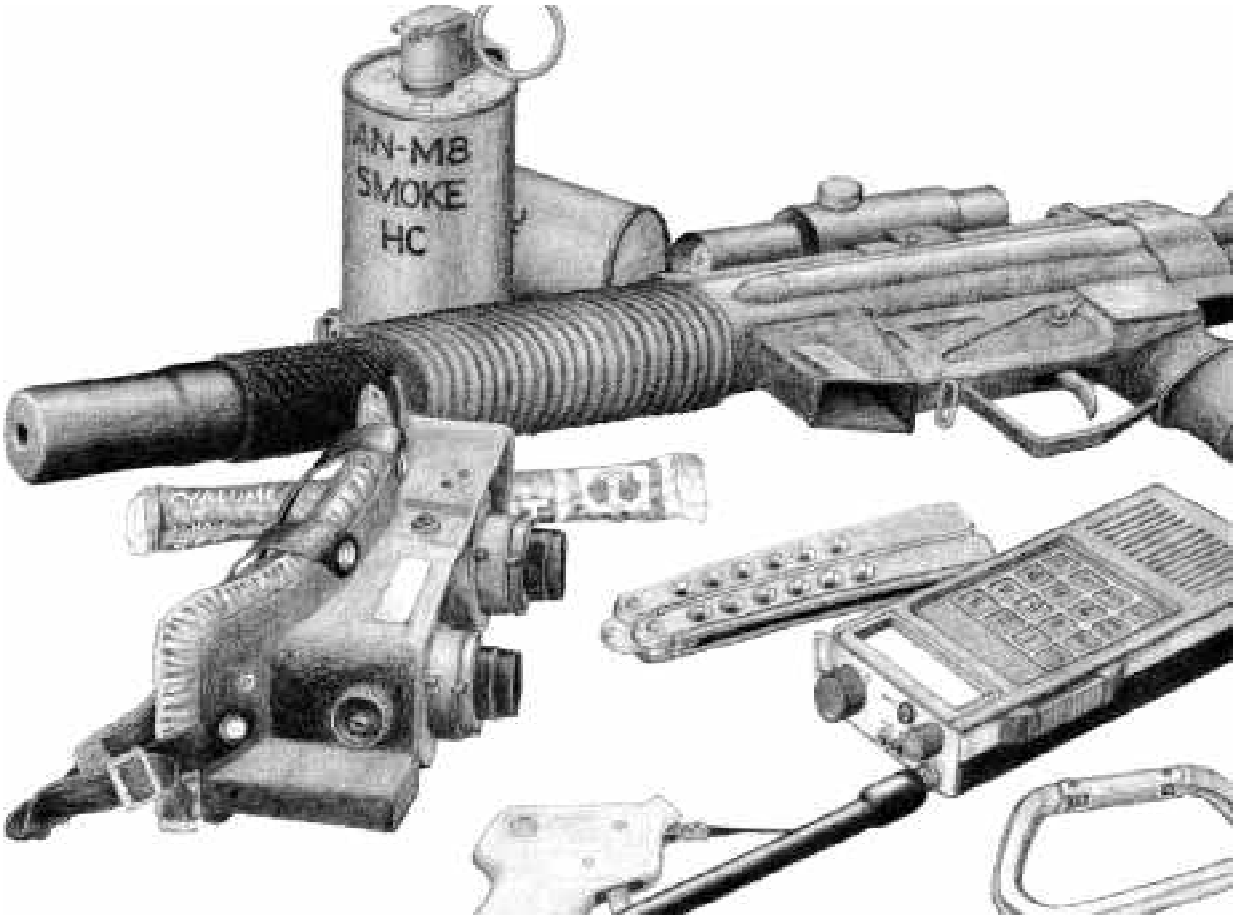
Each Character Frame is headed with a rough background and list of "critical skills"—general types of tasks the character will be good at. All of the Character Frames represent rookie BlackEagle operatives, and the skills listed on the Frame fulfill the requirements for education, Bottom Line skills, and BlackEagle Entry Training.

To create a character from a Frame, get yourself a blank character sheet and choose a Frame on which you can build a character that appeals to you. Then simply follow the listed steps, filling in your character sheet as you go. Generating a character from a Frame usually takes twenty or thirty minutes—about half the time as the normal process.

Weapons, Vehicles and Possessions

The remaining boxes on your character sheet are for recording information on your character's equipment, including game stats on weapons and vehicles. The use of these sections is optional—but filling them out ahead of time will prevent having to search through the book during play.

The Possessions box, on the back of your character sheet, simply provides space to list your character's equipment. Purchase gear for your character from the lists in the Appendix. If your character needs anything not covered there, feel free to make up reasonable prices, with the approval of your GM. Don't forget that your character may not want to spend all of his or her money on adventuring gear, so set aside some cash for mundane items, living expenses, and your character's outside interests. Write each item you do buy, its location, and any notes you may want to make in the Possessions box. Use the small check-boxes to indicate



which pieces of gear are carried at any given time. If you don't have enough space for all of your character's possessions, or simply don't like the format on the character sheet, feel free to keep track of possessions on a separate sheet of paper.

Once you've equipped your character, copy information on weapons and vehicles from the Weapons Table and Vehicles Table (at the end of the book) into the appropriate boxes on your character sheet. Most of the data in these boxes comes straight from the tables, with a few exceptions. In the Vehicles box, under the column marked "Skill," write in the required roll (subskill plus skill plus Talent Base) for the use of each vehicle, which should be listed to the left of the appropriate subskill. In other words, if you list your character's car, copy in the roll for his or her Automobile subskill (Drive skill). If you have no levels in the subskill, write in the roll for the parent skill. All other information in this box comes straight from the Vehicles Table, and will be explained in Chapter Two.

Do the same thing for your character's weapons, but with an additional step. Once you've written in the subskill roll in the "Skill" column, add it to the weapon's Inherent Accuracy (the next column to the right), and record the result in the shaded "Roll" column. Whenever your character uses a weapon, roll against that total, rather than the subskill listed in the Skills area. The Inherent Accuracy and remaining data in the Weapons box comes straight from the Weapons Table, and will be explained in Chapter Three.

Step 1: Develop Background Information

This character is female, 26 years old. She is 170cm tall, weighs 58kg, and is right handed. In addition to her law-enforcement experience, she has attended three years of college. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(3 dice) x 2 + 20
Sensibility	(2 dice) x 2 + 20
Agility	(1 die) x 2 + 20
Coordination	(2 dice) x 2 + 20
Constitution	(2 dice) x 2 + 25
Strength	(3 dice) x 2 + 15
Personality	(3 dice) x 2 + 20
Appearance	(3 dice) x 2 + 20
Bravado	(4 dice) x 2 + 20
Willpower	(2 dice) x 2 + 20

Character Frame: Ex-Cop

Critical Skills: Covert Entry, Personal Security

This character came to BlackEagle after five years or so on the inner-city beat. Time on the streets has put her face-to-face with the worst kinds of scum, but her brains, strength and most of all guts have served her well. Alternatively, this character's skills could have come from bodyguarding, private security, or even a few years with the mob.

Modifying this Frame

Gender: To create a male character from this frame, add five points to **Str** and **Bra** and subtract five from **Agl** and **Con** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Note that this character's age must account for several years of higher education and military service.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception = 55 if **Sen** is between 41 and 45
(this score includes 20 points from Perception skill)
Base Speed = 14 if **Agl** is between 31 and 35
(this score includes 2 points from Kata skill)
Recovery = 8 if **Con** is between 46 and 55
Endurance = 10 if **Con** is between 46 and 50
Dam. Rating = 5 if **Str** is between 41 and 55
Mass Factor = 1.2

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $2500

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Aim	40	Kata	20
Autofire	10	Jui-jitsu	10
Longarm	10	Literature	20
Smallarm	20	Math	45
Art	30	Medicine	20
Computer Ops	20	Emergency Med.	10
Civil Systems	10	Military Science	45
Diplomacy	20	Tactics	20
Drive	40	Miniature Mechanics	40
Automobile	20	Locksmithing	20
Electrics	30	Native Lang. Group	50
Electronics	15	Native Language	25
General Mechanics	15	Perception	40
Geography	20	Psychology	30
History	20	Swim	20
Journalism	20	Unarmed H-to-H	40
Research	10	Punch	20

Use this formula to determine remaining skill points:

(Int x 6) – 147

Record the skill levels listed above on your character sheet. Then use the remaining skill points to purchase additional skills of your choice. Remember that certain skills (Athletics/Bodybuilding, Athletics/Gymnastics, Kata, Perception, and Run) can affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is male, 23 years old. He is 185cm tall, weighs 65kg, and is right handed. He's fresh out of school, with a Bachelor's degree in Computer Science. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(4 dice) x 2 + 20
Sensibility	(3 dice) x 2 + 20
Agility	(2 dice) x 2 + 15
Coordination	(4 dice) x 2 + 20
Constitution	(1 die) x 2 + 20
Strength	(2 dice) x 2 + 20
Personality	(3 dice) x 2 + 20
Appearance	(2 dice) x 2 + 20
Bravado	(2 dice) x 2 + 25
Willpower	(2 dice) x 2 + 20

Character Frame: Hacker

Critical Skills: Computers, Surveillance

Not the physical type, what this character lacks in combat ability he more than makes up for in computer, electronics and surveillance skills. Fresh out of college when he joined BlackEagle, this character is a consummate tinkerer and a hell of a hacker.

Modifying this Frame

Gender: To create a female character from this frame, add five points to **Agl** and **Con** and subtract five from **Str** and **Bra** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Remeber that this character's age must account for five years of higher education.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception	= 41	if **Sen** is between 51 and 55
Base Speed	= 14	if **Agl** is between 41 and 50
Recovery	= 4	if **Con** is between 26 and 35
Endurance	= 7	if **Con** is between 31 and 35
Dam. Rating	= 5	if **Str** is between 41 and 55
Mass Factor	= 1.0	

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $7500

Once you have finished creating your character, purchase equipment and possessions with this money. If the total is negative, start with $500.

Step 5: Purchase Skills

Record the following skill levels on your character sheet:

Aim	30	Hiding	35
Autofire	10	Shadowing	15
Longarm	10	History	20
Smallarm	15	Journalism	20
Computer Ops	50	Research	10
Civil Systems	10	Literature	10
Networks	20	Math	45
Programming	5	Medicine	30
Security	25	Emergency Med.	10
Diplomacy	25	Military Science	20
Drive	35	Tactics	10
Automobile	15	Native Lang. Group	40
Electrics	50	Native Language	20
Electronics	25	Philosophy	30
Foreign Lang. Group	50	Photography	40
For. Language	25	Psychology	30
General Mechanics	15	Swim	40
Geography	20	Unarmed H-to-H	30
		Punch	10

Use this formula to determine remaining skill points:

(Int x 10) – 325

Record the skill levels listed above on your character sheet, choosing a foreign language. Purchase additional skills of your choice with these remaining skill points. Remember that certain skills affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is male, 27 years old. He is 190cm tall, weighs 105kg, and is right handed. In addition to his military experience, he has attended three years of college. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(3 dice) x 2 + 20
Sensibility	(1 die) x 2 + 20
Agility	(3 dice) x 2 + 15
Coordination	(2 dice) x 2 + 20
Constitution	(4 dice) x 2 + 20
Strength	(4 dice) x 2 + 20
Personality	(1 die) x 2 + 20
Appearance	(2 dice) x 2 + 20
Bravado	(1 die) x 2 + 25
Willpower	(4 dice) x 2 + 20

Character Frame: Grunt

Critical Skills: Combat Arms, Tactics

This character joined BlackEagle after several years of military service. No mere newbie with a crewcut, this man is a professional with a sharp tactical mind and well-honed combat skills. His background might include service in the U.S. or foreign armies, mercenary groups, or even corporations or embattled relief agencies working in the third world.

Modifying this Frame

Gender: To create a female character from this frame, add five points to **Agl** and **Con** and subtract five from **Str** and **Bra** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Note that this character's age must account for several years of higher education and military service.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception = 49 if **Sen** is between 31 and 35
(this score includes 20 points from Perception skill)
Base Speed = 14 if **Agl** is between 41 and 50
Recovery = 10 if **Con** is between 56 and 65
Endurance = 14 if **Con+13** is between 76 and 85
(add 13 to **Con** when determining Endurance, due to Run Skill)
Dam. Rating = 6 if **Str** is between 56 and 80
Mass Factor = 0.7

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $2500

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Aim	50	Math	30
Autofire	15	Medicine	30
Longarm	25	Emergency Med.	15
Smallarm	20	Military Science	50
Armed H-to-H	40	Hardware	15
Block/Parry	10	Tactics	25
Thrust	10	Native Lang. Group	50
Swing	20	Native Language	25
Diplomacy	20	Perception	40
Drive	40	Run	40
Automobile	20	Swim	30
General Mechanics	15	Unarmed H-to-H	45
Geography	20	Dodge	20
History	20	Punch	15
Literature	10		

Use this formula to determine remaining skill points:

(Int x 6) – 123

Record the skill levels listed above on your character sheet. Then use the remaining skill points to purchase additional skills of your choice. Remember that certain skills (Athletics/Bodybuilding, Athletics/Gymnastics, Kata, Perception, and Run) can affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is male, 27 years old. He is 187cm tall, weighs 75kg, and is right handed. He has taken one year of college courses. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(4 dice) x 2 + 20
Sensibility	(1 die) x 2 + 20
Agility	(2 dice) x 2 + 15
Coordination	(2 dice) x 2 + 20
Constitution	(2 dice) x 2 + 20
Strength	(2 dice) x 2 + 20
Personality	(4 dice) x 2 + 20
Appearance	(3 dice) x 2 + 20
Bravado	(4 dice) x 2 + 25
Willpower	(1 die) x 2 + 20

Character Frame: Gangster

Critical Skills: Covert Entry, Diplomacy

These days it's not easy for a street kid to make something of himself—or even to survive to his twentieth birthday. This character's wits kept him alive through his gang-banging days, then gave him a career that puts his street skills to good use. Alternatively, this character could have come out of any of the world's many refugee populations.

Modifying this Frame

Gender: To create a female character from this frame, add five points to **Agl** and **Con** and subtract five from **Str** and **Bra** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. This character's age must account for one year of college education.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception	= 29	if **Sen** is between 31 and 35
Base Speed	= 13	if **Agl** is between 36 and 40
Recovery	= 6	if **Con** is between 36 and 45
Endurance	= 9	if **Con** is between 41 and 45
Dam. Rating	= 5	if **Str** is between 41 and 55
Mass Factor	= 0.9	

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 + $2500

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Acting	50	General Mechanics	15
Con	25	Geography	20
Aim	30	History	20
Autofire	10	Literature	10
Longarm	10	Math	30
Smallarm	15	Medicine	10
Armed H-to-H	40	Military Science	20
Block/Parry	10	Tactics	10
Thrust	15	Miniature Mechanics	40
Swing	20	Locksmithing	20
Computer Ops	20	Native Lang. Group	50
Civil Systems	10	Native Language	25
Diplomacy	30	Swim	20
Drive	30	Unarmed H-to-H	30
Automobile	15	Dodge	10
Electrics	30	Punch	15
Electronics	15		

Use this formula to determine remaining skill points:

(Int x 2)

Record the skill levels listed above on your character sheet. Then use the remaining skill points to purchase additional skills of your choice. Remember that certain skills (Athletics/Bodybuilding, Athletics/Gymnastics, Kata, Perception, and Run) can affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is female, 25 years old. She is 180cm tall, weighs 62kg, and is right handed. She has a Bachelor's degree. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(4 dice) x 2 + 20
Sensibility	(4 dice) x 2 + 20
Agility	(1 die) x 2 + 20
Coordination	(2 dice) x 2 + 20
Constitution	(2 dice) x 2 + 25
Strength	(2 dice) x 2 + 15
Personality	(1 die) x 2 + 20
Appearance	(3 dice) x 2 + 20
Bravado	(3 dice) x 2 + 20
Willpower	(3 dice) x 2 + 20

Character Frame: Investigator

Critical Skills: Diplomacy, Investigations, Surveillance

With a few years' background in investigations, this character has a sharp mind, a silver tongue, and well-honed shadowing and surveillance skills. She's not the toughest or the strongest, but she can get by with a gun. Her background might include a few years work as a P.I., a federal or police investigator, or a corporate spook.

Modifying this Frame

Gender: To create a male character from this frame, add five points to **Str** and **Bra** and subtract five from **Agl** and **Con** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Remember, this character's age must account for four years of higher education as well as any professional experience in her background.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception = 62 if **Sen** is between 61 and 65
(this score includes 15 points from Perception skill)
Base Speed = 12 if **Agl** is between 31 and 35
Recovery = 8 if **Con** is between 46 and 55
Endurance = 10 if **Con** is between 46 and 50
Dam. Rating = 4 if **Str** is between 31 and 40
Mass Factor = 1.1

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $5000

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Aim	40	History	20
Autofire	10	Journalism	20
Longarm	10	Research	10
Smallarm	20	Law	15
Acting	20	Criminal	5
Con	10	Literature	20
Art	30	Math	45
Computer Ops	30	Medicine	10
Civil Systems	10	Military Science	20
Diplomacy	50	Tactics	10
Coersion	15	Native Lang. Group	50
Prying	25	Native Language	25
Drive	40	Perception	30
Automobile	20	Photography	40
Electrics	40	Police Science	40
Electronics	20	Forensics	20
General Mechanics	20	Psychology	30
Geography	20	Swim	20
Hiding	50	Unarmed H-to-H	30
Shadowing	25	Punch	10

Use this formula to determine remaining skill points:

(Int x 8) – 330

Record the skills above on your character sheet, then use the remaining skill points to purchase additional skills. Remember that some skills can affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is male, 24 years old. He is 175cm tall, weighs 68kg, and is right handed. He has attended three years of college in addition to his professional experience. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(2 dice) x 2 + 20
Sensibility	(4 dice) x 2 + 20
Agility	(4 dice) x 2 + 15
Coordination	(3 dice) x 2 + 20
Constitution	(3 dice) x 2 + 20
Strength	(2 dice) x 2 + 20
Personality	(2 dice) x 2 + 20
Appearance	(2 dice) x 2 + 20
Bravado	(1 die) x 2 + 25
Willpower	(2 dice) x 2 + 20

Character Frame: Sniper

Critical Skills: Combat Arms, Medic

One shot, one kill. This character came to BlackEagle after just a few years training as a military or police sniper. But don't be fooled by his lack of experience. This kid is on target at a hundred meters or a thousand. He's got the skills to get in and out undetected, too—a real asset in any BlackEagle cell.

Modifying this Frame

Gender: To create a female character from this frame, add five points to **Agl** and **Con** and subtract five from **Str** and **Bra** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Note that this character's age must account for several years of higher education as well as professional experience.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception = 57 if **Sen** is between 61 and 65
(this score includes 10 points from Perception skill)
Base Speed = 15 if **Agl** is between 51 and 60
Recovery = 8 if **Con** is between 46 and 55
Endurance = 11 if **Con** is between 51 and 55
Dam. Rating = 5 if **Str** is between 41 and 55
Mass Factor = 1.0

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $2500

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Aim	55	History	20
Autofire	10	Literature	10
Longarm	27	Math	30
Smallarm	15	Medicine	40
Climb	40	Emergency Med.	20
Computer Ops	20	Military Science	20
Civil Systems	10	Tactics	10
Diplomacy	20	Native Lang. Group	50
Drive	30	Native Language	25
Automobile	15	Perception	20
General Mechanics	15	Swim	20
Geography	20	Tracking	30
Hiding	50	Unarmed H-to-H	30
Concealment	10	Punch	10
Creeping	25		

Use this formula to determine remaining skill points:

(Int x 6) – 74

Record the skill levels listed above on your character sheet. Then use the remaining skill points to purchase additional skills of your choice. Remember that certain skills (Athletics/Bodybuilding, Athletics/Gymnastics, Kata, Perception, and Run) can affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is male, 28 years old. He is 183cm tall, weighs 66kg, and is right handed. He has attended two years of college. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(3 dice) x 2 + 20
Sensibility	(3 dice) x 2 + 20
Agility	(4 dice) x 2 + 15
Coordination	(3 dice) x 2 + 20
Constitution	(2 dice) x 2 + 20
Strength	(1 die) x 2 + 20
Personality	(2 dice) x 2 + 20
Appearance	(2 dice) x 2 + 20
Bravado	(2 dice) x 2 + 25
Willpower	(3 dice) x 2 + 20

Character Frame: Pilot

Critical Skills: Language, Pilot, Vehicles

After almost ten years working for mercenaries, relief agencies, smugglers, poachers, and corporate covert teams, this is a man who's been everywhere and seen everything. There's nothing he can't drive or fly or fix, and his fluency in three languages gets him by just about anywhere.

Modifying this Frame

Gender: To create a female character from this frame, add five points to **Agl** and **Con** and subtract five from **Str** and **Bra** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Note that this character's age must account for two years of higher education.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception = 51 if **Sen** is between 51 and 55
(this score includes 10 points from Perception skill)
Base Speed = 16 if **Agl** is between 61 and 65
Recovery = 6 if **Con** is between 36 and 45
Endurance = 9 if **Con** is between 41 and 45
Dam. Rating = 4 if **Str** is between 31 and 40
Mass Factor = 1.0

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Aim	30	Math	30
Autofire	10	Medicine	10
Longarm	10	Military Science	20
Smallarm	15	Tactics	10
Diplomacy	20	Native Lang. Group	50
Drive	50	Native Language	25
Automobile	25	Navigation	40
Powerboat	10	Air	15
Foreign Lang. Group	40	Perception	20
For. Language	20	Pilot	50
For. Language	10	Helicopter	20
General Mechanics	40	IFR	20
IC Engines	20	SE airplane	25
Geography	20	Swim	20
History	20	Unarmed H-to-H	30
Literature	10	Punch	10

Use this formula to determine remaining skill points:

(Int x 4) – 40

Record the skill levels listed above on your character sheet, choosing a foreign language group and two foreign languages. Then use the remaining skill points to purchase additional skills of your choice. Remember that certain skills (Athletics/Bodybuilding, Athletics/Gymnastics, Kata, Perception, and Run) can affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is female, 29 years old. She is 170cm tall, weighs 60kg, and is right handed. In addition to her military experience, she has a four-year college degree. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(2 dice) x 2 + 20
Sensibility	(4 dice) x 2 + 20
Agility	(3 dice) x 2 + 23
Coordination	(1 die) x 2 + 20
Constitution	(3 dice) x 2 + 25
Strength	(3 dice) x 2 + 20
Personality	(2 dice) x 2 + 20
Appearance	(2 dice) x 2 + 20
Bravado	(2 dice) x 2 + 20
Willpower	(3 dice) x 2 + 20

(the **Agl** and **Str** formulas include points from Athletics skill)

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception	= 47	if **Sen** is between 61 and 65
Base Speed	= 15	if **Agl** is between 51 and 60
Recovery	= 10	if **Con** is between 56 and 65
Endurance	= 12	if **Con** is between 56 and 65
Dam. Rating	= 5	if **Str** is between 41 and 55
Mass Factor	= 1.1	

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $5000

Character Frame: SpOps

Critical Skills: Combat Arms, Demo

Don't let this character's diminutive size fool you. After eight years of special operations experience, she's someone you want on your side. A skilled fighter and demolitions expert, no-one can keep up with her in the woods. Her background might include service with U.S. or foreign armies, mercenary organizations, or insurgent groups.

Modifying this Frame

Gender: To create a male character from this frame, add five points to **Str** and **Bra** and subtract five from **Agl** and **Con** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Note that this character's age must account for four years of higher education as well as military service.

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Anthropology	30
Aim	45
Autofire	15
Longarm	20
Smallarm	15
Armed H-to-H	20
Thrust	10
Swing	10
Athletics	30
Bodybuilding	15
Gymnastics	10
Diplomacy	20
Drive	30
Automobile	15
Electrics	30
Equatorial	20
Swim	20
Tracking	35
Unarmed H-to-H	43
Punch	10
Electronics	10
Engineering	40
Chemical	20
Civil	10
General Mechanics	15
Geography	20
History	20
Journalism	20
Research	10
Literature	20
Math	45
Medicine	20
Emergency Med.	10
Military Science	35
Hardware	10
Tactics	10
Music	30
Native Lang. Group	50
Native Language	25
Survival	40

Use this formula to determine remaining skill points:

(Int x 8) – 180

Step 1: Develop Background Information

This character is male, 24 years old. He is 175cm tall, weighs 67kg, and is right handed. He has a four-year college degree. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(3 dice) x 2 + 20
Sensibility	(2 dice) x 2 + 20
Agility	(4 dice) x 2 + 15
Coordination	(4 dice) x 2 + 20
Constitution	(2 dice) x 2 + 20
Strength	(3 dice) x 2 + 20
Personality	(1 die) x 2 + 20
Appearance	(2 dice) x 2 + 20
Bravado	(1 die) x 2 + 25
Willpower	(3 dice) x 2 + 20

Character Frame: Medic

Critical Skills: Hand to Hand, Medic

A "fresh-out," this character joined BlackEagle straight out of college. His medical qualifications and excellent hand-to-hand skills make up for his lack of experience, however—this character could be a life-saving member of any BlackEagle cell, in more ways than one.

Modifying this Frame

Gender: To create a female character from this frame, add five points to **Agl** and **Con** and subtract five from **Str** and **Bra** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Remeber that this character's age must account for four years of college as well as any professional experience he may have had.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception = 35 if **Sen** is between 41 and 45
Base Speed = 19 if **Agl** is between 51 and 60
(this score includes 4 points from Kata skill)
Recovery = 6 if **Con** is between 36 and 45
Endurance = 9 if **Con** is between 41 and 45
Dam. Rating = 5 if **Str** is between 41 and 55
Mass Factor = 1.0

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $5000

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Aim	30	Kata	40
Autofire	10	Karate	20
Longarm	10	Literature	20
Smallarm	15	Math	45
Armed H-to-H	30	Medicine	55
Block/Parry	10	Emergency Med.	25
Swing	15	Military Science	20
Biology	30	Tactics	10
Computer Ops	25	Native Lang. Group	50
Civil Systems	10	Native Language	25
Diplomacy	20	Philosophy	30
Drive	30	Pharmacy	30
Automobile	15	Surgery	40
General Mechanics	15	Swim	20
Geography	20	Unarmed H-to-H	50
History	20	Block	20
Journalism	20	Dodge	10
Research	10	Kick	20
		Punch	25

Use this formula to determine remaining skill points:

(Int x 8) – 243

Record the skill levels listed above on your character sheet, then use the remaining points to purchase additional skills. Remember that some skills can affect Attributes or Secondary Attributes.

Step 1: Develop Background Information

This character is male, 30 years old. He is 185cm tall, weighs 70kg, and is right handed. He has a Bachelor's degree. Copy this information onto a blank character sheet, filling in the remaining background information according to your character concept.

Step 2: Roll Attributes

Roll your character's Attributes according to the following formulas. Record the resulting levels on your character sheet.

Intelligence	(2 dice) x 2 + 20
Sensibility	(3 dice) x 2 + 20
Agility	(2 dice) x 2 + 15
Coordination	(2 dice) x 2 + 20
Constitution	(2 dice) x 2 + 20
Strength	(2 dice) x 2 + 20
Personality	(3 dice) x 2 + 20
Appearance	(3 dice) x 2 + 20
Bravado	(4 dice) x 2 + 25
Willpower	(2 dice) x 2 + 20

Character Frame: Spook

Critical Skills: Surveillance, Diplomacy, Language

They say spies never really retire. Truth is, the best go to work for BlackEagle. Almost a decade of service with the CIA, KGB, or one of the larger multinationals has honed this character's surveillance and diplomatic skills. Total fluency in a second language has been an added bonus.

Modifying this Frame

Gender: To create a female character from this frame, add five points to **Agl** and **Con** and subtract five from **Str** and **Bra** before determining Secondary Attributes and Talent Bases. Check the Weight and Height Table if you change either, and don't forget to alter the character's Mass Factor accordingly.

Education: For every additional year of higher education you give this character, increase skill points by **Int** x 2 and subtract $2500 from starting cash. Do the opposite if you reduce the education level.

Age: Increase skill points by fifteen for every year you add to the character's age. But for every two years over the age of thirty, subtract one point from **Con** and **Agl**. Subtract fifteen skill points per year if you make the character younger. Note that this character's age must account for four years of higher education as well as his professional experience.

Step 3: Determine Secondary Attributes and Talent Bases

Look up these values on the Secondary Attributes Table if they do not fall into the ranges below. Then compute your character's Talent Bases from the formulas listed.

Perception = 51 if **Sen** is between 51 and 55
(this score includes 10 points from Perception skill)
Base Speed = 13 if **Agl** is between 36 and 40
Recovery = 6 if **Con** is between 36 and 45
Endurance = 9 if **Con** is between 41 and 45
Dam. Rating = 5 if **Str** is between 41 and 55
Mass Factor = 1.0

Academic	(**Int** + **Wil**) / 20
Creative	(**Sen** + **Cor**) / 20
Dom/Tech	(**Sen** + **Cor** + **Con**) / 30
Medical	(**Int** + **Sen** + **Cor**) / 30
Natural	(**Sen**) / 10
Physical	(**Agl** + **Str** + **Con** + **Wil**) / 40
Reflexive	(**Agl** + **Sen**) / 20
Scientific	(**Int**) / 10
Social	(**Per** + **Bra**) / 20

Step 4: Determine Starting Cash

Use this formula to determine starting cash:

(3 dice) x $1000 – $5000

Once you have finished creating your character, purchase equipment and possessions with this money.

Step 5: Purchase Skills

This character has the following skills:

Aim	30	Hiding	35
Autofire	10	Shadowing	15
Longarm	10	History	20
Smallarm	15	Journalism	20
Anthropology	30	Research	10
Computer Ops	35	Literature	20
Civil Systems	10	Math	45
Security	5	Medicine	10
Diplomacy	45	Military Science	20
Lying	20	Tactics	10
Prying	20	Music	30
Drive	30	Native Lang. Group	50
Automobile	15	Native Language	25
Electrics	40	Perception	20
Electronics	20	Photography	40
Foreign Lang. Group	50	Swim	20
For. Language	25	Unarmed H-to-H	35
General Mechanics	15	Punch	15
Geography	20		

Use this formula to determine remaining skill points:

(Int x 8) – 175

Record these skills on your character sheet, choosing a foreign language and group. Then use the remaining points to purchase additional skills. Remember that certain skills can affect Attributes or Secondary Attributes.

Chapter Two
Game System

In *Millennium's End*, as in all roleplaying games, the action and events take place almost entirely in the imaginations of the players and GMs. Unlike competitive games, roleplaying game rules are not intended to restrict the options of the players, or to force their actions into the narrow constraints of the game's structure. Instead, the rules of any good roleplaying game provide a framework for play and help the players build and guide their characters. Like the plot of a well-written novel, events in a roleplaying game must unfold in a way that makes sense to the players. The characters, like those of fiction, must have believable abilities and limitations. That is the structure that roleplaying game rules impose—with, ideally, minimal restriction on the players' choice of action. This structure gives the characters and game events credibility, which allows the suspension of disbelief necessary for roleplaying games or any form of fiction.

Millennium's End rules can be broken down into a number of systems. The most basic and universal is the skill system, which will be covered just below. While the skill system resolves most common conflicts in a quick and elegant manner, a few specific issues, such as the use of vehicles, require larger systems of which skill rolls only are a part. Combat is without a doubt the most difficult and complex issue—and one of life and death importance, as far as player characters are concerned—so it's handled in its own section (Chapter Three). The remainder of the rules of play are covered here.

The Skill System

Skills represent the things a character can do and how well he or she can do them. Every skill covers a broad range of possible tasks, and the full list of skills allows any character to attempt almost any conceivable action. A character has a defined level in every skill, which determines his or her percent chance of success when the skill is used. Subskills—specializations within broader skills—increase that chance of success, but they apply to a narrower set of tasks and can't always be used.

Choosing to Make a Roll

The skills available to *Millennium's End* characters are many, and each covers a broad range of possible actions. In play, when a player states that his or her character will attempt an action of some sort, the GM must decide if a skill roll is appropriate. **Skill rolls are necessary whenever an action calls for an appreciable degree of knowledge or practice.** Obviously, such basic acts as running, opening a door, or talking to a friend generally don't require a skill roll. But programming a computer, climbing a cliff, and firing a gun at a target do. Furthermore, mundane acts such as those just mentioned may require a roll if they are used in an unusual or challenging way. For instance, slamming a door into an assailant or talking a friend into doing something dangerous might require rolls. If a skill roll is called for, decide which skill and (possibly) subskill apply, based on the skill descriptions which follow on the next few pages. It may also be a good idea to modify the roll to account for conditions or the difficulty of the task. Modifiers are covered below.

Any time a skill roll is made, the character may gain experience in the skill used, which contributes to an increase in his or her skill level. Experience and advancement are covered after skill descriptions.

Subskills

Skills are very broad in application, and each covers many possible types of tasks. Whenever a character develops a proficiency in a specific area of a skill, he or she develops a subskill. Subskills cover much more limited ranges of tasks than do normal skills. However, **whenever a task falls under a subskill, add the subskill's level to that of its parent skill, and use the total to determine the necessary roll.** This will increase the character's chance of succeeding, but the player may only use the subskill for those tasks that it covers directly—other tasks under the parent skill are made against the skill level only, or against another subskill. Never require rolls against a subskill level alone—subskills are always used with their parent skills.

Rolls and Modifiers

Skill rolls are made with percentile dice, with any result equal to or less than the required roll indicating success. When a character attempts a skill roll under ideal circumstances, and the task is of average difficulty, **the required roll equals the character's skill level plus the appropriate Talent Base, plus any applicable subskill.** If the conditions are not ideal, or if the task is especially difficult or easy, modify the roll. Modifiers are numbers that are added to the skill level to make the roll easier, or subtracted from it to make it harder. When the task is easier than an average task covered by the skill, assign a positive modifier to the skill level. If it is more difficult than average, or if bad conditions make it more difficult, apply a negative modifier.

A modifier of +30 for easy tasks and -30 for more difficult ones is a good, general-purpose modifier. You may, of course, set the level of the modifier arbitrarily, based on how difficult or easy you feel the task is. Some skills have specific modifiers for specific conditions—consult the skill descriptions if you think that might be the case.

It's Laenna's first assignment, and her cell is tracking down a gang that's been trafficking stolen weapons to Cuban smugglers. Laenna has snuck into a seedy warehouse, and is busy rooting through crates when a longshoreman surprises her. Struggling for composure, Laenna states that she is a Customs Service official on a surprise inspection, and she hastily flashes a video club membership card as I.D. The GM tells Roselyn to make a Acting skill/ Con subskill roll. Laenna's Acting skill level is 20, and her Con subskill is 10. With her Creative Skills Talent Base of 4, her required roll is 34 (20 + 10 + 4 = 34). The GM doesn't think her I.D. is very convincing, but given the dim lighting in the warehouse he only applies a modifier of -10. Roselyn rolls the dice, getting a 22 and beating the modified roll by just two points.

The longshoreman buys her story, and dutifully leaves her to her business. Because the roll was so close, however, he might just reconsider after a few moments, especially if he sees Laenna hanging around much longer.

Sometimes the difficulty of a task will be based on how well a previous roll was made. For example, the chance for one character to notice a concealed object depends in part on how well it was hidden by another. In such cases, modify the second roll by the result of the first. In other words, if the hider made his or her roll by twenty-five points, give the seeker a -25 modifier.

Impairments

Characters that have been wounded may be impaired (Impairment is explained in Chapter Three). When that is the case, **treat impairment levels as negative modifiers to appropriate actions.** Most impairments affect only certain areas of the body, and hence only some types of actions. The location of the wound offers some guideline (see *Impairment Effect*, again in Chapter Three), but in many cases common sense must determine whether an impairment affects a given task. For instance, a leg impairment obviously affects any attempt to run (an action which requires two legs). But how it affects a character's attempt to drive a car depends on many things, like whether the car has an automatic or manual transmission and which leg is impaired.

Performance Time

Every task has a base performance time, found with the skill descriptions below. A skill's Performance Time is the amount of time required for the character to perform a task, or the amount of time between skill rolls for a continuous or long-term task. Because most skills cover a variety of tasks, though, the performance time may vary widely. Additionally, performance time may not apply to knowledge skills. In any event, use the performance time listed only as a broad guideline.

Interpreting Rolls

Often, when a player makes a skill roll for his or her character, a simple success or failure result is sufficient. Equally often, however, it's good to know just how successful a roll was, or how bad was the failure. Some skills, especially combat skills, have specific guidelines for interpreting results (see the skill descriptions, or Chapter Three for combat skill rolls). In general, however, roll interpretations are left to the GM.

If an interpretation is called for, base it on how much the roll was made or missed by. In general, a result made by thirty or so indicates a solid success, worthy perhaps of some small reward. Maybe the character was able to carry out the task in less time than normally needed, or to do a particularly good job. Conversely, a roll missed by thirty or more is a concrete failure, indicating that perhaps the character couldn't succeed even after spending twice the normal time on the task.

Extremely good or bad rolls warrant extra attention, especially 01 and 00 results, the best and worst possible. It's often fun to throw in some seemingly unrelated bonus—something that reflects the luck of the roll. A Diplomacy roll result of 01, made when questioning an informant, may reveal some clue that the questioner hadn't even considered, let alone been fishing for. On the other hand, a character rolling a 00 in a car chase

might have struck a pothole and blown a tire. These types of results throw a random element into play that keeps things exciting without becoming too big a factor in play.

Using Attributes

Some situations call for rolls against Attributes. In general, **Attribute rolls are used only when the issue in question is not specific enough to require a skill roll.** For example, a character pinned under a fallen log could make a roll to try to remove it. Obviously, there is no "Lift Log" skill, so an Attribute, in this case Strength, should be rolled against. Use the Attribute descriptions in Chapter One as guidelines for the types of situations calling for Attribute rolls. Attribute rolls may be modified in exactly the same way as skills (see above), for the level of difficulty and any impairment suffered by the character.

Skill Descriptions

Skills are organized into Skill Groups which correspond to the Talent Bases. On the next page is a list of skills, followed by their descriptions. Skills are defined under the ambiguous and sometimes overlapping headings of "knowledge" and "action" skills. Knowledge skills are those whose rolls generally allow a character to know something. When a knowledge skill is failed, the character will not have the knowledge needed. If it is badly failed (by thirty or so points), the GM may decide to feed the character some false information. Action skills are skills whose rolls generally allow a character to do something. The results of failed action skills vary from skill to skill and with the magnitude of the failure, as laid out in the skill descriptions. Many skills represent a combination of both knowledge and action.

Every skill listed below has a brief description that tells what knowledge and capabilities the skill imparts. Listed alongside is the performance time, or the average time required to perform the skill. Performance time is generally instantaneous for most knowledge skills and some action skills, and it may vary with others. As stated above, under roll interpretation, a borderline roll may be interpreted by the GM to mean that an unusual amount of time was required to complete the task—in the case of knowledge skills, the character had to think for a while before coming up with the solution.

Complete Skill List

Academic Skills

Anthropology
- Archaeology
- Specific cultures

Business
- Economics
- Finance
- Management

Geography
- Specific regions

Geology
- Paleontology

History
- Ancient
- European
- Modern
- Specific periods/cultures

Journalism
- Research

Language Groups
- Specific languages

Law
- Civil/Business
- Criminal
- International
- Specific foreign law

Literature
- Specific canon

Philosophy
- Eastern
- Western

Creative Skills

Acting
- Con

Art
- Drafting
- Drawing
- Painting
- Sculpture

Dance

Make-up
- Disguise
- Theatrical

Music
- Keyboard
- Percussion
- Singing
- Strings
- Wind

Photography
- Film
- Still

Domestic/ Technical Skills

Carpentry

Electrics
- Electronics
- Wiring

General Mechanics
- Internal
  - Combustion Engines
- Jets
- Mechanical Systems

Metalworking
- Milling

Miniature Mechanics
- Gunsmithing
- Locksmithing

Medical Skills

Dentistry

Medicine
- Emergency Medicine
- General Practice
- Veterinary

Pharmacy

Surgery

Natural Skills

Farming

Fishing
- Freshwater
- Sea

Foraging
- Arctic
- Equatorial
- Temperate

Hiding
- Concealment
- Creeping
- Shadowing

Meteorology

Navigation
- Air
- Land
- Water

Perception

Survival
- Arctic
- Equatorial
- Temperate

Tracking
- Hunting Arctic
- Hunting Equatorial
- Hunting Temperate

Physical Skills

Armed Hand-to-Hand
- Block/Parry
- Swing
- Thrust

Athletics
- Bodybuilding
- Gymnastics

Climb
- Mountaineering

Jump

Kata
- Aikido
- Jui-jitsu
- Karate

Run

Swim
- Scuba

Unarmed Hand-to-Hand
- Block
- Combat Throw
- Dodge
- Grapple
- Kick
- Punch

Reflexive Skills

Aim
- Autofire
- Bow
- Longarm
- Rocket
- Slingshot
- Smallarm
- Throw

Drive
- Automobile
- Motorcycle
- Powerboat
- Semi-truck
- Tracked Vehicle

Parachute

Pilot
- Glider
- Helicopter
- IFR
- M.E. Prop.
- M.E. Jet
- S.E. Prop.
- S.E. Jet
- VTOL

Ride

Ski

Scientific Skills

Biology
- Botany
- Microbiology
- Zoology

Computer Operations
- Civil Systems
- Networks
- Programming
- Security

Engineering
- Aeronautical
- Chemical
- Civil
- Electrical
- Mechanical
- Nuclear

Math
- Algebra
- Calculus
- Geometry

Military Science
- Hardware
- Strategy
- Tactics

Police Science
- Forensics

Social Skills

Animal Training
- Specific animals

Diplomacy
- Lying
- Prying
- Coercion

Gambling
- Betting
- Card Games
- Dice Games
- Table Games

Hypnosis

Psychology
- Deviant
- Psychoanalysis

Academic Skills

Academic skills are knowledge skills that cover non-scientific subjects of scholarly nature. Performance time is generally instantaneous—a character either knows something or doesn't. A failed roll means that the character has no knowledge pertaining to the question or situation at hand, or (if the roll is a near miss) only partial information.

ANTHROPOLOGY

Anthropology is the study of cultures and how they work. The skill gives a character knowledge and understanding of the customs of the world's culture groups, and allows him or her to draw basic conclusions about specific cultures.

Performance time: N/A
Subskills: Archaeology, Any specific culture

Any specific culture, modern or ancient, may be studied as an Anthropology subskill. If a character studies a specific culture, a successful roll will impart detailed information on questions about that culture.

Archaeology —Archaeology is the study of ancient cultures through the relics left behind. A character with this subskill understands and may practice the use of archaeological techniques, which not only cover the unearthing of ancient relics, but also the interpretation of their use and function in a society. This subskill gives no special knowledge of any particular ancient cultures.

BUSINESS

This skill provides a character with a knowledge of the workings of businesses and business dealings. A business roll can be used in working out contracts, setting up a company (such as a private investigations firm), or analyzing a corporation's operations, financial records, or licenses.

Performance time: N/A
Subskills: Economics, Finance, Management

Economics —This subskill covers an understanding of the workings of economic systems. Because it allows the prediction of future economic trends, it is a useful skill for the investor.

Finance —The finance subskill allows a character to organize the finances of a business. This includes an understanding of such topics as taxes, loans and corporate buyouts and mergers.

Management —This subskill allows a character to understand the principles of business management, and to use these principles to effectively utilize the business's personnel and resources.

GEOGRAPHY

This is the study of the world and its populations. Characters with this skill have a broad and basic knowledge of what goes on in the world, where, and why. A successful roll may yield information concerning the location of a country, area, or major city, the disposition of one nation towards another, the major exports of a region, or recent news-making events that have occurred in an area.

Performance time: N/A
Subskills: Any major region

GEOLOGY

This skill covers the knowledge of the earth and its formation. Characters with this skill understand the forces that shaped the earth and that continue to work within it, as well as the structure of geological formations from individual rocks to continents.

Paleontology —This is the study of fossils and of early life on earth. Characters with this subskill can utilize techniques for unearthing fossils, and can identify various types of fossils.

Performance time: N/A
Subskills: Paleontology

HISTORY

History is the study of past events and people, and how they affected one another and the present.

Any period and culture not specified below may be adopted as a subskill for History.

Ancient —This is the study of ancient history, up to about the time of Christ.

European —This is the study of the history of western civilization from about the time of Christ to the period of revolution (late eighteenth century)

Modern —This is the study of western history from the beginning of the nineteenth century until the present.

Performance time: N/A
Subskills: Ancient history
European history
Modern history
Any specific period and/or culture

JOURNALISM

Journalism skill combines writing with investigation and research techniques. Although characters with this skill are capable of performing interviews and researching pertinent information, the focus of this skill is on effective expository writing. This skill can be used to put together essays, articles, and reports. The time required varies with the task and the subject matter, from 500 or more words an hour for simple or familiar material to 500 words or less a day for unfamiliar, difficult material.

Research—Finding information is what this subskill covers. Characters with this subskill know how to use information sources—newspapers, libraries, municipal records, universities, data banks, and archives, to name a few—to find information they want.

Performance time: varies
Subskills: Research

LANGUAGES

Languages are not handled in exactly the same manner as other skills. Each of the major language groups is an individual skill, with the languages within the groups being subskills. The language groups and their subskills are listed on the Language Table below.

Any character who has a language skill/subskill total of seventy-five or more is considered conversationally fluent and should not be asked to make a language roll unless particularly technical information is discussed, or one of the conversants is speaking in a dialect or strong accent. Non-fluent characters should make rolls for every five minutes of conversation. Failure indicates only the most basic of ideas are communicated. Bad failure may indicate that nothing was communicated, or perhaps that the information was interpreted incorrectly.

A character's native language group and native language are included in the education skill packages at a level of 50/25.

Performance time: N/A
Subskills: see Language Table

Language Table

Language Groups and Languages

Anglo Language Group	English
Arabian Language Group	Arabic Persian Read/Write Arabian
Celtic Language Group	Gaelic Welsh Read/Write Celtic
Germanic Language Group	Afrikaans Danish Dutch German Swedish Yiddish
Greek Language Group	Greek Read/Write Greek
Japanese Language Group	Japanese Read/Write Japanese
Korean Language Group	Korean Read/Write Korean
Mandarin Chinese Lang. Grp.	Mandarin Chinese Read/Write Mandarin Chinese
Romance Language Group	French Italian Latin Portuguese Spanish
Slavic Language Group	Russian Polish Czech Read/Write Cyrillic

LAW

This skill represents a knowledge of legal systems, processes, and precedent, and a character with this skill has an understanding of the law and its applications. This skill does not give the character the right to practice law (except in his own defence) unless he or she is a member of the appropriate Bar Associations. A practicing lawyer should specialize in one or more of the subskills described below.

Bar membership is gained by passing the bar examination—a task requiring three successive successful law rolls, each with a -40 modifier. Two of those rolls may be made with the character's specialty subskill, but one must be made against only the Law skill.

Performance time: N/A
Subskills: Civil/business
Criminal
International

Civil/business —This subskill covers civil law (divorces, suits, executions of wills and deeds, etc.), and the legalities of running a business (taxes, licenses, incorporation, and so on).

Criminal —The most visible type of courtroom law, this involves the prosecution and defense of accused criminals.

International —The international law subskill covers a knowledge of the laws between nations, such as immigration and trade policies, maritime law, extradition treaties and the legal workings of international bodies such as the U.N. and World Court. This subskill only gives a general knowledge of the internal laws of foreign nations.

A character may also make the knowledge of a foreign country's internal laws and legal practices a subskill.

Any foreign country's Civil/business or Criminal law

LITERATURE

This is the study of the art of writing. Characters with this skill have a knowledge and appreciation of literature, but are not necessarily talented writers.

Performance time: N/A
Subskills: Any specific national or cultural canon

PHILOSOPHY

Characters with this skill are familiar with the tenets of the religions and philosophies of the world.

Eastern —This subskill allows a character to be especially familiar with the philosophies of the far east, including Hinduism, Buddhism, Shinto and Taoism, to name a few.

Western —This subskill allows a character to be familiar with western religions, such as Judaism, Christianity and Islam, and the thoughts of classical and western philosophers, such as Plato and Aristotle, Nietzsche and Descartes.

Performance time: N/A
Subskills: Eastern
Western

Creative skills

Creative skills are generally action skills, measuring a character's competence in creative activities such as art and poetry. Generally, one roll should be made per project or performance, unless the project is particularly long, or is broken into distinctive parts. Failures generally indicate that the result is unimpressive.

Acting

This is the ability of a character to convincingly assume the role of someone other than himself. This skill may also cover some very basic knowledge of theatrical or cinematic production. A failed roll indicates that the character's performance is unbelievable or unconvincing.

Performance time: varies
Subskills: Con

Con —This subskill covers a character's ability to act as a confidence artist, or con man. It is generally used in a deceitful or treacherous way, to gain somebody's trust and then exploit it. This may be a long-term process, such as a real-estate or stock scam, or it may be a quick fast-talking out of a sticky situation.

Art

This is the ability to communicate visually. Characters with this skill may be technically or aesthetically oriented, or both, and may choose to work in two or three dimensions in any of a variety of media.

Performance time: varies
Subskills: Drafting
Drawing
Painting
Sculpture

Drafting —This is the ability to produce accurate, correct technical drawings.

Drawing —This subskill covers the ability to draw. Media include pastel, pencil, ink and charcoal, to name just a few.

Painting —This subskill covers the ability to paint, be it in oils, acrylic, or watercolor, for example.

Sculpture —This is the ability to create three-dimensional art. Media include but are not limited to stone, clay, wood, bronze and steel.

Dance

This skill covers a character's ability for artistic expression through the use of his or her body.

Performance time: varies
Subskills: none

Make-up

Enhancing or changing an individual's appearance is the function of this skill. Materials used may include cosmetics, masks, and costuming. Failed rolls indicate that the changes or enhancements are not convincing, and that a viewer is likely to recognize that make-up was applied. However, if the failure is not extreme, a character's identity might not be discernible even if it is obvious that he or she is made up (assuming the character was attempting to be unrecognizable). The time required depends upon the complexity of the change in appearance and the scrutiny it is expected to withstand.

Disguise —This is an attempt to change a person's appearance in such a way that he or she will not be recognized, or will be mistaken for somebody else, when in public or interacting with other people. A successful roll indicates that any person who has no reason to be suspicious will be completely fooled. Anyone who has **Performance time:** varies
Subskills: Disguise
Theatrical

reason to be suspicious, or is very familiar with the character, may make a Perception roll with a negative modifier equal to the amount by which the Disguise roll was made. It's up to the GM to decide whether a failed roll indicates that others can determine the identity of the disguised character, or just that his or her appearance is a disguise.

The GM should determine how to modify a disguise roll based on the appearance changes and the scrutiny which the disguise will have to withstand. Obviously, if a character attempts to disguise him- or herself as another person, and then meets with that person's friends, stiff negative modifiers are in order. On the other hand, if the character needs to convince observers from hundreds of feet off, the roll should have positive modifiers.

Theatrical —Theatrical make-up differs from disguise in that it tends to overstate features, and is not at all convincing when seen close up.

MUSIC

This skill covers the composition and performance of music.

Performance time: varies
Subskills: Keyboard, Percussion, Singing, String, Wind

Keyboard —This covers the use of keyboard instruments such as pianos, organs, and synthesizers.

Percussion —This covers the use of percussion instruments, such as drums.

Singing —This subskill covers a character's ability to sing.

String —This subskill applies to the use of stringed instruments, such as guitars.

Wind —This subskill covers the use of wind instruments like the flute and the recorder.

PHOTOGRAPHY

The photography skill allows a character to take accurate, clear, and even compelling photographs. It applies equally to a character's ability to use photography as an artistic medium and to produce distinct visual records. Successful rolls indicate that photographs clearly show the image (assuming that was the intent). Failed rolls indicate that the image is difficult to interpret, or simply not there. Performance time varies depending on what is being photographed and how. If the photographer knows what he or she wants to photograph, and is prepared, performance time can be nearly instantaneous.

Performance time: varies
Subskills: Film, Still

Still —This subskill applies to the use of still cameras.

Film —This applies to the use of movie and videotape cameras.

Domestic/Technical Skills

These are skills covering a wide range of tasks, particularly blue-collar tasks requiring a person to work with his hands or body. Many of these skills require the use of tools. If tools are lacking, the GM must determine whether a task can be completed, wholly or partially. Impromptu tools may suffice, but may require that the skill roll be made with a negative modifier.

Carpentry

This skill covers a character's woodworking ability. It includes the repair, assembly and construction of wooden furniture, cabinetry, and structures, but covers only basic woodcarving, which is generally an Art/Sculpture task.

Performance time: varies
Subskills: none

Electrics

Work with electrical systems is covered by this skill. This skill can be used when a character attempts to analyze, repair, or build electrical circuits, devices, or electronic items. It is assumed that a character will have access to the tools he or she needs. Critically failed rolls may indicate that the character has burned out or damaged any delicate components, if possible, or even that he has electrocuted himself, if he is working with enough power.

Electronics —This subskill covers design, construction, and service of electronic devices.

Wiring —This subskill covers the design, construction, and maintenance of circuits ranging from house wiring to automotive electrical systems.

Performance time: varies
Subskills: Electronics
Wiring

General Mechanics

This basic skill covers the ability to repair and construct mechanical devices. The broad range of devices falling under this skill includes everything from Rube Goldberg contraptions to monstrously complex rocket motors. This skill allows characters to assemble mechanical devices from component parts (the design and construction of which may require additional skills, such as Engineering and Metalworking), diagnose and repair disabled devices, and perform preventive maintenance. Rolls should be made once per broken component, unless the repair of a single component requires extensive work in several distinct stages. For example, the repair of a broken clutch might first require the removal of a transaxle. In this case, the GM might require three successful rolls—one to remove the transaxle and associated items, another to repair and replace the clutch, and a third to put everything back together.

A successful roll indicates that a character has repaired or constructed a mechanical component. Failed rolls indicate that the character cannot repair the component. Badly failed rolls may indicate that the component has been further damaged as a result of the repair attempt. Note that the use of this skill assumes that an available selection of tools and parts reasonable for the tasks available.

Performance time: varies

Subskills: Int. Combustion Engines
Jets
Mechanical Systems

Occasionally, specialized tools are required, without which a task would be extremely difficult or even impossible. The GM must decide how tool availability modifies a task attempt.

Internal Combustion Engines —This subskill specializes in engines of the type used in cars, trucks, boats and many planes. Characters may use this subskill to repair all sorts of internal combustion engines, including diesel, gasoline, and propane.

Jets —This subskill covers jet engines of all sorts.

Mechanical Systems —This subskill covers basic mechanical and structural systems.

METALWORKING

Performance time: varies
Subskills: Milling

This skill involves all types of metalworking, including forging, casting, and milling, soldering, and welding.

Milling —This subskill covers the use of milling to shape metals. It is useful in the fabrication of mechanical components.

MINIATURE MECHANICS

Performance time: varies
Subskills: Gunsmithing
Locksmithing

This skill is used when a character attempts to design, repair, or construct miniature mechanical devices ranging from gun mechanisms to clockworks. With the exception of scale, its function is exactly the same as that of General Mechanics, above.

Gunsmithing —As its name implies, this subskill is used when a character attempts to create or perform maintenance on a firearm. It is not necessary for the routine cleaning of weapons, or for the clearing of minor malfunctions.

Locksmithing —This subskill covers the act of repairing and constructing locks. It also allows the picking of mechanical key locks. When used in this manner, modify the roll to account for the quality of the lock and the available tools. Average quality locks and deadbolts can often be picked with a single pick and tension bar—or even makeshift tools, although this may incur a negative modifier. Higher quality locks require an assortment of rakes, picks, and tension bars of various sizes. Lock release guns are very effective when used against most door and padlocks; allow a +30 modifier when appropriately used.

Rotary, punch-card, and other types of specialized locks require even more specific tools, and sometimes additional negative modifiers. This skill is useless in dealing with electronic locks, unless the user can get to the physical lock mechanism.

Medical Skills

Medical skills are action and knowledge skills pertaining to the sciences of living things and the study of medicine.

Dentistry

This skill covers the practice of dentistry. Unmodified use of this skill assumes complete facilities and equipment.

Performance time: varies
Subskills: none

Medicine

This is the basic medical skill. It is the foundation of all other medical skills, and covers, amongst other things, first aid, diagnostics, and basic pharmaceutical knowledge and surgical technique. Because the use of this skill requires such a very broad scope of knowledge and because tasks covered by this skill are frequently very difficult (and heavily modified), an actual doctor needs very high levels not only in this skill, but also in the General Practice subskill, other subskills and even other related skills.

Performance time: varies
Subskills: Emergency Med.
Gen. Practice
Veterinary

The number and type of Medical skill rolls required for a given task, and the ways in which they should be modified, depend upon the nature of the medical problem. Dressing a simple wound or prescribing cold relief requires no roll, unless the source of the problem or the conditions make infection, complications, or a misdiagnosis a substantial possibility. More complicated problems should require a roll, or perhaps two—one to diagnose the problem and another to treat it. Diseases or conditions for which the treatment consists of several distinct steps, or takes considerable time, may require many rolls over the course of treatment, and may also require rolls against Surgery or Pharmacy skills.

Successful rolls indicate that treatment has been successful—allowing recovery at the normal rate (see *Healing*, in Chapter Three)—or that the next required roll may be made, whichever is appropriate. A failed roll may have many possible results, depending on the situation and the magnitude of the failure. If the first roll was for the purpose of diagnosis, the amount by which the roll was missed could be applied as a negative modifier to the treatment roll. If a treatment roll was missed, a second roll may be required to rectify the first, perhaps with a negative modifier. In any event, the failure of the first roll may not be evident for some time—and during the intervening period, the afflicted person could continue to decline, lose blood, etc. A very badly failed roll might even make the condition worse, especially if the victim is suffering from severe wounds.

The use of this skill assumes the full advantage of modern facilities, equipment, and reference materials. Working without these advantages may require negative modifiers, depending upon the situation.

Emergency Medicine —This subskill covers the advanced first aid training given to paramedics, field medics, EMTs, and emergency room RNs. In general, the function of this subskill is to stabilize a patient's condition until he or she can receive more substantial medical attention. As explained in Chapter Three (see Treating Wounds, p. 111), this subskill is used to stop bleeding and to treat shock, but not to stabilize an eventually fatal wound. Failed rolls simply indicate failure in the task—the victim may get worse due to wasted time, but not directly due to even a critically failed roll. Emergency Medicine may also be used to revive unconscious (stunned) characters.

The Emergency Medicine subskill can be used for a variety of purposes other than treating wounds. Paramedics and emergency rooms routinely deal with heart attacks, poisonings, illnesses, and accidental injuries. The GM should handle these situations as appropriate, keeping in mind that the nature of this subskill is not to cure conditions, but to prevent them from getting worse or killing the patient while more sophisticated care is pending.

The unmodified use of this skill assumes that the equipment required is available. A first-aid kit, at least, should be used when treating minor wounds, but will be insufficient when dealing with major wounds and serious bleeding. An EMT's medkit will provide much of the equipment necessary to treat major wounds and many other medical conditions. Ambulances and paramedic's vehicles are typically well-equipped for almost any situation. If proper equipment is not available, apply negative modifiers.

General Practice —The tasks covered by this subskill make up the bulk of the doctor's trade. They are far too numerous to cover here. The use of this subskill is essentially the same as that of the Medicine skill.

This subskill may be used to treat stable wounds (that is, cause them to heal at the normal rate) and to stabilize eventually fatal wounds. It may not be used to deal with emergency conditions such as blood loss, shock, and stun.

Veterinary —This subskill covers the medical treatment of animals. Its use is exactly like that of the Emergency Medicine and General Practice subskills. The Veterinary subskill may not be applied to humans, but a veterinary specialist may use his or her Medicine skill when treating people. Likewise, a doctor or medic may use his or her Medicine skill to treat animals, but not the Emergency Medicine or General Practice subskill.

PHARMACY

This skill covers the application, interaction, and creation of pharmaceuticals. Its use may be required in the course of difficult medical cases.

Performance time: varies
Subskills: none

SURGERY

This skill covers the use of surgical techniques in medicine. It should be required, at the GM's discretion, for the treatment of some complicated, serious, or extended medical conditions. The unmodified use of this skill assumes that full facilities, equipment, and assistance are taken advantage of. More primitive conditions will require negative modifiers.

Performance time: varies
Subskills: none

Natural Skills

These are skills that have to do with the outdoors. Most are highly dependent on intuition and common sense.

FARMING

This skill covers a character's knowledge of agricultural techniques.

Performance time: varies
Subskills: none

FISHING

This skill allows a character to locate and then catch or trap fish. Methods include rod and reel, nets, spears, traps, and catching by hand. Modify the roll to account for availability of fish, if any are present at all. The more successful the roll, the more bountiful the catch.

Performance time: 1 hour
Subskills: Freshwater
Sea

Freshwater —This covers fishing in fresh water, such as rivers and lakes.

Sea—This covers fishing in salt water, both coastal and deep sea.

FORAGING

Foraging is the ability to find edible plants and other useful natural items in the wild. It does not cover hunting or tracking, but may be used to set snares or other traps for the capture of small game or fish. Obviously, the GM will have to modify Foraging rolls to account for the availability of food or other items looked for. There may be little to eat in a desert, for example, regardless of the skill of the character. On the other hand, a tropical island may offer an abundance of easily attainable food. Successful Foraging rolls yield enough food to feed one person for one day. An extremely successful roll may yield double this. An unsuccessful roll may yield less food, or even inedible or poisonous foods (GM's discretion).

If a character attempts a Foraging roll to find non-food items, it's up to the GM to determine whether or not the items being looked for are available, and if so what modifier applies. If a character forages for flint, for example, decide first if flint is available in the region, and if so, how easy it is to find. Other skills rolls can sometimes help—in this case, a successful Geology skill roll might make things easier for the forager.

Performance time: 4 hours
Subskills: Arctic
Equatorial
Temperate

Foraging arctic —This subskill covers foraging in arctic climes.

Foraging equatorial —This subskill covers foraging in tropical climates.

Foraging temperate —This subskill covers foraging in temperate, sub-arctic, and sub-tropical climes.

HIDING

Hiding skill rolls are made any time a character wants to avoid detection of himself, another character, or an object. A successful roll indicates that detection is avoided if nobody is really looking for the hidden character or object. If somebody is deliberately looking, apply the amount by which the hider made his or her hiding roll as a negative modifier to the seeker's Perception roll. If the **Performance time:** varies

Subskills: Concealment
Creeping
Shadowing

Hiding roll is failed, the hidden character or object is not necessarily obvious, but may be noticed by anybody making a Perception roll, and will be automatically found by anyone deliberately looking.

Some conditions or detection devices make hiding difficult or impossible. No amount of visual concealment will hide a pistol from a metal detector, or an explosive from a trained sniffing dog. However, a pistol could be dismantled into pieces that an airport x-ray machine wouldn't identify, especially if the pieces were concealed against the confusing background of a tool kit. A dog's nose could be fooled by coffee grounds or other scent-masking devices. In short, many detection methods are quite good, but few are completely foolproof. Modify Hiding rolls according to the scrutiny to which they will be subjected.

Concealment —This subskill is generally used to hide objects by making them blend in with their backgrounds. It includes the use of camouflage materials for hiding large objects outdoors.

Creeping —Creeping is the act of moving undetected, visually and audibly. It can be used to sneak up on somebody, to sneak away from them, or to sneak past them. Require one roll for every ten meters to be snuck, modifying it for the visual and audible cover, the alertness of the watcher, and the distance between the sneaker and the watcher.

Shadowing —This is the act of following somebody without their knowing it, either on foot or in a vehicle. Require rolls once every ten minutes if the target is moving, and once an hour if it is not. Only a critically failed roll reveals the shadower's presence if the target has no reason to be suspicious. Good cover and multiple tails trading off should give the shadower a positive modifier, but too much cover can give the shadower away, as it forces him or her to keep too close to the target.

METEOROLOGY

This skill covers a character's ability to accurately forecast the weather. It assumes the use of modern equipment and data sources. If a character attempts to make predictions without the benefit of these resources, his or her forecasts will be more general in nature and specific in location, but may still be accurate.

Performance time: varies
Subskills: none

NAVIGATION

The navigation skill is used when a character needs to get from his or her current location to a distant one, and is not familiar with the route. Require just one navigation roll for short trips, but up to one per hour for longer trips, especially in rough terrain or with few distinct landmarks. Failure indicates that the character becomes lost. Decide how lost the character is—and what can be done about it—based upon how severity of the failure. Even the most critical road navigation failure can be rectified by finding somebody to give directions—although substantial time may be lost. Becoming lost in the wilderness may be another story altogether. Allow a +30 modifier for rolls made with the aid of a GPS device.

Performance time: varies
Subskills: Air
Land
Sea

Air —This covers knowledge of air navigation, including the use of aerial charts, aircraft navigation instrumentation, and air traffic navigation aids.

Land —Cross-country navigation, or orienteering, is covered by this subskill. It includes knowledge of ground maps and terrain features, and the use of a compass for cross-country movement.

Sea —This subskill covers navigation over water, including the reading and use of nautical charts and course-plotting techniques, and nautical navigation aids.

PERCEPTION

Performance time: N/A
Subskills: none

Developing perception as a skill complements a character's natural perceptive abilities, mentioned in Chapter One (on page 15). Perception is used any time a character might notice something not immediately obvious. Examples include seeing nearly imperceptible things, such as a tiny glint of sunlight on the horizon that might indicate an approaching vehicle; noticing concealed qualities, like bullet-proof windows on an ordinary-looking car; picking up on personal affects, like a newspaper reporter who gets a little nervous when asked to explain his assignment; or even sensing mood, like noticing how a barroom quiets a little when a missing jewel was mentioned. Perception represents intuition, experience, and sensory capability.

Perception rolls are made against a character's natural perception level, derived from Sensibility and listed on the character sheet. **Perception skill increases natural perception by one point for every two levels in the skill.**

Modify Perception rolls like normal skill rolls, according to difficulty and the circumstances under which they are performed. Remember that impaired senses will have a major effect on perception, as will any sources of distraction. Note also that Perception rolls should never be used in cases where deduction is the operating factor—perception is an intuitive response to sensory information, not an intellectual process.

SURVIVAL

Performance time: 2 hours
Subskills: Arctic
Equatorial
Temperate

This skill is a measure of a character's ability to protect him- or herself from the pitfalls of the wild. Survival skill doesn't help a character to find food or water, but does help protect against extreme weather, wild animals, and other natural hazards that exist in the wilderness. Require one or more rolls per day in harsh climates, or one or fewer per week for milder ones. Also, require rolls any time a character set out to build a shelter or raft, to set up a camp, or to attempt to cross dangerous terrain. Failed rolls might make a character susceptible to anything from snake or spider bites to sunstroke to having food stolen by animals.

Arctic —This is the ability to survive in the arctic.

Equatorial —This is the ability to survive in equatorial wilderness regions.

Temperate —This is the ability to survive in temperate regions.

TRACKING

Hunting Equatorial
Hunting Temperate

This skill may be used to identify and follow a trail left by people or animals. Require a roll to pick up and identify the trail, unless it is already obvious. From then on, rolls should only required made when the conditions change for the worst, or when the trail crosses a stream, paved road, railway track, or other place where it is broken. If the trail has been deliberately concealed, modify the roll by the amount by which the concealer's Hiding/Concealment roll was made.

If a tracking roll is failed, the trail is lost, but it may be found later if the tracker makes a later roll. However, the GM should remember that the searcher's attempts to pick up the trail may in fact obscure it, thereby increasing the negative modifiers to the roll. Additionally, time and conditions such as wind, rain, and snow will cause a trail to deteriorate or disappear.

Hunting arctic —This subskill covers the hunting of game in arctic climates. Rolls may be made once every hour spent hunting. A successful roll indicates that game has been found, and that the roller has moved moderately close without

Performance time: varies
Subskills: Hunting Arctic

being detected by the target (exact range depends on conditions, and is at the GM's discretion). Moving closer may require a Hiding/Creeping roll. Killing or capturing the game will require appropriate additional rolls.

Modify Hunting rolls depending on the availability of game, remembering that an area that has been heavily hunted will eventually run out. In addition, the roll may be modified by environmental conditions.

If an attempt to kill or capture the game alerts it, and it flees, it may be followed using Tracking skill.

Hunting equatorial —This subskill covers the hunting of game in tropical and jungle climates.

Hunting temperate —This subskill covers the ability to find game in temperate, sub-arctic, and sub-tropical climates.

Physical Skills

Physical skills are action skills that require the use of the body, such as athletic and combat oriented skills.

Armed Hand to Hand

Performance time: 1 turn
Subskills: Block/Parry, Swing, Thrust

This is an attempt to make a hand-to-hand attack using a weapon, or to defend against such an attack. The use of this skill and its subskills is covered in Chapter Three.

Block/Parry —This subskill is used in an attempt to deflect or block an enemy's attack using a weapon.

Swing —This is an attempt to strike an opponent with a swinging or slashing motion. Some weapons may be used with either the Swing or Thrust subskill, while others may be used exclusively with one or the other. The Hand-to-Hand Weapons Table in the Appendix specifies which subskills are used.

Thrust —This is an attempt to strike an opponent with a thrusting, jabbing, or stabbing motion. As with Swing, the use of this subskill depends on the weapon.

Athletics

Performance time: varies
Subskills: Athletics, Gymnastics

This skill represents a character's experience with sports and the process of improving oneself physically. Although this skill does not require a character to be active or talented in any particular sport, it does imply an interest in sports in general.

Bodybuilding —This subskill represents a character's efforts at building up his or her physique and musculature. **For every three levels a character has in this subskill** (not including levels in the Athletics parent skill), **increse his or her Strength by one point.**

Gymnastics —Ability to perform gymnastic feats and improved physical speed are the two effects covered by this subskill. **For every three levels a character has in the Gymnastics subskill** (not including levels in the Athletics parent skill), **increase his or her Agility attribute level by one.** Additionally, this subskill may be used to attempt gymnastic feats (somersaults, backflips, etc.) not accomplishable by unskilled characters, or to extend normal gymnastic capabilities. For example, the GM may allow a player make an Athletics/Gymnastics roll to lessen the impact of a jump from a second-floor window. Of course, negative modifiers apply to difficult feats or tasks which combine several acts. A failed roll may result in injury, which should generally be handled as falling damage (see Chapter Three).

CLIMB

Performance time: varies
Subskills:
Mountaineering

Characters use this skill when climbing rocks, fences, walls, cliffs, buildings, or any other steep or vertical surface beyond the capabilities of an unskilled person. Require a roll for every five vertical meters climbed, modified according to difficulty and conditions. Allow a +30 modifier for trees, cliffs, and fences which provide easy hand and footholds, while assessing a -30 or worse modifier for shear faces with tiny holds, or wet or difficult conditions. A failed roll indicates that the character falls—how far depends on how high he or she is at the time. If the character is climbing an irregular cliff or similar surface, he or she may land on a ledge or outcropping instead of falling the entire distance. Damage from falls is handled in Chapter Three (*Falling and Major Impacts*, p. 113).

Mountaineering —Mountaineering covers the use of specialized climbing equipment. When a character attempts a climb with the proper safety equipment (chocks, pitons, carabiners, and a life-line), require rolls against just his or her Climb skill. If he or she fails a roll, then call for a second roll against the combined Climb skill/Mountaineering subskill. Success indicates that the fall was stopped by the safety gear, and the character is unhurt. A mild failure indicates that the gear stopped the fall, but in the process the climber was injured as if he or she fell two meters. A bad failure (thirty or more) indicates that the safety gear failed and the character fell.

Rappelling —This subskill is used for rappelling down cliff, buildings, or out of hovering aircraft. Rappelling is a fairly easy task once learned—unless conditions are bad, don't require rolls for short rappels. If a roll is called for, require just one per rappel, regardless of the distance. Failure indicates that the character falls, but only one-third the total distance. Severe failure indicates that he or she falls two-thirds the total distance. A second character belaying the line, however, may make a roll to prevent the fall.

Rappelling

JUMP

Performance time: 1 turn
Subskills: none

This skill represents a character's ability to jump, both vertically and horizontally. Typical characters can jump about four meters horizontally with a running start, two without, and about a half-meter vertically, without making a roll. Call for a roll any time a character attempts anything beyond this, keeping in mind that no human being can more than double those figures. Modify the roll according to circumstances and the distance to be jumped.

KATA

Subskills:
Aikido
Jui-Jitsu
Karate
Tae Kwan Do

The Kata skill covers martial arts form and technique, and increases a skilled character's Base Speed. As explained in Chapter Three (see *Using Martial Arts*, p. 94), there are a number of Kata techniques which can supplement a character's hand-to-hand combat skills. Kata skill rolls may be made once per turn during combat, in addition to normal combat actions. If the roll is successful, the combat action was made using a martial arts technique. If a character made a successful Kata roll after a punch attack, for example, he or she could apply the benefit of martial arts training to the attack.

Most characters specialize in one of the several schools of martial arts, which are handled in this system as subskills. A given school will not include all of the techniques offered by the Kata skill, and may not include all types of combat actions. This is explained below under the subskills. If a character wishes to use a technique not included in his or her school, or with a type of action not used by his or her school, require a roll against just his or her Kata skill, without the benefit of subskill levels in the school.

The martial arts techniques are discussed below. Remember that only one Kata roll may be made per turn, and that only one technique may be attempted per roll.

1. Negate defense: A practitioner employing this technique may make an attack regardless of the victim's defense roll. If the attack is successful, any defense made by the victim is disregarded. This technique may be used with any hand-to-hand attack.

2. Combination maneuvers: A combination maneuver allows a martial artist to follow a defensive maneuver with an attack or a hold. The second portion of the maneuver (the attack or hold) occurs in the turn following the first portion, but the martial artist automatically gains initiative over that opponent so long as he continues with the combination maneuver. This technique may be used with an Unarmed hand-to-hand/Block or Dodge or an Armed Hand-to-hand/Block/Parry action, and may be followed by any hand-to-hand attack, including a grapple or throw.

3. Increase damage: A martial artist may focus the energy of his or her attack more directly than a conventional attacker. Using this technique, the martial artist may increase his or her Damage Rating by one for every ten points by which the roll was made. This technique may only be used with an Unarmed Hand-to-Hand/Punch or Kick attack.

4. Attack to stun: If a martial artist succeeds in a hand-to-hand attack to the head or neck of an opponent, he or she may attempt to increase the opponent's stun chance. By making a Kata roll, he or she causes the opponent to suffer a -50 modifier to his or her stun roll, as defined by the Damage Table. This technique may only be used with an Unarmed Hand-to-Hand/Punch or Kick attack.

5. Pain hold: Using this technique, a martial artist may hold an opponent in such a manner that the opponent will not be able to move or act without inflicting serious pain upon himself. The victim must make a Willpower roll before attempting to break the hold. Once the hold is established, the martial artist may use it to inflict pain on the victim at will, for as long as he maintains the hold. However, when he does this, the victim may attempt to break the hold without having to make a Willpower roll. This technique may be used as the second part of a combination maneuver, or with an Unarmed Hand-to-Hand/Grapple roll.

6. Break hold: When held in a wrestling situation, or when in a pain hold, a martial artist may make a Kata roll to break the hold. This is typically done by briefly inflicting pain on the opponent through a pressure point or other sensitive area. The Willpower roll generally needed to break a pain hold is not necessary if this technique is employed.

7. Disarm: Using this technique, a martial artist may attempt to disarm an opponent, generally by twisting a weapon out of his or her grip or by striking the arms or hands holding the weapon. If successful, the opponent loses control of the weapon. A disarm attempt may be made with a Unarmed Hand-to-Hand/Grapple, Kick, or Punch roll. If a kick or punch is used, the attack must successfully strike the limb holding the weapon.

Skill with martial arts affects a combatant's speed in combat, even if the arts aren't being utilized. For this reason, **for every ten levels a character has in Kata skill** (not including subskills)**, increase his or her Base Speed by one.**

The use of these techniques in combat is discussed further in Chapter Three.

Aikido —This martial art focuses on non-violent action and the use of an attacker's movements to defeat him. Aikido users may employ the following techniques: combination maneuvers, break hold, disarm and pain hold. Kata rolls may be made with the following types of actions: Unarmed Hand-to-Hand/Combat throw, Dodge, Grapple, and Kick.

Performance time: N/A

Still looking for the gun runners, Laenna and her cell are reconnoitering the home of the organization's suspected leader. Laenna is keeping watch near the back door when a hired thug appears around the corner. He lunges for her, while Laenna tries to dodge the attack. Roselyn makes a successful Unarmed Hand-to-Hand/Dodge roll, then tells the GM she would like to use a combination maneuver, to combine the dodge with an attack. The GM asks for a Kata/Jui-Jitsu (Laenna's martial arts school) roll. Laenna's required roll is a 65, and Roselyn rolls a 30, making it easily.

The following turn, Laenna turns the dodge into a strike with one smooth motion, acting first despite the thug's superior speed. Roselyn rolls Laenna's Punch, successfully hitting the attacker in the head. To try and put the thug out of commission quickly and quietly, Laenna tries to stun him with her strike. Roselyn makes another Kata/Jui-Jitsu roll, again succeeding. The GM computes the damage of the attack, and makes a stun roll for the thug, adding a -50 modifier to the result on the Damage Table. Failing his roll, the thug falls to the ground, out like a light.

If for some reason Laenna had decided to increase the damage of her strike—a maneuver not included in her school—Roselyn would have made the roll against her the Kata skill only, without adding the Jui-Jitsu subskill level.

Jui-jitsu —Also known as judo, this martial art is primarily defensive in nature. Jui-jitsu practitioners may use the following techniques: combination maneuver, attack to stun, break hold, and disarm. Kata rolls may be made with the following types of actions: Unarmed Hand-to-Hand/Block, Combat Throw, Dodge, Grapple, and Punch.

Karate —This martial arts school teaches offensive and defensive maneuvers exploiting the focused energy of an attack. Martial artists in this school may use the following techniques: combination maneuver, increase damage, attack to stun, negate defense. The Kata skill may be applied to the following actions: Unarmed Hand-to-Hand/Block, Dodge, Kick, and Punch.

Tae Kwan Do —Tae Kwan Do is an aggressive, attack-oriented martial art which focuses on punches and kicks. Tae Kwon Do users may employ the following techniques: negate defense, attack to stun, increase damage, and disarm. Kata rolls may be applied to the following actions: Unarmed Hand-to-Hand/ Block, Dodge, Kick, and Punch.

RUN

Performance time: varies
Subskills: none

Levels in this skill represent experience with running as a sport or pastime. Consequently, this skill allows characters to improve their running speed as well as increase endurance. Average characters sprint at fifteen meters per turn and run eight meters per turn. Every fifteen levels in this skill allow a character to increase his or her speed by one meter per turn in each category. Additionally, **for every three points a character has in this skill, modify his or her Endurance as though his or her Constitution had increased by one.** The Constitution level does not actually increase, but Endurance is affected as though it had.

SWIM

Swimming is the ability to stay afloat and move effectively in water. Low levels in this skill indicate that a character is able to keep his head above the surface for moderate periods of time. Higher levels indicate that the character can swim moderate distances, with particularly high levels meaning that a character can swim quickly, stay under water for prolonged periods (one to two minutes, depending on the level of activity), and stay afloat for long periods. A character swims at a maximum rate equal to one meter per ten levels of skill each turn. For purposes of endurance, this rate is equivalent to sprinting. Half that rate or less is equivalent to running.

Do not require skill rolls for characters just trying to stay afloat or move slowly for short periods, unless there are adverse conditions. A strong current, rough waves or surf, or light rapids should require a roll. Strong rapids, undertows, or high sea states may demand a negative modifier. In these cases, a failed roll indicates that the character is pulled along with the water, unable to fight the current. This may mean trouble if he is being swept out to sea, carried over a waterfall, or dashed against a cliff-face, but only a badly failed roll indicates that the character cannot keep his head above water and will begin to drown.

Do call for a roll when a character tries to swim quickly or for a long distance (more than a couple hundred meters), is carrying a heavy load, or has to keep afloat for a long time (more than half an hour). A failed roll indicate that the character is tiring, and cannot keep moving. A critically-failed roll means that the character is too tired even to float, and will start to drown.

If a character does fails a Scuba roll, he or she will suffer the bends. The bends occur when gasses in the blood-

A drowning character must make a Constitution roll once every ten seconds (five turns). Failure means he or she has filled his lungs with water, and will pass out in a number of turns equal to his Endurance rating. Unconscious characters sink at a rate of roughly one meter per turn, and will die in roughly two minutes, unless revived with a successful Emergency Medicine roll. Additionally, require a Willpower roll at -30 to avoid panic. Panicking characters can do nothing to save themselves but clutch at floating objects within arm's reach.

Scuba —This subskill represents an ability to use SCUBA equipment to remain safely under water for prolonged periods. Any character having a level of 15 or more in this subskill should not be required to make a roll unless he or she attempts to dive to depths greater than thirty meters or stay underwater for periods in excess of forty-five minutes.

stream come out of solution, and they affect the vitals (Body Zones five and eight) as an Impact wound (no possibility to blood loss) at one Trauma Level for every three points by which the roll was missed.

Performance time: varies
Subskills: Scuba

Unarmed Hand-to-Hand

As with Armed Hand-to-Hand, above, this skill represents hand-to-hand attacks and defenses, but without the use of weapons. The use of this skill and its subskills is explained in detail in Chapter Three: Combat.

Block —A block is an attempt to stop or deflect an opponent's blow with an arm or hand.

Combat Throw —A combat throw is an attempt to throw or flip an opponent to the ground.

Dodge —This is an attempt to dodge or evade an enemy's attack.

Grapple —Grappling is an attempt to engage an opponent by wrestling or holding him.

Kick —This is an attempt to strike an opponent with the leg or foot.

Punch —This is an attempt to strike an opponent with the fist or hand.

Performance time: 1 turn
Subskills: Block
Combat Throw
Dodge
Grapple
Kick
Punch

Reflexive Skills

These are action skills that rely on a character's physical reflexes and quick thinking.

Aim

Performance time: 1 - 4 turns
Subskills: Autofire, Bow, Longarm, Smallarm, Throw

This skill measures a character's ability to aim thrown or fired projectiles. The effects of rolls are covered in Chapter Three, under *Projectile Combat* (p. 96). Although this action requires only one turn, a carefully aiming character may spend up to three additional turns accumulating bonuses to his or her roll. Other modifiers are listed on the Aiming Modifiers Table, on page 99. Performance time does not cover drawing weapons or loading.

Autofire —This covers the use of any firearm on a fully-automatic or burst setting.

Bow —This subskill covers the use of any bow. It does not cover crossbows, which are considered longarms.

Longarm —This subskill covers the use of longarms, a category that includes rifles, assault rifles and machine guns if used on a single-shot setting, and crossbows.

Smallarm —This is the use of pistols and submachineguns. It applies only to weapons fired on single shot—if fired fully automatically, use the Autofire subskill.

Throw —This subskill is a measure of a character's ability to accurately throw objects.

Drive

Performance time: varies
Subskills: Automobile, Motorcycle, Powerboat, Semi-truck, Tracked Vehicle

This skill is a character's ability to operate surface vehicles. Don't require a roll under normal circumstances unless the operator is unfamiliar with the vehicle type, or if he or she attempts to push the vehicle's performance thresholds. Complete rules for the use of vehicles appear later in this chapter, starting on page 72.

Automobile —This subskill covers the use of any car or small or medium truck. For game purposes, an automobile is defined as a vehicle with no fewer than four wheels and no more than three axles.

Motorcycle —This subskill covers the use of motorized two- or three-wheeled vehicles.

Powerboat —This subskill covers the use of any small or medium-sized (up to twenty meters overall length) powerboat.

Semi-truck —This is the use of any large truck having four or more axles.

Tracked Vehicle —This subskill covers the use of vehicles propelled by tracks, such as bulldozers and tanks.

PARACHUTE

This skill allows a character to safely use a parachute. Success indicates that the parachute deploys properly and that the character is able to land safely, and more or less where he intended. A mildly unsuccessful roll indicates that the character does not land where intended. Very unsuccessful rolls indicate a bad landing, equivalent to a fall from five to ten meters. Only critically failed rolls should indicate a bad parachute deployment. Weather conditions and visibility should modify parachute skill rolls. Performance time varies with the height of the jump.

Performance time: varies
Subskills: none

PILOT

The pilot skill measures a character's ability to operate any sort of flying vehicle. Don't require rolls unless the operator is unfamiliar with the aircraft type, or if he or she is attempting something difficult or challenging. A failed roll may result in a crash.

The subskills for aircraft type (below) assume visual flight. To fly by instrument, a pilot must make a roll with the IFR subskill, in addition to any rolls normally needed for visual flight.

The minimum skill level for a licensed pilot is Pilot 50/Single-engine Propeller 25 and IFR 10.

Performance time: varies
Subskills: Glider
Helicopter
IFR
ME Propeller
ME Jet
SE Propeller
SE Jet
VTOL

Glider —This skill covers the use of gliders.

Helicopter —This is the operation of any rotary-winged aircraft.

IFR —This subskill covers the control of an aircraft by instrument. It is used when poor visibility makes visual piloting impossible. IFR instruments are largely the same for all aircraft, so this subskill may be used in conjunction with any type of craft.

Multi-engine Propeller —This is the ability to pilot propeller-driven airplanes powered by two or more engines.

Multi-engine Jet —This is the ability to pilot jet-driven airplanes powered by two or more engines.

Single-engine Propeller —This is the use of any propeller-driven airplane powered by just one engine.

Single-engine Jet —This is the use of any jet-driven airplane powered by just one engine.

VTOL —This is the use of any non-helicopter aircraft capable of vertical take-offs and landings.

RIDE

Horseback riding is covered by this skill. Rolls should be required if the terrain is difficult or the horse is not inclined to be ridden or controlled, and should be made just once per ride, or when terrain conditions or the horse's inclinations change. Successful use indicates that the horse is controlled and safely ridden. Failure indicates that the horse will not obey the rider's desires. Severe failures indicate that the rider is knocked or thrown from the horse. Note that fatigue may make a horse unwilling to be ridden.

Performance time: varies
Subskills: none

Ski

This skill covers both downhill and cross-country skiing. If a character is skiing cross-country, require a roll only for areas of difficult terrain. If a character is downhill skiing, require a roll for every hundred meters or so. In either case, the roll should be modified as terrain and perhaps weather conditions dictate. Failed rolls indicate falls. It is up to the GM to determine the speed of the fall and the condition of the landing.

Performance time: varies
Subskills: none

Scientific Skills

Scientific skills are those that fall under the hard sciences. Like Academic skills, above, they are generally knowledge skills.

BIOLOGY

Performance time: N/A
Subskills: Botany, Microbiology, Zoology

This is the study of life. Characters with this knowledge skill know about life on this planet and how it works.

Botany —This is the study of plants.

Microbiology —This is the study of single-celled organisms.

Zoology —This is the study of animal life.

COMPUTER OPERATIONS

Performance time: varies
Subskills: Civil Systems, Networks, Programming, Security

This skill covers the use of computers. Rolls should be made any time a character attempts to operate an unfamiliar computer system or software package, to do something unusual or demanding with a familiar system or software package, or to write programs or manipulate computer networks or security systems. The implications of a failed roll vary with the task being attempted. A failure with a simple civil system may just mean that the character is having trouble getting it to do what he or she wants. A severe failure may mean that the system crashes, with loss to data and even software damage. Mild failure while attempting to infiltrate a security system may mean that the character is unable to penetrate, but remains undetected. Severe failure, on the other hand, may mean detection, triggering stiffer security measures and an investigation. Modify computer operations rolls as appropriate, according to the difficulty of the task, the sophistication of equipment, and the software tools available to the user. Basic rules for using computer networks and penetrating security systems are covered later in this chapter (see *Using Computers*, p.78).

Civil Systems —The civil system subskill covers the operation of computer systems and software regularly used for civil applications—everything from word processors to telecommunications control systems to computer assisted design programs. While it may be used to operate these systems and even put together complex systems from smaller software packages, this subskill does not allow a character to program or write software.

Networks —Networks link computers together locally and around the world. This subskill allows a character to navigate the GenNet and other networks. Obviously, a network link is required to use this subskill.

Programming —A character may use this subskill to create computer programs. Because most useful software for today's sophisticated machines is highly complex, it is likely that a character will need to make several rolls, perhaps with negative modifiers, to create a complete program.

Security —This skill allows a character to set up computer security systems, or to defeat security systems of other computers. If a character uses this subskill to set up a security system, anyone attempting to defeat the system must make a security roll with a negative modifier equal to thirty plus the amount by which set-up roll was made. If the set-up roll was failed, an invader will not need to make a roll when attempting to breach the security. Since most computer break-ins occur via networks and must negotiate a variety of local systems, an invader may be faced with several security rolls before reaching his or her goal. And even before attempting the break-in, he or she may wish to make additional security or networking rolls to cover his or her tracks.

ENGINEERING

The engineering skill covers the practice of engineering—the design of the physical systems that support society. This skill can be used to design sturdy and efficient mechanical, structural, chemical, and electrical systems for almost any application. Having this skill allows a character to understand the physical forces at work on any such system. Complicated engineering problems typically involve many engineering rolls, and the design of an entire system or project may require rolls against other skills, such as Math, as well.

Performance time: varies

Subskills: Aeronautical, Chemical, Civil, Electrical, Mechanical, Nuclear

Aeronautical —This subskill is used in the design of ships, aircraft, spacecraft, and other related systems.

Chemical —This subskill relates to the design of chemical compounds and substances derived from chemical processing.

Civil —This subskill covers the design of structural systems, including the design of roads, bridges, buildings, and related systems.

Electrical —This subskill covers the design of electrical systems.

Mechanical —This subskill is used in the design of machines and mechanical components.

Nuclear —This subskill relates to the design and operation of nuclear reactors and related facilities.

MATH

This skill covers a character's grasp of mathematics. Its subskills are self-explanatory.

Performance time: varies
Subskills: Algebra, Calculus, Geometry

Military Science

This skill represents a knowledge of the military and military resources, strategy and tactics. A character may use this skill to exercise or recognize military tactics and strategy, and to identify and understand military equipment, practices, and personnel.

Performance time: N/A
Subskills: Hardware
Strategy
Tactics

Hardware —This subskill is used to identify military equipment, uniforms, and insignia. A successful roll allows a character to recognize items, identify their use, characteristics, origins, and/or functions. It does not in itself allow the character to operate equipment or weapons.

Strategy —This subskill may be used to understand and implement techniques of military strategy. Used successfully, this subskill allows a character to plan large-scale military operations, or react to such operations by an opposing force. It does not apply to tactical moves on an individual or small-unit level.

Tactics —This subskill may be used to understand, implement and react to military tactics. Successful use of this skill allows a character to lead combat operations in a manner most likely to achieve its objectives with minimal potential for casualties and other loss of resources. Call for rolls to foresee tactical problems and in the planning or execution of small-unit operations.

Laenna's cell is creeping through mangrove swamps on the coast of Cuba, moving in on a gun-running gang's staging base. Laenna is on point. The GM knows that the smugglers set up booby traps and ambushes around their base, and he asks Laenna to make a Military Science/Tactics roll. Roselyn needs a 47, and rolls a 15. The GM tells her that it's common practice to spread out into a wide wedge, with ten or so meters between individual, so that a mine or ambush can't get everyone at once. Laenna instructs her cell to do so.

A few hours later, the cell closes in on the base. Peering through her starlight scope, Laenna spots a tank-like vehicle with little guns parked near the center of the compound. The GM asks for a Military Science/Hardware roll. Roselyn makes it, and Laenna recognizes the vehicle as a Russian-made ZSU 23-4. Designed as an anti-aircraft weapon, its autocannons are also devastating against personnel. Wondering what a petty band of smugglers is doing with such high-end firepower, Laenna decides that knocking it out quickly will be a priority.

Police Science

This skill covers knowledge of police techniques, including but not limited to handling crime scenes and chains-of-evidence, dealing with witnesses, victims, and informants, reacting to crime situations, making arrests, and dealing with civil disturbances. A GM might request a roll any time a knowledge of police procedure is needed.

Performance time: N/A
Subskills: Forensics

Forensics —This subskill covers techniques for recognizing, gathering, and analyzing physical evidence.

Social Skills

These are skills that depend on a character's socialization and his or her ability to interact with others.

Animal Training

The training of all sorts of animals is covered by this skill. The time required to do so varies widely with the type of animal, conditions, and the nature of the task. Virtually every type of creature is trainable. However, the complexity of learnable tasks and time required to learn varies greatly with the animal's intelligence and temperament.

Any given type of animal may be identified as a subskill for this skill.

Performance time: varies
Subskills: any specific animal

Diplomacy

This skill is used when a character is attempting to achieve something through interaction with other people. It may be used to deceive, coerce, or extract information from other characters without their awareness. If the target person or people are suspicious or for some reason dislike the character, apply a negative modifier. Additionally, apply modifiers according to the task—coercing someone to do something he is already planning on is not hard, whereas lying to him on a subject about which he is an expert may be. Successful rolls allow a character to interact favorably with the target person or people. Failure indicates that the character's diplomatic efforts have no effect on the target, or even that the target comes to dislike or distrust the character. Performance time can vary widely—however, the time listed is sufficient for a basic situation.

Coercion —This is an attempt to convince somebody to do something which they are not inclined to do. It may or may not involve threats. Very successful rolls might even convince the target that he or she wanted to do it all along.

Lying —As the name implies, this subskill covers a character's attempts to deceive another. It may be used to convince somebody of something, or to fast-talk. There is often a degree of overlap between this subskill and Acting/Con. This subskill applies only to isolated lies, whereas a con is usually an attempt to use multiple, related lies, while putting up a false front or adopting an alternate persona.

Prying —This subskill should be used whenever a character wants to extract information from another individual without his or her realizing it. It is difficult if not impossible to uncover any closely-guarded secrets without tipping off the target.

Performance time: 15 minutes
Subskills: Coercion
Lying
Prying

Gambling

As the name implies, this skill covers the art of gambling. It includes knowledge of game rules and etiquette, as well as techniques for success such as card counting, bluffing, and cheating. This skill only applies to games involving other players—it cannot be used when playing games of random chance, like slot machines.

Betting —This subskill covers gambling on races, sporting events, and other betting.

Card games —This subskill covers games of chance employing cards, such as poker.

Performance time: varies
Subskills: Betting
Card games
Dice games
Table games

Dice games —This subskill covers gambling games involving the use of dice, such as craps.

Table games —This subskill covers table games such as roulette typically played in casinos.

HYPNOSIS

A character using this skill may hypnotize another, to gain access to the subject's subconscious thoughts and memories. These thoughts are typically much clearer than those of the conscious mind, and are in fact often inaccessible to the consciousness. The subject of the attempt must be willing and relaxed. The performance time listed is that required to induce hypnosis—once in this state, the subject may remain hypnotized for several hours.

A hypnotizer may also establish a key signal while the subject is under, which will induce hypnosis almost instantaneously at a later time. An additional roll at the time of the initial session is required to do this. The effectiveness of this key signal will wear off in time. The period for which the signal remains effective depends on how well this additional roll is made—a few hours to a few weeks is possible. It may, of course, be re-enforced during later sessions.

Performance time: 20 minutes
Subskills: none

PSYCHOLOGY

This skill represents a character's knowledge of the study of psychology. It can be used to gain an understanding of the subconscious forces acting upon one's thoughts and actions.

Deviant —This subskill focuses on the psychological forces that drive criminals and other anti-social individuals.

Psychoanalysis —This subskill is used to analyze the psychological forces acting upon a given individual.

Performance time: varies
Subskills: Deviant
Psychoanalysis

Character Improvement

Characters who have been involved in play may improve their skills and sometimes, as a result, their attributes. This can happen due either to experience, or to practice and study.

Experience

As characters negotiate assignments and adventures, use their skills, and grow and mature, they improve their capabilities through experience. Keeping track of a character's experience allows a player to develop that character's skills, improving the character for future assignments. Character improvement rewards the player as well, as the focus of his or her effort and attention grows in concept and capability—and that keeps players interested in their characters and the campaign.

There are two ways to award experience: through direct use of skills, and as a general reward. Rewarding direct skill use is more realistic, but it places a record-keeping burden on the players that sometimes gets neglected. General rewards are less realistic, but easier to implement and more gratifying. Both methods are discussed below—feel free to select one or the other, or combine the two.

Skill Points

Experience is measured in skill points, just like the skill points used to purchase skills during character generation. The rates at which skills improve during play are the same as the purchasing scale for character creation, although there are no limits to the maximum level to which a skill or subskill can be advanced. **For levels one through twenty-five, one skill point increases a skill by one level. For levels twenty-six through forty, two skill points are required to raise a skill by one level. Three are required for levels forty-one through fifty-five, four for levels fifty-six through seventy, and five for any level above seventy.**

Always apply skill points to subskills, whenever possible. Remember, however, that a subskill level may never exceed one-half the level of its parent skill. If applying a skill point to a subskill violates this guideline, or if the parent skill has no subskills, apply the skill point to the parent skill.

Experience Reward Table

Choose one:	
Short assignment	20
Medium assignment	35
Long assignment	50
Add as many as apply:	
Success in a:	
primary objective	20
secondary objective	10
Good planning	20
Good tactics	15
Good teamwork	20
Good use of resources	10
Additional awards for individual players:	
Excellent roleplaying	5
Excellent use of skills	2
Good ideas	4

Direct Use Experience

Any time a player rolls dice against one of his or her character's skills, that character is entitled to experience in that skill. For every roll made, regardless of its success or failure, give the character a single skill point in the skill or subskill that was rolled against, up to a maximum of three skill points per subskill per adventure. Record these skill points in the column marked "uses" on the character sheet, then convert them to skills at the end of the assignment.

General Reward Experience

At the end of an adventure, the GM may wish to reward successful play, clever ideas, and good use of skills by awarding skill points to the players. Such an award may be given in addition to direct use experience, or, at the option of the GM, it may be the sole source of skill points awarded for experience. The Experience Reward Table lists a handful of guidelines for

general reward experience—to use it, decide which conditions apply, then total the points and divide them amongst the players. Award the bonuses at the bottom to individual players for exceptional performance. The numbers on the table apply if the general reward is the only source of experience in the campaign—if the players are also keeping track of direct use experience, divide the total general reward by three.

The players may assign general reward experience to whatever subskills and skills they feel are appropriate, according to the guidelines above.

Practice and Study

Sometimes a character may wish to practice and get better at a skill. This is typically done between adventures, out of play. When this happens, decide how much free time per day the character has to devote to practicing. Generally, time permitting, a character may practice six hours per day. To exceed that limit, he or she must make a Willpower roll. Modify this roll according to the perceived importance of the practice. For every ten points by which the roll is made, add one hour to the time spent practicing.

Once the amount of practice time has been determined, convert this time to skill points. The conversion rates differ for action skills and knowledge skills. Because these two terms, as defined under the Skills section, above, are vague, it is left to the GM to decide whether a skill or subskill being practiced constitutes an action or knowledge skill.

The conversion rate for knowledge skills is one skill point per eight hours of study and practice. This may be reduced to one skill point for every five hours if the character has a credible course of study, and to one for every four hours if the character has the aid of an instructor with a combined level in the skill and subskill that exceeds that of the student by forty or more.

The conversion rate for action skills is one skill point per every four hours of study and practice, three with a well-defined course of study, and two with a qualified instructor.

Convert the skill points gained through study and practice to skill levels at the same rate as those gained through experience. Good role-playing should keep out-of-play practice and study to a reasonable level.

Encumbrance and Endurance

There are limits to the physical and mental capabilities of any character. Attributes measure these limits when they are tested against specific tasks, but they don't say much about how many tasks a character can take on, or for how long. Such decisions are generally best left to common sense and good roleplaying. These rules, however, provide some guidelines for those times when a precise ruling is needed.

Encumbrance

Keeping track of the weight and bulk of every piece of equipment a character carries is far too onerous a burden for player or GM. Keep to common-sense limits and you can't go too far wrong. If a guideline is needed, use the following: any character can carry roughly ten percent of

his or her body mass with no negative effects. A character carrying up to thirty percent of his or her weight is lightly burdened, while a character carrying more than that is heavily burdened.

Burdening a character affects his or her long-term endurance, covered just below. It also affects Base Speed on initiative checks (covered in Chapter Three). **Lightly-burdened characters suffer a -2 penalty to their Base Speed. Heavily-burdened characters suffer a -5 penalty.**

Endurance

The Endurance Secondary Attribute, derived from the Constitution Attribute, measures a character's staying power. Endurance represents the number of hours a character can walk under moderate environmental and terrain conditions when unburdened. If the character attempts to exceed this number, the player must succeed in a roll against the character's Willpower for every additional hour to be walked. The Endurance level assumes a moderate amount or rest along the way (say five or so minutes every hour). Once a character fails a Willpower test, he or she must pause for at least two hours before trying again.

There are an enormous number of potential modifiers to the Endurance score. A lightly-burdened character will suffer a -2 modifier to his or her Endurance, while a heavily-burdened character will suffer a -4. Very rough terrain or difficult weather can also reduce Endurance scores by two or three points each. Particularly stressful or fatiguing activities, or a lack of sleep, food, or water can apply further modifiers, as the GM sees fit. In any event, however, no character's Endurance level can ever be modified below a score of two.

Feel free to use this score as a guideline for activities other than walking. For moderate physical labor, use the Endurance score to measure hours of potential work just like it measures hours of walking. For high-adrenaline activities, like running, multiply the score by two and use it to indicate the number of minutes the character can go on. In any case, however, defer to common sense first—don't require an Endurance check unless a fairly precise decision is really needed.

VEHICLES

Even in the declining world of *Millennium's End*, where war in the Middle East and worldwide depression have driven fuel prices to almost ten times those of the real world, cars and other vehicles are still a common part of urban life. Whether the operatives drive motorcycles, trucks, econoboxes or sportscars, the use of vehicles and their inclusion in combat or chases is an inevitable part of a *Millennium's End* campaign. Unfortunately, the intricate and difficult rules necessary for complete realism would bog down the pace of play during the fast-paced scenes for which they are critical. With this in mind, the relatively simple rules here establish guidelines for the performance of vehicles and their drivers in this game. Use them judiciously and with a little imagination, and they will provide satisfactory, realistic, and consistent results.

These vehicle rules cover two issues: chases and crashes. In vehicle chases, the most important factor is usually how far apart the vehicles are, and that determination is the focus of the system. The crash rules cover the dangers of driving on the edge, and the damage a vehicle and its occupants sustain should the driver lose control.

The pace of play is important, especially in the types of scenes that call for vehicle rules. For that reason, try to minimize the amount of dice-rolling and rules consultation by "winging it" whenever the performance of a vehicle and its driver are really not that important. Refer to these rules only when necessary.

Vehicle Limitations

All vehicles have limitations to their performance, many of which are totally independent of the operator's skill. For example, a car's maximum velocity—a function of its engine output and aerodynamics—is the same for an inexperienced driver as it is for a successful racer. On the other hand, some limitations are sensitive to driver skill. A given car will have limits to its cornering ability, but a bad driver may never be able to push it fully to those limits.

For the purposes of this game, there are five significant limitations to a vehicles performance. These are Acceleration, Braking, Cornering, Top Speed, and Range. In order to use a vehicle in *Millennium's End*, it must have a numerical rating in each of these categories, and in the thresholds covered below. Ratings for a number of vehicles are covered in the Vehicle Table on page 194.

Acceleration
This rating represents the maximum number of kilometers per hour that a vehicle can add to its velocity each turn. If the vehicle is travelling at one-half or greater of its top speed (explained below), it may only accelerate at a rate equal to this number minus two. If it is travelling at a rate equal to three-quarters or more of its top speed, it may only accelerate at a rate equal to this number minus four. However, the vehicle's acceleration rate cannot drop below one until it reaches its top speed. Acceleration rate is affected by driver skill.

Braking
This rating is equal to the shortest distance in which a vehicle can shed ten kilometers per hour of its velocity, measured in meters. Any vehicle can shed up to forty kph each turn, but the distance it takes to do it varies from vehicle to vehicle. The braking rating is affected by driver skill.

Cornering
This rating is a reflection of a vehicle's ability to handle lateral g-forces. It is used in conjunction with the Cornering Table, explained below, to determine the maximum speed at which a vehicle can handle a given curve. This rating is typically the most sensitive to driver skill.

Top Speed
This is the highest velocity, in kilometers per hour, that a vehicle can achieve on a straight, level surface. It is not affected by driver skill.

Range
This is the longest distance, in kilometers, that a vehicle can travel on a single tank of fuel. It is not affected by driver skill, but may be modified according to driving conditions.

Millennium's End uses the metric system. The table below should make conversions between the English and Metric systems convenient.

Metric/English Unit Conversion Table

Metric	English
1 meter	1.1 yards
20 m	22 yds.
50 m	55 yds.
100 m	109 yds.
1 kilogram	2.2 pounds
20 kg	44 lbs.
50 kg	110 lbs.
100 kg	220 lbs.
1 kilometer (or kilometer/hour)	.6 miles (or miles/hour)
20 km (kph)	12 miles (mph)
50 km (kph)	31 miles (mph)
100 km (kph)	62 miles (mph)

English	Metric
1 yard	.9 meters
20 yds.	18 m
50 yds.	46 m
100 yds.	91 m
1 pound	.5 kilograms
20 lbs.	9 kg
50 lbs.	23 kg
100 lbs.	45 kg
1 mile (or miles/hour)	1.6 kilometers (or kilometers/hour)
20 miles (mph)	32 km (kph)
50 miles (mph)	80 km (kph)
100 miles (mph)	161 km (kph)

Cornering Table

Radius (m)	Curve description
5	Right-hand turn into a narrow alley or driveway. Extremely sharp hairpin on a winding country road.
15	Right-hand turn into a two-lane road. Left-hand turn into a narrow alley or driveway. Hairpin curve on a country road.
30	Turn into a four-lane road. Sharp curve on a country road. Tight highway cloverleaf.
50	Turn into a four-lane or larger road, cutting across lanes (i.e., making a left-hand turn from the right-hand lane). Hard turn on a country or suburban road. Typical highway cloverleaf.
80	Pronounced curve on a country or suburban road.
120	Typical curve on a country or suburban road.
175	Gentle curve on a country or suburban road.
250	Very gentle curve on country or suburban road. Typical curve for an interstate highway.

	Radius of Curve (meters)							
Cornering Number	5	15	30	50	80	120	175	250
	Maximum speed on curve (kph)							
1	15	35	45	65	75	95	115	125
2	15	35	45	65	85	95	125	145
3	25	35	55	65	85	105	125	145
4	25	35	55	65	85	105	125	155
5	25	35	55	75	95	115	135	155
6	25	45	55	75	95	115	135	165
7	25	45	55	75	95	115	145	165
8	25	45	65	85	95	125	145	175
9	25	45	65	85	105	125	145	175

Thresholds and Skill Rolls

Those vehicle characteristics which are affected by driver skill—namely acceleration, braking, and cornering—have thresholds. Thresholds mark the point at which a vehicle's performance requires the driver to make a skill roll. In other words, **require a skill roll** only **when the driver is attempting to push the vehicle's performance beyond its threshold level.** Require an individual roll for each threshold crossed. Obviously, no driver can succeed in a maneuver which exceeds the vehicle's performance limitations.

The use of thresholds and the effects of driving rolls are explained here:

Acceleration

As explained above, the acceleration limitation is the fastest a vehicle can add to its speed. A vehicle's acceleration threshold is the fastest a driver can make the vehicle accelerate without making a skill roll. Typically, vehicles with manual transmissions have higher acceleration ratings than similar vehicles with automatic transmissions. However, the difference between the threshold and the limitation is also typically larger with manual transmissions.

A successful roll against the appropriate skill/subskill indicates that the operator may accelerate up to the vehicle's acceleration limitation. A failed roll indicates that the operator cannot exceed the threshold level.

Vehicle Crash Table

Overspeed (kph)	Result
10	The vehicle completes the corner, but sideslips three meters. Provided it strikes no objects while sideslipping, and the path is unobstructed, the vehicle may continue at speed.
20	The vehicle completes the corner, but sideslips five meters. Provided it strikes no objects while sideslipping, and the path remains unobstructed, the vehicle may continue with a twenty kph loss of speed.
30	The vehicle skids ten meters halfway through the corner. The driver must make an additional roll. Provided the vehicle strikes no objects while sideslipping, and the path remains unobstructed, success indicates that the vehicle may continue with a forty kph loss of speed. Failure indicates that the vehicle spins out of control, and will skid to a stop facing a random direction, with possible damage to the vehicle and/or the occupants.
50	The vehicle skids wildly halfway through the corner. The driver must make an additional roll, with a -20 modifier. Provided the vehicle strikes no objects while skidding, success indicates that the driver may bring the vehicle to a stop, facing a random direction and at a random location (typically thirty to eighty meters outside the curve, depending on velocity) with little or no damage to the vehicle or occupants. Failure indicates that the vehicle spins out of control, and will skid to a stop facing a random direction with probable damage to the vehicle and occupants. Lightweight or topheavy vehicles will roll.
60	The vehicle skids wildly halfway through the corner. Lightweight or topheavy vehicles roll automatically. In all other cases, the driver must make an additional roll, with a -20 modifier. Provided the vehicle strikes no objects while skidding, success indicates that the vehicle spins out of control and will skid to a stop facing a random direction and at a random location (typically forty to ninety meters outside the curve, depending on velocity) with possible damage to the vehicle and occupants. Failure indicates that the vehicle rolls.
70+	The vehicle rolls.

Critically failed rolls may (at the GM's option) result in the vehicle stalling, or in damage to the clutch or transmission. Require just one roll per acceleration, regardless of how long the driver accelerates.

Braking

Braking represents the fastest a vehicle can decelerate. Vehicles equipped with anti-lock brakes typically decelerate faster than those without, and have higher thresholds.

A successful roll indicates that the vehicle may slow at its braking limitation. An unsuccessful roll indicates that it may only slow at its threshold. A critically failed roll may mean that the vehicle swerved or skidded during braking, especially if conditions are bad. This may lead to a collision. Anti-lock brakes, of course, reduce this possibility.

The Braking Distance Table, in the sidebar, lists the total distance required to come to a complete stop from various speeds, by limitation or threshold. To use it, reference the braking limitation of the vehicle (if the driver succeeded in a Driving skill roll), or its braking threshold (if he or she didn't) by the vehicle's current speed to determine the total distance needed to come to a complete stop. Most drivers don't know precisely how

Back in Miami after raiding a smuggler's compound in Cuba, Laenna notices that she is being followed. A black Porsche has been tagging her on the freeway, following even when she picked up speed. Attempting to shake the pursuer, Laenna shoots down a cloverleaf off-ramp. The Porsche follows. Laenna is driving her Corvette, which has a cornering threshold of three and limitation of seven. The GM states that the ramp has a radius of fifty meters. Laenna wants to push her speed to the limit—according to the Cornering Table, the Corvette's limitation allows it to take the curve at seventy-five kph. She slows to this speed as she approaches the ramp. As Laenna takes the curve, Roselyn makes a roll against her Drive/Automobile skill, which totals 55. She rolls a 44, and Laenna successfully takes the off-ramp at seventy-five kph.

The black Porsche 911 tries the same thing. It has a limitation of five and threshold of two. With a successful roll, it can also take the curve at seventy-five kph. The GM states that it is slowing to that speed as it enters the ramp, then makes the driver's roll. A failure! The GM calculates the Porsche's overspeed. Its threshold of two gives it a maximum threshold speed of sixty-five kph. Its overspeed, therefore, is ten kph (75kph - 65kph = 10kph). According to the vehicle crash table, a ten kph overspeed causes the Porsche to sideslip three meters—just about the distance to the guardrail. The GM states that the Porsche skids and strikes the rail, sending out a shower of sparks, but continuing to pursue at sixty-five kph.

much space they need to stop, so when a player asks to look at the table, have him or her make a Driving skill roll. A failure indicates that the character's estimate is off, so give the player a false distance.

Cornering

The effects of cornering are more complex than those of acceleration and braking. As mentioned above, cornering is based on a vehicle's ability to handle lateral g-forces. Additionally, the vehicle's speed and the size of the curve being negotiated also affect the vehicle's cornering ability.

The Cornering Table gives the maximum speed at which a given curve may be safely taken by any vehicle. To use the table, determine the radius of the curve by reading the curve descriptions at the top. Then reference that radius by the cornering threshold or limitation rating of the vehicle. If the driver doesn't want to make a skill roll, or fails the roll, use the threshold value. If the driver succeeds in a Driving roll, use the limitation. The result on the table is the maximum safe speed at which the curve can be taken.

If the maximum safe speed is exceeded, the vehicle may crash. **Determine the vehicle's overspeed by subtracting the maximum safe speed from the vehicle's actual velocity.** Using this overspeed number, look up the crash result on the Vehicle Crash Table.

Chase Scenes

The chase scene is one of the great elements of modern adventure fiction, and sooner or later every *Millennium's End* campaign has one. The most important factor in most vehicle chases is the distance between the vehicles. The rules to this point deal in vehicle speeds. Converting differences in speed to changes in distance is very easy. **Every five kilometers per hour of speed difference between vehicles converts to three meters of distance per turn** (this conversion is not entirely accurate, but it works well for the game). In other words, if two vehicles start even with one another, and one vehicle is moving five kilometers per hour faster than the other, then at the end of one turn it will be three meters ahead. Use this conversion to determine the range between vehicles during firefights or whenever else it is necessary.

Braking Distance Table

Threshold or limitation	Distance required to come to a complete stop (meters)										
	Speed (kph)										
	25	50	75	100	125	150	175	200	225	250	275
2	5	10	15	20	25	30	35	40	45	50	55
3	8	15	23	30	38	45	53	60	68	75	83
4	10	20	30	40	50	60	70	80	90	100	110
5	13	25	38	50	63	75	88	100	113	125	138
6	15	30	45	60	75	90	105	120	135	150	165
7	18	35	53	70	88	105	123	140	158	175	193
8	20	40	60	80	100	120	140	160	180	200	220
9	23	45	68	90	113	135	158	180	203	225	248

Most automotive chases play out on public thoroughfares, and are fraught with pedestrians, vehicles, and other hazards. It is up to the GM to determine the density of traffic and any other factors which affect vehicle chases. If traffic is heavy, require a driving roll every few turns as drivers attempt to weave through it. A failed roll may mean that the driver simply can't go any faster than the traffic speed, or even that there has been an accident. Of course, a gutsy character can always resort to drastic measures such as driving on a shoulder or sidewalk, or in an opposing lane, if the situation warrants.

Crashes

Vehicles involved in firefights or high-speed driving, or even typical urban driving, may become involved in a crash. Determining the effects of an accident requires some imagination on the part of the GM, although these rules provide guidelines on the magnitude and nature of damage taken by vehicle and occupants.

If a vehicle strikes a fixed object dead on, the crash speed is equal to the vehicle's speed just prior to the crash (if the object is a guard rail or other device that may collapse and absorb some of the damage, reduce the crash speed by fifteen or twenty kilometers per hour). If one vehicle strikes another head on, the crash speed is equal to the total of both vehicles' speeds just prior to the crash. If a vehicle strikes another from behind, the crash speed is equal to the speed of the faster vehicle minus that of the slower vehicle. Finally, if a vehicle sideswipes a stationary object or other vehicle, the crash speed is equal to the lateral speed of the vehicle. The lateral speed of a vehicle gently changing lanes is about five or ten kilometers per hour, whereas that of somebody attempting to rapidly weave through traffic may be more like twenty or twenty-five kilometers per hour (increase the effective crash speed for sideswipes by twenty or thirty kph if the vehicle is moving much faster than the object it struck). Automobile bumpers are designed to absorb some damage, so subtract ten kph from the crash speed for a front or rear-end crash.

Once the crash speed is known, find the delivered damage for the crash, in total Trauma Levels, by referencing the impact velocity on the Fall Damage Table (p. 113). Then use the Crash Results Table to determine the effects on the vehicle. The effects as described there are rudimentary and general in nature—use discretion and imagination to make the crash results realistic and vivid.

The effect of crashes on vehicle occupants are determined in much the same way as major impacts or falling damage (see Chapter Three). If an occupant is not wearing a safety belt, he or she will take Delivered Damage equal to half that taken by the vehicle, and may be thrown from the vehicle. If the occupant is protected by a safety belt or airbag (typically available only to front seat occupants, if at all), reduce total the damage taken by an additional fifteen trauma levels. If both are employed, reduce the damage by twenty-five trauma levels. The distribution of this damage is handled the same as for major impacts and falling, in Chapter Three.

Crash Results Table

Total Damage to Vehicle (TL)	Effect
10	Body damage.
20	Body damage.
30	Minor system damage. Cornering limitation drops by one.
40	System damage. Cornering limitation drops by two, top speed drops by twenty-five.
50	System damage. Acceleration limitation drops by two, cornering limitation drops by three, top speed drops by fifty.
60	Major system damage. Acceleration limitation drops by four, cornering limitation drops by four, top speed drops by 100.
70	Vehicle undriveable.
80	Vehicle totalled.
90	Vehicle crushed.

Using Computers

Millennium's End is a game set firmly in the information age, and computers are often an important adventuring tool. Of course, the real advantage of computers lies not in the machines themselves but in the information they afford. Access to networks is the key to this information.

The GenNet and Other Networks

Computer networks connect computers, databases and other information sources all over the country and the globe. There are thousands of networks all over the world, some connecting just a handful of office PCs, others spanning hundreds of major computers all around the globe. In *Millennium's End*, the biggest and most useful network around is the GenNet, a huge public network in the United States.

The GenNet was introduced in 1995 to efficiently connect all government agencies to one another, and to business and private homes. By 1999, the GenNet has grown to become one of the preferred methods for handling information, and has eclipsed all other networks in the U.S. The GenNet does not extend beyond U.S. borders, but it can be used to connect to other networks around the world.

Before an explanation of the GenNet or any network can make sense, one must be familiar with its basic functions. To connect to the GenNet, a user must have two things: a physical connection and an account. Connections are made through dedicated lines, regular telephone service, or cellular links. Dedicated service is available in most areas of the U.S.—one simply plugs a standard cable from his or her computer into a wall jack, just like plugging in a telephone. In areas where dedicated service is not available, a modem connection can be made by regular telephone. Unfortunately, modem connections do not have the same performance levels as dedicated lines, so some GenNet services might be restricted. Cellular GenNet service is available anywhere normal cellular phone service is, although the performance level varies. Most portable computers sold in 1999 have cellular GenNet links built in. Of course, as with standard telephone service, one must pay to have any form of GenNet connection activated. Libraries, public buildings, and large hotels often have public-access GenNet connections, the use of which is billed to the user's account.

Which brings up the second requirement for GenNet use: an account. Every user has one or more accounts, each represented by an "address." An address is sort of like a phone number—a way to reach the user. GenNet addresses read something like normal mailing addresses, but they do not represent a physical location. In fact, physical locations are meaningless on the net—reaching someone across the country is no more or less difficult or expensive than reaching someone next door. GenNet addresses may represent mobile accounts, fixed or "host" accounts, or gateways to other computer networks.

Mobile accounts are the most common type for regular consumer or business users. They always represent the user or the user's computer, regardless of where it is plugged in. When a businessman on the road plugs his laptop into a hotel GenNet connection hundreds of kilometers from his office, the computer automatically announces its location to the

net, and any waiting information is instantly routed there. Whenever a mobile account user is off-line, messages or data are stored somewhere out in cyberspace, waiting until he or she reconnects.

Host accounts are permanent and fixed, representing computers that never move and are never shut down. Generally, host computers are large machines belonging to businesses or government agencies. They usually provide some public or commercial service, like library databases, shopping services, or interactive entertainment connections.

Gateway accounts are sort of like hosts: they are permanent and fixed. Gateway computers allow access to other networks. In order to reach an address on another network, the user must include the address within that network in the top line of the gateway site's GenNet address. Access through a gateway is sometimes so simple that one can hardly tell that the target account isn't actually on the GenNet, or it can be totally closed to all but specific authorized users.

There are two basic types of interaction on the GenNet: message-sending and direct interaction. Message sending is the simplest: the user just bundles up one or more documents and sends the package to the target address. The package can contain any sort of data: electronic mail (e-mail) messages, graphics, sound or video files, text, output files from any application, or any combination thereof.

Direct interaction is a little more complex—like a telephone conversation, it requires two or more parties on the line. The connected parties do not have to be people—one or all can be computers. A direct interaction allows a user to browse a database, order from a shopping service, converse with another user, or access software on a distant machine.

Other computer networks operate in more or less the same way as the GenNet, although few are as easy to use or offer the same range of utility. The biggest global network is the Internet, which connects commercial organizations, government agencies, and major universities around the world. There are thousands of gateway sites on the GenNet that will connect a user to the Internet and vice-versa.

There is more information on the GenNet in Chapter Four.

Hacking

Hacking is the process of utilizing networks to enter other computers and accounts without authorization. Although unethical and strictly illegal, it has its uses in the *Millennium's End* world, as all sorts of useful information is stored in databases belonging to business, the government, universities, and the military.

Hacking techniques are far too varied to cover in any detail. In general, though, hacking tasks can be broken into four categories: locating information, bypassing security, covering retreat, and using foreign machines. Locating information sources, defeating security, and negotiating unfamiliar subnets and machines are all important and often difficult tasks, but they are generally all pretty straightforward. The real art of hacking comes not from getting to the information, but from not getting caught. A successful hacker must be good at covering his or her tracks.

A hacker cannot be caught electronically—he or she must be captured physically. The only way to do that is to track the hacker's connection back to its starting account or physical origin, then go after the owner of the account or the person at that origin point. To keep this from

happening, a hacker can employ a number of tricks to cover his or her trail. The hacker can connect with one host machine, infiltrate another account, then re-enter the net through the new account. An attempt to trace the connection will point to the cover account. The hacker can also try to trick the network software into covering up his or her account activity. Neither of these techniques is foolproof, but both will make it difficult to track the hacker.

Hacking attempts require rolls for each of the four associated tasks. Finding an information source is probably the easiest task: if the hacker is charting new ground, require a Computer Operations/Civil Systems or /Networks roll, with a +30 modifier. Forgo this roll if the hacker is already familiar with the target system.

Once the target system is located, the hacker may choose to take as many steps as desired to cover his or her tracks. For each attempt to cover tracks, require one Computer Ops/Networks and one Computer Ops/ Security roll, and two hours of the operative's time. Success gives the hacker some additional protection against an investigation (see below), should he or she blow things at the target. A critical failure at this stage will bring on its own investigation. These safety measures can be implemented beforehand, and left ready for instantaneous use later. The hacker must state beforehand that he or she is using a prepared track-covering route, however.

When the hacker is confident that his or her butt is covered, the next step is breaking into the target machine. Typical commercial security packages take a half-hour or so to defeat, requiring the hacker to make a Computer Operations/Security roll with a -30 modifier. A good custom package will increase this modifier to -50, while the near-impregnable security of a bank or military subnet might require the roll to be made by 70 or more. Failure indicates that the hacker cannot defeat the security, although a second roll can be made after another half-hour of work. Failure by forty or more will alert the host machine, ratcheting up the modifier for future rolls by an additional -20. A critical failure will incur an investigation.

Once the external security is broken, the hacker has the run of the target system. If the system is a single small computer, the desired data may be easily obtained. If it is a large subnet, the hacker might have to locate a specific machine within the net and bypass additional security—in short, start through the above process all over again. In either event, require a Computer Operations/Civil Systems or /Networks (depending on whether the hacker has accessed a single machine or another network) to find the data or the target machine within the net.

Getting Caught

To catch a hacker, an investigator must first notice the hacker's activity on his or her system, then trace the hacker's connection through the net to a specific account and/or physical connection point. That's no easy task, and it requires a great deal of resources. While a large corporation or government agency will pursue a hacker with haste and determination, smaller companies, organizations, and individuals must rely on the police, if they even notice the hacker's activities. Tracing a hacker is difficult, and the success rate isn't high unless the trace is begun immediately. Unless such a small organization has some compelling reason to pursue the hacker, police response isn't likely to be very determined.

If the hacker made no attempt to cover his or her tracks, the investigator must make a Computer Operations/Networks roll with a -30 modifier to identify the hacker's GenNet account (assume any competent investigator will have a Computer Operations skill of 50 to 60, with a Networks subskill of 20 to 30). He or she can then query the authorities about the identification of the user and the physical connection point of the account at the time the hacking was noticed, and send the cops to that location to begin a conventional investigation. If the hacker tried to cover his or her trail, the investigator will have to make the same set of rolls for every successful step taken (see above). For each step, apply a negative modifier of 30 plus the amount by which the hacker made his or her roll when the step was implemented.

Sometimes the investigator doesn't want to get the authorities in on the act. When that's the case, the investigator can find the physical connection point and identify the intruder by hacking the network control system. Such an attempt requires an unmodified Computer Operations/Networks roll, followed by a /Security roll at -50 and a /Civil Systems roll at +30.

In any of these cases, the investigation can only begin if the hacker bungles his activities and is noticed. What happens when the hacker and his account are identified depend entirely on the nature and circumstances of the crime.

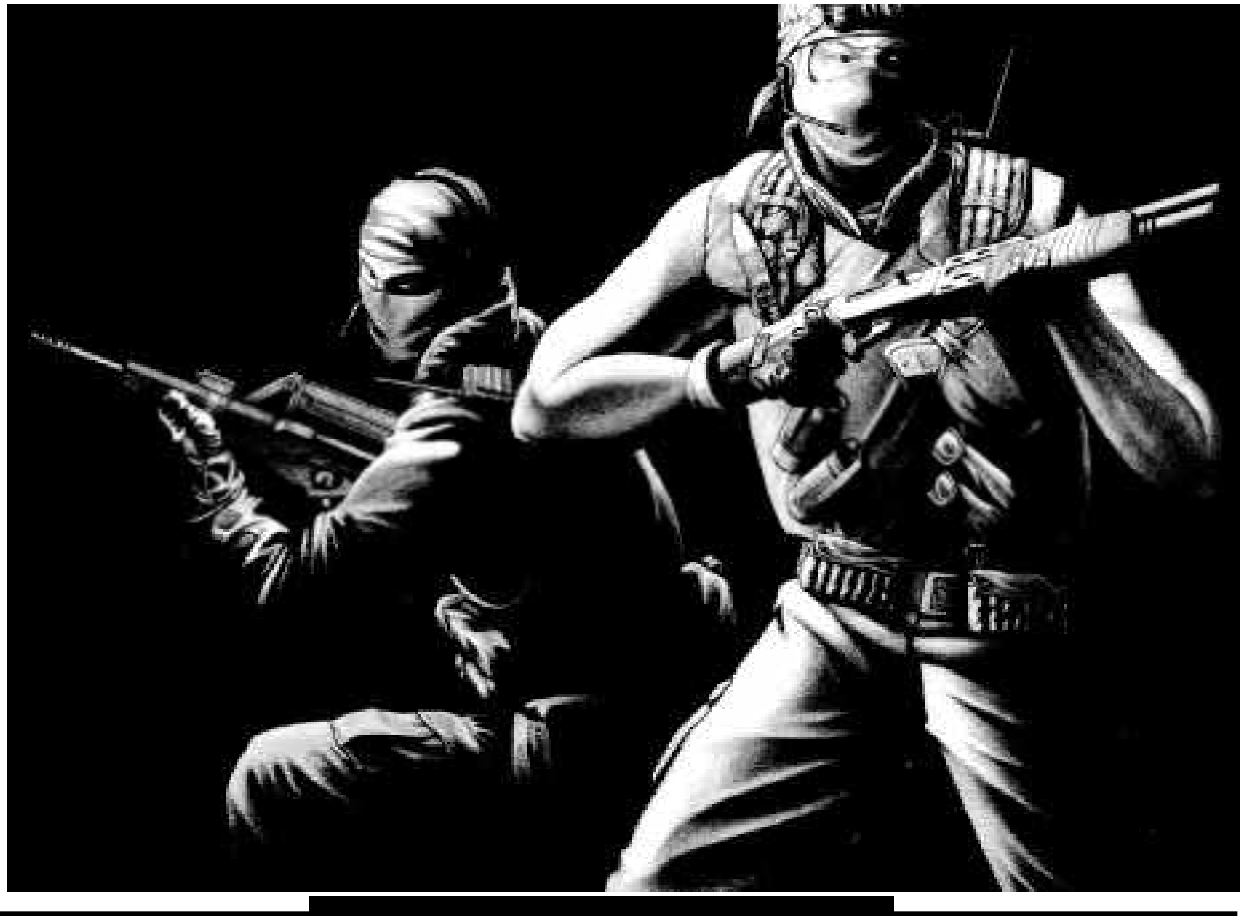
BlackEagle Resources

Millennium's End characters work for BlackEagle/BlackEagle, mentioned throughout this book and explained in detail in the fourth chapter. BlackEagle offers a number of resources for its operatives, including equipment purchases, forensic analysis, information searches, and medical and legal backup. The rules for exploiting these resources are covered here.

L&P Assistance

The bulk of the resources most commonly requested by BlackEagle operatives—information, equipment, and forensic analysis—is provided by the Logistics and Procurement Branch. From its labs in Atlanta and London, L&P maintains databases, stockpiles equipment, enhances and analyzes photographs and video, matches fingerprints and DNA samples, accumulates intelligence, and examines (and occasionally manufactures) documents, all on the request of field operatives.

L&P does a lot with what are really not very elaborate facilities. The entire L&P staff at Atlanta is just over a dozen people, with fewer than ten in London. As a result, not every request for assistance can be processed with equal priority or speed. The L&P Assistance Table helps determine the success of a given request, based on its magnitude and the rank of the requesting operative (operative rank is covered in Chapter



Four). Whenever a character makes a request for L&P assistance, determine the magnitude of the request and consult the L&P Assistance Table. The resulting number is the likelihood that the request will be addressed immediately. Failure indicates the request is delayed for about twelve hours—for every ten points by which the roll is missed, increase the delay by another twelve hours. Any time a 90 or higher is rolled against a difficult or unusual task, L&P simply cannot handle it.

There are a number of ways players can increase the odds of immediate service. Obviously, a high rank helps, so it's a good idea to make the request in the name of the cell leader, or the highest-ranking member of the cell. Also, some offices (like Miami) have L&P representatives who can carry out minor tasks with no help from Atlanta or London. When this is the case, give a +10 modifier to the roll. Finally, operatives can prioritize their requests according to importance. There are four levels of priority: *Routine* tasks have no immediate importance; *Priority* tasks are important but not immediately critical; *Immediate* tasks are critical to the success of the assignment, and must be attended to quickly; and *Flash* tasks are those upon which the life of one or more operatives hangs. If a player does not specify a priority level, use the L&P Assistance Table without modification. If the task is *routine*, use the table as though the requesting operative's rank were one level lower than it actually is (for example, use the Operative column if the character's rank is really Vet 1). If the task is *immediate*, add two levels to the requesting operative's rank, and add four if the task is of *flash* urgency.

There are no hard-and-fast rules concerning the magnitude of a given requested task, and the categories on the L&P Assistance Table are not exactly self-explanatory. To provide a guideline, here are a few of the services L&P provides, listed with the task magnitude for the table.

In-house and public database searches include just about anything that could possibly be found in a well-stocked public library, as well as criminal records from the F.B.I. and Interpol, credit agency reports, and most civil and court records from the U.S. and Europe. Any check against these databases using a name, alias, keyword, or well-defined subject heading falls under *Routine Database Searches*, on the first line of the L&P Assistance Table.

L&P can locate expensive or hard-to-find equipment for operatives, usually at below normal retail cost. Relatively common items can be procured on short notice, although obscure items (those marked with an "V" on the equipment list) may take a little longer. Treat such requests as *Routine Equipment Purchases*, on the first line of the L&P Assistance Table.

A database search starting from vague parameters or requiring access to restricted information, or very unusual or expensive equipment requests come under the heading *Difficult Database Searches/Difficult Equipment Purchases*, on the second line of the L&P Assistance Table.

Simple forensics lab tasks, such as developing film, lifting and identifying fingerprints, matching photographs to criminal records, or identifying taggants in explosive or gunpowder residue come under *Routine Laboratory Analysis*, the third line on the L&P Assistance Table.

Lab tasks that require more effort or equipment, such as DNA identification, ballistic analysis, class characteristic comparisons, and photographic forensics come under *Major Laboratory Analysis*, the fourth line on the L&P Assistance Table.

Finally, there are the *Difficult Laboratory Analysis* tasks, including chemical analysis, photo- and video-enhancement, and medical forensics (rarely ever done). These are handled using the last line on the L&P Assistance Table.

The L&P Assistance Table provides guidelines on the availability and timeliness of Logistics and Procurement Branch resources. It says nothing about the actual time required once the service is begun. A database check may only take a few moments, with the results sent directly to the operative's laptop by GenNet. On the other hand, a specialized equipment purchase may take days to process and deliver. Most lab work takes a few hours. The final time requirement for any resource request must be left to the GM.

Other Resources

L&P provide specific resources for operatives on a case-by-case basis. There are a few other benefits offered by the company, as well as a few resources that BlackEagle specifically does not offer. In general, BlackEagle operatives must be self-sufficient—that's the flip side of working for such a hands-off organization, a company that lets its operatives do their own work, without interference. The benefits listed here are last resort options, to be used sparingly only when really needed.

Medical Support

BlackEagle pays all medical bills—period. In such a dangerous line of work that means a lot, but it doesn't mean player characters have no responsibilities. Operatives are expected to look out for their safety and that of their cell members. Cells are generally set up so that at least one person has some decent emergency medicine skills—and that person should keep the necessary gear and supplies handy. When on assignment, a cell should always plan for the worst and know what it will do should someone's life be in danger. In a bad situation, when things have gone dramatically wrong, BlackEagle can arrange for emergency medivac—but that's the sort of thing operatives should prepare for themselves, and too much leaning on the company will not be looked on kindly.

L&P Assistance Table

Chance of getting immediate L&P assistance

Type of assistance required	Rank of requesting operative†						
	Rookie	Operative	Vet 1	Vet 2	Vet 3	Vet 4	Vet 5+
Routine Database Search/ Routine Equipment Purchase	70	80	85	90	100	100	100
Difficult Database Search/ Difficult Equipment Purchase	55	60	65	70	80	90	90
Routine Laboratory Analysis	40	45	50	55	60	70	80
Major Laboratory Analysis	20	25	30	35	40	50	60
Difficult Laboratory Analysis	10	15	20	25	30	35	40

† Subtract 1 level from the requesting operative's rank if the request is *routine*. Add two levels if the request is *immediate*, and four if it is of *flash* urgency.

Legal Aid

Sometimes, through the normal course of their jobs, operatives get into trouble with the law. As with medical benefits, legal help is unconditional. But once again, it is the responsibility of every operative to avoid trouble. BlackEagle operatives are not above the law—and they shouldn't behave like they are.

Contacts, Vehicles, and Communication

Many people assume that a company like BlackEagle must have a lot of contacts in high places. That's partly true, but the contacts aren't with the company, they're with individuals within the company. Operatives are encouraged to make connections with local businesses, law-enforcement organizations, and government agencies—but they can't rely on the company to make those connections for them.

Operatives should also not rely on the company for transportation. While many large offices have one or two company cars for administrative use, operatives must use or acquire their own vehicles for use on assignment.

BlackEagle does attempt to provide secure communications links for its operatives. Voice and data transmissions between company offices and facilities are all encrypted, and many go by dedicated circuits. The Admin Branch also has a courier system, for safe transportation of documents and hardware. Many offices also offer secure links to operatives' homes, and "untraceable lines" for data and voice communications out of the office.

Emergency Assistance

Company philosophy holds that effectiveness is based on competence and esprit. True esprit comes from the knowledge that the organization backs its operatives one-hundred percent. That means that no operative will be cut off or left behind—ever. Should an individual or group of operatives ever find themselves in a real mess—captured by a hostile government, trapped behind enemy lines in some remote bush war, or jailed by police for scouting out a corporate compound—they can rest assured that BlackEagle and its operatives will do everything in their power to get them back.

CHAPTER THREE
COMBAT

Combat in *Millennium's End* is divided into two categories: Hand-to-Hand combat and Projectile combat. Projectile combat involves fighting from a distance by throwing or shooting weapons. Hand-to-Hand combat, which may or may not involve weapons, takes place at ranges close enough for combatants to directly strike one another.

This section explains the rules for resolving both types of combat, and for determining the damage a character sustains when wounded. Additionally, this section covers the damage that may result from other sources, such as explosions and automobile accidents.

COMBAT IN PLAY

In general, it's not necessary to keep perfect track of the order of events occurring in the game. However, the arrangement of events during combat has life-or-death significance, so it's critical to keep close control over them.

The *Millennium's End* combat system is detailed and realistic. It is also fast-paced and fun. Nevertheless, running combat on a turn-to-turn basis slows the game down somewhat, and, if overused, can ruin the tension of a carefully-wrought adventure. Use judgement when moving into a combat scene, and only go to a round-by-round format when necessary.

Running Millennium's End Combat

Millennium's End has a very powerful, realistic, and flexible combat system. That doesn't mean that it is primarily a combat game. The opposite, in fact, is true—the realism of *Millennium's End* generally results in careful players or dead characters. Furthermore, despite the fast pace of *Millennium's End* combat, running a game from turn to turn is rigid and dull compared to more free-form roleplaying, and it ultimately erodes at the tension and excitement that makes a tactical scene a dramatic part of a well-constructed adventure.

As you run tactical scenes, keep things as free-form as possible. Go to turns only when necessary—don't require initiative rolls until the fight is joined, or when the order of the character's actions is critical. Feel free to slip in and out of turns as the combatants engage and disengage. Throughout the scene, build on the tension of unfolding events and the uncertainty that accompanies even the most well-planned operation. Describe events vividly and realistically. Use miniatures, maps, or drawings to help players visualize those events in which they are involved, while doing your best to keep from them those they cannot see. In short, remember that despite its precision, this

COMBAT TIME

Time in the *Millennium's End* world is measured in the same manner as in our world—in seconds, minutes, and hours. **For keeping track of combat**, however, **events are handled in two-second turns**. Most events that occur during combat require two seconds

or less to transpire, but characters are rarely capable of carrying out more than one action in a two second span. You may find that a lot of combat—especially firearm combat—resolves itself it five or ten turns, which is realistic.

During one turn, all of the steps required to resolve combat events are followed. In the following turn, the same steps are followed again, and so forth, until the entire combat is resolved. Of course, any steps which are not required during a given turn may be skipped.

Order of Events

Running combat is a largely administrative act. Whereas the players must decide upon the actions of their characters and their group, the GM is responsible not just for the opponents, but also for maintaining order and ensuring that events transpire smoothly, realistically, and consistently. To keep things under control, follow the steps listed here each combat turn.

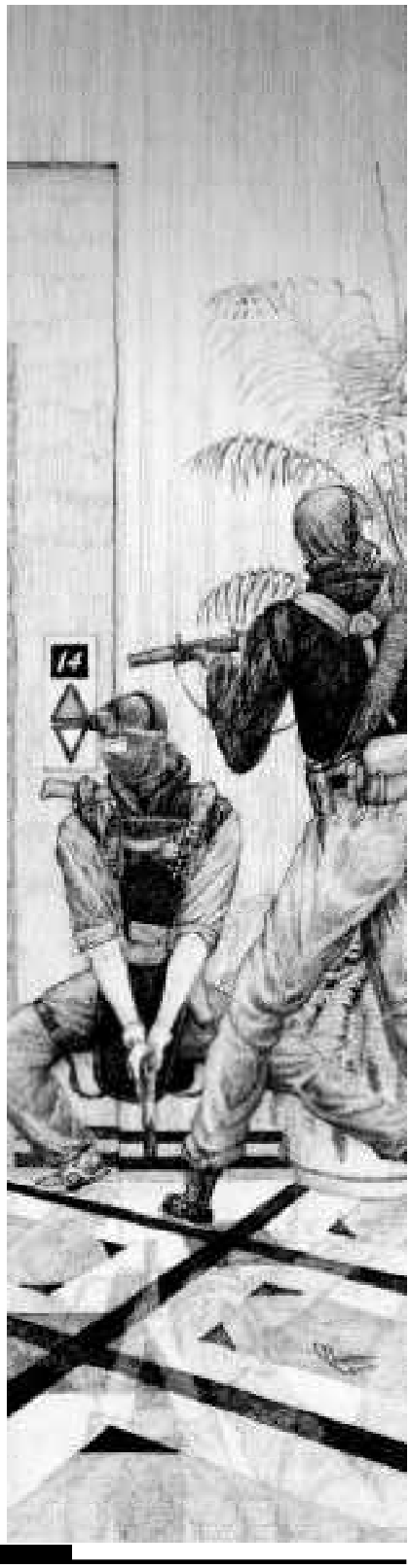
Begin each combat turn with initiative determination, to establish the order in which the involved characters may act. Initiative is explained in more detail below. Once the order of initiative is established, allow the first combatant (player character or NPC) to act. He or she may attack immediately, wait to attack or defend later in the turn, or carry out a non-combat actions (such as running, shouting, or attempting a non-combat skill task). Some actions may carry over from turn to turn, if they require more than two seconds to transpire.

Assuming the character decides to make an attack, he or she must start by identifying the victim. If it's a hand-to-hand attack, the victim must then decide whether or not to defend. If the victim does, that will be the his or her only physical action for the turn. Make the defense roll before the attack, because it is usually simpler, and if successful the attack will automatically fail and no attack roll will be necessary. Of course, even if the defense succeeds and no attack roll is required, the attacker's action for the turn is over.

If the victim decided not to defend, or if the defense roll failed, then the attacker may make his or her attack roll. Choose a Body Map that appropriately represents the victim, place an overlay on it, and make the attack roll. The overlay will indicate if and where the attack struck the victim.

If the attack succeeded, the next step is damage determination. For firearms, the Delivered Damage is predetermined, based on the type of round being fired. For other attacks, the Delivered Damage requires a roll based on the attacker's Damage Rating and the Damage Factor of the weapon. Any armor protecting the victim will reduce the level of Delivered Damage, sometimes negating all of it. Armor may also convert the remaining damage from its original type to Impact damage, which generally has less severe effects.

Once armor has been accounted for, the effects of the damage on the victim can be determined. The Trauma Level of the wound, derived by modifying the Delivered Damage for the body zone hit and the mass of the victim, determines all other effects—the most important of which is Impairment. If the victim is impaired by the wound, he or she will suffer a negative modifier for some or all actions. The victim may also have to make a roll to avoided being stunned. Very bad wounds can also cause serious bleeding and even shock.



Important note: The use of martial arts may allow a character to modify or disregard some of the hand-to-hand combat rules covered here, especially initiative, defensive maneuvers, damage, and wrestling. Check out the special rules on martial arts, beginning on page 94, and the Kata skill rules on page 58.

Once the attack and any resulting damage are resolved, the next highest initiative holder who has not already acted may do so. This process continues until every combatant has had a chance to act, remembering that combatants who made defensive rolls may not make attacks, and vice-versa. Then the next turn begins, with initiative. The process goes on until combat is resolved.

This may seem like a lot of work. In actuality, the above steps go quickly and easily, and many are not even required in a given combat turn. A successful defense, for example, nullifies the need for the succeeding steps. All of the steps are explained in detail below.

Trauma Levels and the Damage Table

Millennium's End uses a non-ablative damage system that rates individual wounds on a one-to-twenty-five scale of severity. The scale operates in units called "Trauma Levels," with a TL of one being the least damaging and twenty-five being the worst. Any wound with a TL higher than twenty-five is instantly fatal. Trauma Levels are not added together unless two or more wounds occur in the same Body Zone, so a character may survive several near-fatal wounds at once.

The Trauma Level system indicates the severity of a given wound, but says nothing about its effects. In *Millennium's End*, a wound may cause impairment, unconsciousness, blood loss, broken bones, and shock. All of these damage effects are found on the Damage Table, on page 106. An intimidating table at first, it's actually quite easy to use. The table is explained further on in this section.

The Delivered Damage of an attack is determined prior to the use of the Damage Table. Using the table and the DD, a GM or player can quickly determine the wound's Trauma Level and all effects. The importance of Impairment and the other effects is explained below.

Determining Initiative

The first step in every turn of combat is initiative determination, which establishes the order in which combatants may act. Initiative can be affected by surprise and held actions.

At the beginning of each combat turn, every combatant must figure his

The Combat Turn

In *Millennium's End*, combat events follow a specific sequence each two-second turn. This structure keeps things running smoothly and helps events unfold consistently and realistically. Every combat turn, follow these steps:

1. Determine initiative. Have each character generate an initiative number by rolling a d10, adding the result to his or her Base Speed, and subtracting the speed rating of the weapon used and any armor worn.
2. The highest initiative holder may act first, or may hold his or her action until later in the turn. If he or she attacks:
   - **a.** The attacker identifies the victim of the attack.
   - **b.** The victim makes his or her defense roll, if he or she can and so desires. If the roll is successful, skip the rest of the attack and go on to step **3**.
   - **c.** The attacker makes his or her attack, placing the appropriate overlay on a Body Map representing the victim and making a skill roll. If the attack misses, go straight to step **3**.
   - **d.** If the attack succeeded, determine the Delivered Damage. For firearms, the Delivered Damage is set, based on the ammunition used. For hand-to-hand attacks, roll (1d10 + 1) for every point of the attacker's Damage Rating, and divide the total by ten. Round off the resulting number, then multiply it by the weapon's Damage Factor.
   - **e.** Account for any body armor worn, or any incidental armor that gets in the way.
   - **f.** Determine the wound's Trauma Level and effects, using the Damage Table.
3. Repeat step 2 for the next initiative holder. A character with a high initiative number who opted not to act earlier in the turn may go at any time before any character with a lower number. Of course, each character only gets one action per turn, so any character who attempted to defend him- or herself may not make an attack until the following turn.
4. When each character has acted, the turn is complete. Return to step 1.

or her initiative number. **To determine initiative, start with the combatant's Base Speed, add the result of a d10, and subtract the Speed of the weapon being used and any body armor worn.** The resulting number cannot be negative—count any negative result as a "zero." A character carrying more than one weapon at a time need subtract only the speed of the weapon he or she will be using that particular turn, and a character not using a weapon does not have to subtract its speed even if it is in his or her hand. Surprise and held actions, both of which are covered just below, can affect initiative numbers. Characters engaged in wrestling always have an initiative number of zero.

The combatant with the highest initiative number may act first, followed by the holder of the second highest number, and so on. When a character is attacked, however, he or she may defend immediately, without waiting for his or her initiative turn. If two characters have the same number, they both act simultaneously. Characters who opt not to act on their turn may do so later. If all combatants opt to wait, no-one acts on that turn. Move on to the next turn and determine initiative again.

Surprise

Surprise is a major tactical resource, and any smart character will try to use it to his or her advantage. Surprise can be a factor in many ways—a character may lay in ambush, sneak up on an alert foe, or stumble across a sleeping enemy. The surprise may be accidental, or the result of a successful Hiding/Creeping or /Concealment roll. The possibilities are endless, so it's left to the GM to determine when surprise is a factor and how it comes about.

It's also left to the GM to determine the exact effects of surprise. In general, **any surprised character has an automatic initiative number of zero.** If all parties are surprised, it's probably best to assume that no-one acts the first turn, and simply move on the next, determining initiative normally. Some circumstances may require that the surprised combatants spend the first turn or more just reacting, especially if the they were caught sleeping or away from their weapons. Again, the possible circumstances are boundless, and good judgement is the only hard rule.

The Attack Overlay System

Unlike many game systems, *Millennium's End* ties the location of a successful hit to the result of the attack attempt, not a roll on some arbitrary table. To achieve this, as well as to make combat flexible and visually engaging, *Millennium's End* uses an overlay system to determine whether and where an attack hits its victim.

The attack overlays are very easy to use. Start by selecting a Body Map from the ones on the inside rear cover—you may even draw your own, if you feel so inclined, as long as it is accurately scaled. Then choose the proper overlay, based on range (for projectile attacks) or the type of action (for hand-to-hand attacks). Place the center of the overlay—the small circle in the middle—on the attacker's aim point. It can be any part of the Body Map—the chest, the head, a hand or leg, or even a point outside of the body, like the location of a held weapon. If the attacker has no preference, or is attacking blind, place the aim point in the center of visual mass. With the exception of the overlay marked "Swing Attacks," it's a good idea to rotate the overlay to some random alignment over the Body Map, to further randomize the results. With Swing Attacks, however, align the overlay so that the arrow appearing along the edge of the image represents the direction of the swing.

Make the attack roll, noting by how much the roll is made or missed. Reference that result on the overlay to determine the success of an attack and its location. With the "Swing Attacks" and "Point Blank Attacks" overlay, a successful roll indicates that the attack hit the aim point. A miss may hit another part of the body, if the amount by which the roll was missed on the overlay indicates a point on the Body Map. With the Projectile Attack overlays, success depends on how well the attacker rolled over the needed amount.

This system is uniquely flexible. If a victim is hiding behind a wall, for example, lay a sheet of paper over the Body Map, covering those areas protected by the wall. If characters attempt to shoot an inanimate object—like the tires of moving vehicle—whip out a quick sketch. It doesn't have to be too accurate, just more or less to scale. Finally, use Body Maps and overlays even when characters are trying to shoot near, but not directly at, a target. If a character shoots over another's head for example, place an overlay with its aim point above the Body Map's head. A near-miss could have disastrous results.

A masked man enters Laenna's apartment through a bedroom window. Laenna is in the living room, so the GM asks Roselyn to make a Perception roll. She succeeds, and the GM tells her that Laenna hears the window being opened. Laenna moves quietly into the hall, and isn't surprised when she sees the assailant at the far end.

The masked man draws a switchblade. Laenna is unarmed, although she has a pistol hidden in the kitchen. The GM calls for an initiative roll. Roselyn rolls a die, getting a 2. With her Base Speed of 19 and no weapon or armor, Roselyn has an initiative number of 21 (19 + 0 + 0 +2 = 21). The GM rolls for the assailant, announcing a result of 24. The assailant goes first.

Held Actions and Getting the Drop

Sometimes a character will want to hold an action, preparing to act on some cue. When that cue is the action of an opponent, the character is said to have "gotten the drop" on the victim.

Any time a character holds an action or has the drop on another, add +5 to his or her initiative roll, if and only if he or she performs the held action.

Hand-to-Hand Combat

Any combat situation in which the combatants are at close quarters and are trying to directly strike each other is hand-to-hand combat. Hand-to-hand combatants employ the Armed and Unarmed Hand-to-Hand skills and their subskills in offensive and defensive actions.

Making Hand-to-Hand Attacks

An attack is an attempt to strike the enemy. Attacks can be made with or without weapons, using the Armed Hand-to-Hand and Unarmed Hand-to-Hand skills. Several different types of armed and unarmed attacks may be made using the appropriate subskills.

When a victim faces a hand-to-hand attack, he or she may try to defend by dodging, blocking, or parrying the blow. When this is the case, it's generally simpler for the defender to make his or her roll before the attacker. Making a defense roll is simpler, and if it succeeds, it renders the attack roll superfluous. Even when the defense roll is made, however, the attacker is still acting, and may take no other action that turn. Rules for defensive actions are outlined below.

Millennium's End uses transparent overlays and Body Maps to determine the success of attacks. To make an attack, choose an appropriate Body Map to represent the victim. Then choose the proper overlay. Use the one marked "Swing Attacks" when making Armed Hand-to-Hand/Swing attacks. When making Unarmed Hand-to-Hand/Punch or /Kick attacks, either overlay can be used. Use the "Point-Blank Attacks" overlay for all other hand-to-hand attacks.

The small circle in the center of the overlay represents the point of aim for the attack. Place it on the Body Map wherever the attack should go. If the attack is being made blindly, or if the attacker has no preference for hit location, place the aim point on the center of visual mass.

The Swing Attacks overlay has an arrow pointing at it, representing the direction of the swing. Like the aim point, it may be placed however the attacker likes. If the attacker has no preference, point it at the victim's leading shoulder. The Point-Blank Attacks overlay has no arrow. Provided the center of the overlay is placed on the attacker's aim point, the alignment of the overlay on the Body Map doesn't matter. In fact, rotating the overlay a little for each attack helps randomize the results.

Once the overlay is in place, make the appropriate skill roll. Like any other use of a skill, attack rolls are made with percentile dice. **The required roll is a total of the character's Talent Base, skill and subskill levels, plus the Inherent Accuracy of the weapon employed.** It should already be recorded on the character sheet, in the Weapons box. Don't forget to **subtract any impairments due to wounds.** If the roll is successful, the attack hits its intended aim point. If not, it may still hit the victim at some other location. Figure out how

much the roll was missed by, and look up that number on the overlay (if the roll missed by more than thirty, the attack missed wide). If the point falls on the Body Map, it indicates a hit. Note which Body Zone was struck.

Often a weapon may be used to attack in several different ways. Most knives, for instance, can be used to slice or thrust. Even a punching character can choose a jab or a roundhouse swing. Always specify which type of action is being made before attacking, as different actions can require different overlays, the use of different skills, and may yield different damage results.

Defending Against Hand-to-Hand Attacks

A combatant who has not yet acted may defend against an incoming attack, even if it's not his or her initiative turn. **The victim must state his or her desire to defend before the attack roll is made** —in fact, it's recommended that the defender make his or her roll first. A combatant may only defend against one attack per turn, and the defensive action constitutes the his or her only action for the turn. **To determine a defense roll, subtract any impairments due to wounds from the defender's skill roll** (including Talent Base and subskill level). A character fending off attacks from a prone position suffers an additional -30 penalty. There are three types of defensive actions—parries, dodges, and unarmed blocks.

Armed Blocks and Parries

A parry or armed block is an attempt to use a weapon, shield, or other object to ward off an attack. A successful roll deflects the attack, leaving the defender unharmed. Blocks and parries are ambidextrous actions, incurring no negative modifiers for off-hand use. Any reasonable object can be used to block or parry an attack.

If an armed defender successfully blocks or parries an unarmed attack, the attacker may be wounded by the defender's weapon, regardless of whether or not the attack roll would have been successful. Compute damage based on half the attacker's Damage Rating and the Damage Factor of the blocking or parrying weapon (these terms are explained below, under Delivered Damage). If the attack is blocked or parried with an impromptu weapon, it's left to the GM to decide on the damage factor for the blocking object (hard, blunt objects generally have damage factors of 1.0 to 1.4). The wound is sustained in region of the body making the attack (typically the hand for punches, and the foot for kicks).

Dodges

A dodge is an attempt avoid an attack by getting out of its way. A successful Dodge roll negates the attack. Although Dodge is an Unarmed Hand-to-Hand subskill, it may be used in armed combat.

Unarmed Blocks

Like the armed block, above, an unarmed block is an attempt to deflect an incoming blow. Unlike the former, however, unarmed blocks are made without a weapon or object. A successful Unarmed Block roll made against an unarmed opponent has the same effect as a parry—the blow is harmlessly deflected. Unarmed blocks may be made with an off-hand, incurring no penalty.

Having the initiative, the assailant lunges. He easily closes the distance of the short hallway and stabs at Laenna's throat. Roselyn attempts a Dodge roll, but fails. The assailant then makes his attack. His Armed Hand-to-Hand/ Swing skill total is 70. The GM places the Point-Blank Attack Overlay on a Body Map showing a standing victim, such that the aim point is on the throat. He rotates it a little to randomize the result, then rolls the dice. The result is 73—three points higher than the assailant's required roll of 70. This means he missed the aim point, but may have hit Laenna in some other location. The GM consults the overlay: a difference of three indicates a hit on Laenna's torso (Body Zone 4).

Unarmed blocks may be made against armed attacks, but will probably lead to injury. A successful roll against an armed opponent means that the damage is automatically taken by the hand or arm used in the block, instead of the target area. This may be advantageous—if, for example, the blocking limb is better armored than the target area, or the blow is aimed at a sensitive area, like the head. Nevertheless, against an armed opponent, a Dodge roll is almost always a better option than an Unarmed Block.

Movement

Most characters walk at a rate of two meters, run at a rate of eight meters, and sprint at a rate of fifteen meters per turn. Characters with Run skill (described on p. 60) may run and sprint somewhat faster. Characters may crawl at a speed up to half their run speed, but for only one-tenth the time (as defined by their endurance). Swim rates are described under the skill of that name.

Rules concerning vehicle movement are covered in Chapter Two.

Movement in Combat

In combat, a character can move up to four meters in a turn and still act without penalty. If a character attempts an attack while moving at any rate from five meters up to his running speed (usually eight meters), apply a -30 modifier to the roll. Normal kicks are not possible when running—only attacks using the arms can be made normally. A running character can make a sacrifice attack—a flying kick or tackle—but will always end up on the ground, in the prone, regardless of the success of the attack. Any critically failed attack roll made while running should indicate that the attacker has stumbled or even hurt him- or herself. Defending oneself is not possible while running. A sprinting character cannot perform any physical actions except a sacrifice tackle.

Whenever a character attempts to withdraw from combat by running away, the opponent always gets a chance to attack, unless he or she has already acted that turn. The fleeing character may not attempt to defend. A character may always try to back out of a fight without losing the option to defend—provided he or she does not move faster than four meters per turn. Of course, a character being fired upon is a target until out of sight or range.

The difference between two characters' running or sprinting rates is the number of meters which can be gained by one character over the other each turn. In other words, if a character with a sprinting rate of fifteen meters per turn is being chased by another with a speed of seventeen meters per turn, the distance between them will close at the rate of two meters every turn, or ten meters after five turns of sprinting. Since all unskilled characters run at essentially the same speed, there is no appreciable gain in most flat-out foot chases. Require Agility, Climb, Athletics/Gymnastics, or any other appropriate rolls as characters hop fences, duck under fallen logs, dodge cars, or stumble down steep hillsides. Then interpret the results of these rolls to decide which party gains on the other. Check the Endurance rules in Chapter Two if the chase becomes a test of stamina. Generally, the only way to stop a pursued character is to tackle him or her.

Being Prone
Any character who falls over, is knocked down, or is crawling or lying on the ground is considered prone. Apply a -30 modifier to any combat action a prone character attempts (except grappling, covered below), and divide his or her Damage Rating in half when determining the damage of any successful hand-to-hand hit. Getting to one's feet requires a full turn, during which a character may take no other actions.

Wrestling

Sometimes during hand-to-hand combat two or more characters will become locked in a wrestling match. Two subskills are used in wrestling situations—Grappling and Combat Throw, both subskills of the Unarmed Hand-to-Hand skill. Their use is explained below. Generally, the goal of a wrestling match is for one combatant to control or hold the other, so that he or she may not freely act, while avoiding the reverse. Any character involved in wrestling is considered to be in one of three states: engagement, control, or hold.

All characters involved in any wrestling match are "engaged." This means that the character cannot freely break away without his or her opponent having an opportunity to try and prevent it. A character may become engaged in wrestling voluntarily, by grabbing or tackling an opponent, or involuntarily, by being grabbed or tackled. Characters engaged in wrestling may make normal hand-to-hand attacks, employ smallarms, or make other physical actions. If the character is prone, however, as frequently happens when wrestling, all combat actions except Grappling rolls suffer a -30 modifier.

A character is "controlled" when an opponent has enough of a hold on him or her to prevent free movement, but not enough to entirely prevent action. Characters who are controlled make all non-grappling hand-to-hand attacks and other physical actions with -30 modifiers, in addition to the -30 for being prone (if applicable). Two wrestling characters can mutually control one another.

A character is "held" when his or her opponent's grip prevents any physical action. The only physical act a held character may attempt is an Unarmed Hand-to-Hand/Grappling roll to try and free him- or herself. It is not possible for a held character to control or hold another, although the character doing the holding is considered engaged.

With all of this in mind there are four possible outcomes at the end of any given turn of wrestling: 1. no combatants are engaged; 2. two or more combatants are engaged, but none are controlled; 3. two or more combatants are engaged, with one or more being controlled; and 4. two or more are engaged, with one or more being held.

A wrestling match starts when one combatant attempts to grab or tackle another, using the Unarmed Hand-to-Hand skill/Grapple subskill. A grab requires the target be within reach; a tackle within three or four meters. Either form of attack may be defended against normally, using the Parry, Block, or Dodge subskills. The Combat Throw subskill may also be used against tackling attackers.

If the wrestling match begins with a tackle, both combatants go prone and are engaged. If it starts out with a grab, both are engaged but not necessarily prone. Any time a character controlling or holding another decides to go prone, or when both combatants fail their Grappling

The next turn Laenna wins the initiative. Clutching her side, she turns to run into the kitchen. Her flight gives the assailant a free attack, and he uses it to try and tackle her. The GM makes an Unarmed Hand-to-Hand/Grappling roll. It is successful, and the assailant catches Laenna. They both end the turn prone on the floor, engaged in wrestling.

No initiative is necessary for the following turn, as both characters are wrestling and have automatic initiative numbers of zero. The GM and Roselyn make their Grappling rolls. Laenna's required roll is 67, but she is suffering from a 20-point impairment (from the knife wound—how it was derived will be explained later), so she needs a 47. Roselyn's roll is a dismal failure. The attacker, on the other hand, needs a 60, and rolls a 17. The GM consults the Wrestling Results Table. The attacker (combatant #1) made his roll by more than thirty, while Laenna (combatant #2) failed hers. The result: combatant #2 held, or #1 may disengage. The assailant has no interest in disengaging, so Laenna is held.

rolls, both fall to the ground. Grappling in the prone does not incur a -30 penalty. Prone or not, once engaged a character will remain so until he or his opponent breaks free.

No initiative rolls are necessary for characters involved in wrestling matches—**all wrestling characters automatically have initiative numbers of "0."** To resolve a wrestling match, have each engaged character make a Wrestling/Grappling roll. Consult the Wrestling Results Table to see how the turn ends. No character can extricate him- or herself unless he or she gets a "disengage" result. A held character must get a "disengage" result to break the hold, or use the Kata technique "Break Hold," discussed below under Using Martial Arts. In either event, the character remains engaged even if the hold is broken.

If one combatant is wrestling two or more opponents, he or she can make a grappling roll against only one opponent, automatically failing against any other attack. The additional opponent should still make a roll, however, to get a result on the table.

The Combat Throw

A combat throw is a defensive action only used against tackles. If successful, the attacker misses his tackle and is rendered prone, but the defender remains on his feet, and is not engaged in wrestling with the opponent. A failed roll indicates that the opponent's tackle or grab attempt may succeed. Some martial arts schools allow a combat throw to be combined with an attack.

Using Martial Arts

Martial arts techniques make characters faster and more efficient in combat. This is manifest in several ways: in improvements to Base Speed, increased hand-to-hand damage, the ability to combine maneuvers, negate defenses and knock opponents unconscious, and special skills to disarm opponents, break holds in wrestling matches, and employ pain

Wrestling Results Table

Combatant #1's roll result	Combatant #2's roll result	Result at end of turn†
failed	failed	indecisive
failed	made	#1 Controlled
failed	made by 30	#1 held, or #2 may disengage
made	failed	#2 Controlled
made	made	indecisive
made	made by 30	indecisive
made by 30	failed	#2 held, or #1 may disengage
made by 30	made	indecisive
made by 30	made by 30	both controlled

†An "indecisive" result indicates that the current turn ends in the same manner as the previous turn. Both combatants end the turn engaged unless a "disengage" option is achieved and taken. If either party is "held", only a "disengage" breaks the hold.

holds. All of these are explained below. Players whose characters will be employing martial arts should also read the Kata skill description in Chapter Two.

Martial arts techniques are employed as a part of hand-to-hand combat, and these techniques affect the practitioner's attack and defense rolls. Each martial arts school allows some or all of the techniques to be used in combination with one or more types of combat actions. To use one of the martial arts techniques below, make a Kata roll at the appropriate time—generally directly after the affected attack or defense roll, but sometimes at the beginning of a turn or after the opponent's defense roll (see below). This Kata roll does not constitute an additional action—it simply determines whether or not the technique was effectively employed during the combat action. Kata rolls may only be employed if the combat action affected was successful. An Increased Damage effect, for example, cannot work if the attack was unsuccessful.

A successful Kata roll indicates that the effects take place as described below. An unsuccessful roll means the technique did not take effect, although the attack or defense may still succeed in its normal manner. Only one Kata roll may be made per turn, and only one technique may be used per roll.

Attack to Stun

If a martial artist succeeds in a hand-to-hand attack to the head or neck (Body Zone one or two) of an opponent, he or she may attempt to increase the opponent's stun chance. Success indicates that the attacker has struck the victim in such a way that the opponent suffers a -50 modifier to his or her stun roll, in addition to the modifier on the Damage Table. If the table doesn't specify a stun roll, require one with a total modifier of +40.

Break hold

When held in a wrestling situation, or when in a pain hold (covered just below), a martial artist may make Kata roll to break the hold and disengage. No willpower roll is required to break a pain hold in this manner. Break holds are typically employed by briefly inflicting pain on the opponent through a pressure point or other sensitive area.

Combination Maneuvers

A combination maneuver allows a martial artist to follow a defensive action with an attack, a grab, or a combat throw. The second portion of the maneuver (the attack) occurs in the turn following the first portion, with the martial artist automatically gaining initiative over that opponent so long as he or she continues with the combination maneuver.

To use this technique, first make a successful defensive action against an opponent's attack. Then make a Kata roll, stating that a combination maneuver will be employed. The following turn, initiative over that opponent is automatic, regardless of initiative numbers. Go ahead and make an attack, grapple, or combat throw roll at the beginning of the turn. You may, of course, abort the second action and act on your initiative number.

Since the second action occurs on a new turn, a second Kata roll can also be made. Combination maneuvers always start with defensive actions, however, so the second roll can't be another combination maneuver.

The next round, Roselyn states that Laenna will use her Jui-Jitsu to break her opponent's hold on her. She makes a Kata/Jui-Jitsu roll, needing a 45 (her required roll of 65 minus the 20-point impairment). Roselyn's roll of 23 is a success. She is now no longer pinned, but is automatically free of the assailant and disengaged from the wrestling match. She is, however, still prone.

Disarm
Using this technique, a martial artist may attempt to disarm an opponent by twisting a weapon out of his grip or striking the arms or hands holding the weapon. If successful, the opponent loses control of the weapon. Chances are that it will be knocked to the ground or grabbed by the martial artist, but that doesn't mean the artist will be able to use it right away. In most cases, he or she will grab the weapon by some part other than the normal grip, and will have to adjust his hold before using it. The GM must determine the precise results of a disarm attempt, based on the circumstances and the success of the roll.

Increased Damage
A martial artist may focus the energy of his attack more directly than a conventional attacker. Using this technique, the martial artist may increase his or her Damage Rating by one for every ten points by which the Kata roll was made.

Negate Defense
A practitioner employing this technique may make an attack regardless of the victim's defense roll. If the attack is successful, any defense made by the victim is disregarded. Make the Kata roll directly after the victim's defense roll (usually just before the attack roll). Do not mention this Kata technique before the defense roll is made, or the defender may decide to take some other action.

Pain hold
In a wrestling situation, or following a combination maneuver, a martial artist may get a hold on an opponent in such a manner that he cannot move or act without inflicting serious pain upon himself. Furthermore, the martial artist may use this hold to inflict pain at will, for as long the hold is maintained. If the martial artist simply uses this technique to hold the opponent, the victim must make a willpower roll before attempting to break the hold. However, if the hold is used to inflict pain even when the opponent does not attempt to break the hold, no willpower roll is necessary. Whether or not a willpower roll is required, a pain hold may be broken like any other, as described under Wrestling.

PROJECTILE COMBAT

Projectile combat rules apply to any attempt to throw, shoot, or otherwise propel a projectile towards an opponent. Action occurs in the same order for projectile combat as it does in hand-to-hand combat, except that it is not possible to negate a projectile attack with a defensive action.

Making Projectile Attacks

As with hand-to-hand combat, projectile attacks are determined by a skill roll, using overlays to judge the success and location of the hit. All projectile attacks are made against the Aim skill and any of a variety of subskills. Five overlays are used for projectile combat, marked according to the ranges for which they are employed. Use the Point-Blank overlay (also used for some hand-to-hand attacks) for attacks at ten or fewer meters. Use the other overlays for attacks at ranges of up to thirty, 100, and 300 meters, and for attacks at ranges greater than 300 meters.

To make a projectile attack, choose an appropriate Body Map and overlay. Select an aim point on the Body Map and lay the overlay on it, so that the small circle in the center of the overlay sits on the aim point. If no aim point is specified, or if the attacker is attacking blind, center the overlay on the visual center of the Body Map. Precise alignment of the overlay on the target does not matter—in fact, rotating the overlay a little helps randomize the distribution of near misses, which is desirable. Once the overlay is in place, make the attack roll.

The attacker's required roll, which may already be written on the his or her character sheet, **is the total of his or her Aim skill level, subskill level, Reflexive Skill Talent Base, and the Inherent Accuracy of the weapon used.** Of course, any impairment due to wounds must be subtracted. In addition, **there may also be some situational modifiers.** Check the Aiming Modifiers Table and subtract any of the modifiers that apply. **Make the roll, then check the overlay. The amount by which the roll was made (or missed, in the case of point-blank attacks) will indicate if and where the attack hit.**

Millennium's End characters are limited to one combat action per turn, although in the case of firearms a single action may consist of several shots. A character may fire up to the maximum fire rate for his or her weapon (covered below) each turn, making a separate roll for each round fired. A single action, however, only allows the character to engage a single target, so those multiple shots cannot be fired at more than one opponent or aim point.

Aiming

Millennium's End allows a character to make a single aimed attack at one opponent each turn. When using firearms, however, it's usually possible to fire several shots in a two-second span. There is not enough time to re-aim between shots fired that fast, so skill roll penalties apply. There are also penalties for "hip firing"—that is, making attacks without using the weapon's sights—and for conditions such as movement or poor visibility. On the other hand, an attacker can improve his or her odds by aiming for more than just a single two-second turn.

The one-shot-per-turn limit allows a character to compensate for a firearm's recoil. Whenever a character fires faster than one round per turn (rates of fire are covered just below), he or she cannot aim the individual shots—it's an effort just to keep the weapon on its original aim point. For that reason, whenever a character fires more than one shot per turn, every shot except the first suffers a penalty. Any time a character fires at a rate exceeding one round per turn, but does not fire the weapon on a fully-automatic setting, he or she is rapid-firing. Whenever the character fires on an automatic setting, even for just a few rounds, he or she is auto-firing. **Assess a -20 penalty whenever a character rapid-fires, to all but the first roll in a sequence.** If a character rapid-fires for two or more consecutive turns, all of the rounds are part of that sequence—only the very first round fired in the first turn is not penalized. The same rule applies **for auto-fired weapons**, except that **the penalty is -30.** Weapons mounted on bipods reduce either penalty by ten, while vehicle or tripod-mounted weapons reduce the effects by twenty.

Any time a character hip-fires—that is, fires in such a way that he or she does not use the weapon's sights—**apply a -30 modifier to all attack rolls.**

Any time conditions of movement (on the part of the attacker or the target) or visibility might interfere with an attacker's aim, check the

The following turn, Laenna staggers into her kitchen. She turns, but the assailant didn't follow her. Quietly, she digs her back-up pistol out of the towel drawer and moves to the kitchen door. Peeking around the corner, she sees the attacker climbing back out her bedroom window. He sees her, too, and raises a gun. The GM calls for an initiative check. The assailant wins, and fires.

The GM picks an appropriate Body Map to depict Laenna, covering its right half with a sheet of paper to represent the doorway behind which she is partially covered. He then selects the "11 to 30 Meter" overlay, having ruled that the masked man is about a dozen meters away. He places the overlay's center on the assailant's aim point—Laenna's head—and makes a roll. The attacker's Aim/Smallarm total is 85, and his pistol, a Beretta 92F, has an Inherent Accuracy of 14—making his required roll a 99 (85 + 14 = 99). He rolls a 94—five less than his required roll, but maybe not enough to hit Laenna. Consulting the overlay, he sees that a roll succeeding by only five goes over Laenna's shoulder.

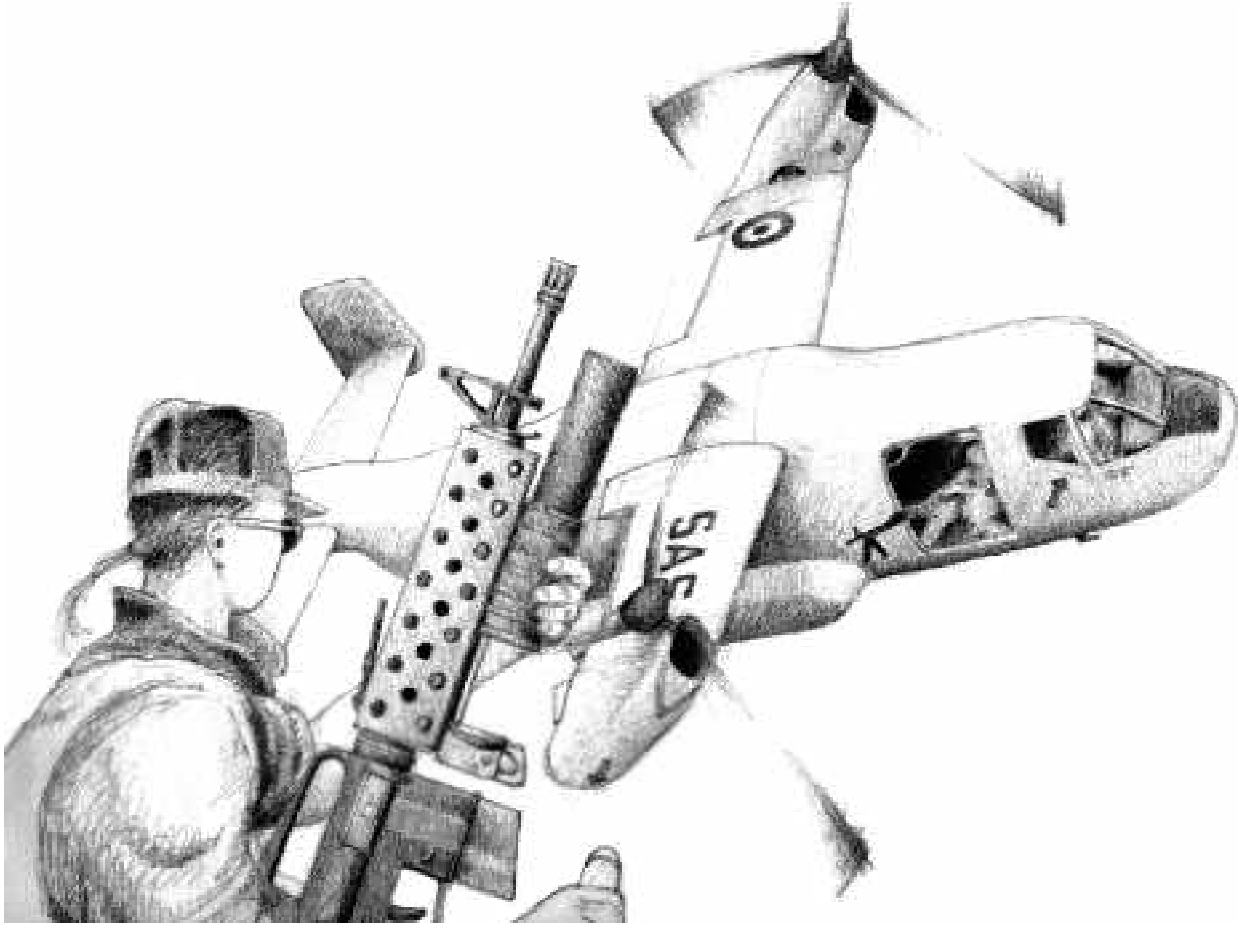
Aiming Modifiers Table. Apply the modifiers for any of the listed conditions that apply, and feel free to develop modifiers for additional conditions as necessary.

Sometimes a character will opt to spend extra time setting up for a shot. **Allow a +10 modifier for every extra turn a character spends aiming, up to a maximum of +30.** When aiming like this, a character can do nothing else. If he or she is interrupted by, for example, being attacked, any accumulated modifier is lost.

Laser sights add an automatic modifier of +20. This is not in addition to an aiming bonus—it simply accounts for two turns of aiming instantaneously. Adding one or more turns of aiming will increase the total bonus to its maximum of +30. **Laser sights also negate the penalty for hip firing.**

Shotguns are somewhat more accurate than other firearms because their multiple-projectile shots spread out as they travel, covering a broad area. A shotgun's "choke" controls this spread. **Whenever a character fires shot from an open-choke or sawed-off shotgun, apply a +10 modifier to the attack roll** (the listed Inherent Accuracies in the Appendix reflect standard (non-open) chokes). Although it increases the chance of a hit, an open choke reduces a shotgun's effective range by half.

Optical sights do not modify the attack roll, but they do reduce the effective range of an attack. **When an attacker uses an optical sight,**



Aiming Modifiers Table	
Modifiers to Attack Rolls	
Target silhouetted	+20
Target walking towards or away from firer	0
Target running towards or away from firer	-5
Target walking perpendicular to firer	-10
Target running perpendicular to firer	-20
Target dodging	-25
Firer walking	-20
Firer running	-40
Target well camouflaged	-10
Bad light	-20
Darkness	-40
Firer firing blind	-60

divide the range to the target by the power of the sight, then use the attack overlay for that effective range. Due to their limited field of vision, however, optical sights require a little more time to use than normal sights. When using an optical sight, no more than one round may be fired per turn, regardless of the weapon's action type. If a character exceeds this limitation, apply the hip-firing penalty to all but the first shot. Conversely, a combatant cannot hip-fire and still receive the range advantage afforded by an optical sight.

Suppressive Fire

Sometimes characters use gunfire to keep their opponents from acting, even when they can't be seen. The effectiveness of suppressive fire depends on its accuracy—fire that accurately strikes on or around an opponent's hiding place is much more likely to keep heads down than rounds fired randomly in the air. Roleplay suppressive fire, allowing characters that are brave enough—or stupid enough—to stick their heads up in the face of incoming gunfire to do so. In any event, accurate suppressive fire always gives the suppressor a "held action" bonus to initiative (covered above).

Thrown Objects

The overlay system works well for all sorts of direct projectile attacks—including objects, like knives, that are thrown directly at their targets. Unfortunately, the standard overlay system doesn't work for objects that are lobbed, like grenades, or thrown at a point on the ground rather than a specific vertical target.

To lob an object, use the appropriate range overlay to depict the target area. The top of the overlay represents the direction of the throw; the bottom of the circle is the point closest to the thrower. The circle itself represents an area ten meters in radius. Make a roll, and read the overlay as usual. The point indicated is the rough landing point of the thrown object. For example, if a character threw a grenade at a point twenty-five meters away, and made her roll by 18, the grenade would land about six meters past and to the left of the target (the point marked with an "18" on the "11 - 30" meter overlay).

Now it's Laenna's turn. Roselyn states that Laenna will fire off four quick shots, the maximum allowed per turn for her Glock autoloader. The GM picks a Body Map to represent the masked man, covering the lower half to indicate the wall giving him some cover. Laenna places the overlay with the aim point on the center of the target's chest. Her Aim/Smallarm skill total is 80. The Glock has an Inherent Accuracy of 15, and its laser sight adds another 20. Unfortunately, the Laenna still suffers from a -20 impairment, and with a look at the Aiming Modifiers Table the GM decrees an additional -20 for bad light—the assailant is climbing through a window from an unlit room into the darkness of night. Furthermore, all of Laenna's shots except the first will suffer an additional -20 rapidfire penalty. This gives her a total required roll of 75 (80 + 15 + 20 - 20 - 20 = 85) for the first shot, and 55 (75 - 20 = 55) for the remaining three.

Laenna rolls. Her first result is an 11, hitting dead on. The second, third, and fourth are a 78, 60, and 38. The 78 and 60 miss wide, but the 38 hits the assailant in the thigh, where it is covered by the wall.

Rates of Fire

Different weapons fire at different rates, depending on the type of mechanism used. Double action revolvers fire at a maximum rate of three rounds per turn. Semi-automatic weapons, including autoloaders (pistols often erroneously referred to as "automatics"), assault rifles and submachineguns fired on a single shot setting, fire up to four times per turn. Automatic weapons fire at up to the maximum rate listed on the Weapons Table. Single-action revolvers, and pump-action and lever-action weapons fire at only one round per turn, and bolt-action weapons may only be fired once every two turns, with the alternating turns being spent cycling the bolt. Weapons which have no internal magazine may only be fired once every three turns, as they must be reloaded and cocked after each round fired.

Range

All projectile weapons have limits to their range. Most, however, are not reliable out to their absolute range. A weapon's effective range is the farthest distance at which it will be reliably accurate. Its maximum range is the farthest its projectile will go.

Any time a weapon is fired beyond its effective range (listed on the Projectile Weapons Table), its Inherent Accuracy becomes zero. A weapon simply cannot hit targets beyond its maximum range. The maximum range for all pistols and shotguns is 150 meters, for submachineguns is 300 meters, for grenade launchers is 450 meters, for assault rifles is 1500 meters, and for rifles and machineguns is 2500 meters.

Shotguns and Special Ammunition

The damage caused by shotguns firing shot is not handled in the same manner as normal firearms. Special types of ammunition are also handled somewhat differently.

Shot

In reality, a hit from a shotgun firing shot is actually a number of small attacks instead of one large one. Each of these attacks has less penetrating power than a single powerful round would, and because of this, shotgun hits do not over-penetrate. On the other hand, they are also less able to penetrate armor. **When the victim of a shotgun attack is protected by armor, triple the AV (Armor Value—explained below).**

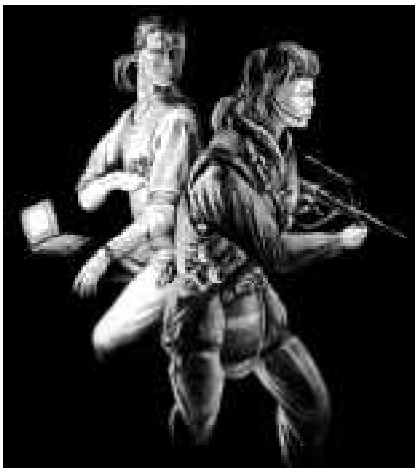
Shot tends to spread out over distance, especially when fired from an open-choke weapon. *Millennium's End* does not account for this effect, primarily because it would require the GM to calculate the damage of many individual wounds for each shotgun attack. Instead, it's always assumed that all pellets hit within the same Body Zone—unrealistic, but simple. However, any time a character fires a shotgun with an open choke (including all sawed-off shotguns), allow a +10 modifier to the attack roll.

Anti-Personnel Rounds

Conventional bullets sometimes pass right through their targets, failing to transfer all of their energy and therefor not doing as much damage as they might. Hollowpoint and Glaser rounds, however, come to a rapid halt as soon as they hit their targets, dumping more energy and doing more

damage than they would if they passed right through. Hollowpoint rounds mushroom as they pass through the body, while the somewhat more effective Glaser rounds actually break apart. The resulting increase in damage is reflected in the higher Delivered Damage ratings for these types of rounds.

Unfortunately, because these rounds break up easily, armor is more effective at protecting wearers from these rounds than from normal bullets. As explained below, armor comes in two types—flexible and rigid. When protecting against anti-personnel rounds, flexible armors double their Conversion Number. Rigid armors double their Armor Value and their Conversion Number. The way in which armor protects against damage is explained in greater detail below.



Armor-Piercing Rounds

Armor-piercing (AP) rounds are designed to penetrate armor. Unfortunately, they can also over-penetrate their targets, transferring less of their energy. For this reason they typically do less damage than standard ammunition, a fact reflected in their lower Delivered Damages. However, Armor Values and Conversion Numbers are halved when protecting against armor-piercing rounds.

AET Rounds

A relatively recent development, AET (Accelerated Energy Transfer) rounds work like anti-personnel rounds, transferring all of their energy to their targets without over-penetrating. Unlike standard anti-personnel rounds, however, AET rounds do not deform or fragment, so they do as good a job penetrating armor as normal bullets do. In short, they provide the best of both worlds. AET rounds suffer no penalty when used against armor. Their improved damage potential is reflected in their higher damage values on the Weapons Table.

Silenced Weapons

A number of firearms are available with removable or built-in silencers or suppressors—devices designed to eliminate or reduce the weapon's report. The efficiency, ammunition requirements, and use of silenced firearms varies from weapon to weapon.

A silenced weapon must deal with three sources of noise: the muzzle blast of the firing cartridge, the sonic boom of the supersonic bullet, and the mechanical noise of the weapon's action. All silenced weapons quiet muzzle blast by catching the propellent gases in a trap, which slows them to below the speed of sound. This eliminates not only the sound, but also the flash of the muzzle, as the gases cool in the trap.

The next hurdle is the bullet's sonic boom. Most pistols and virtually all longarms fire supersonic bullets, which make miniature sonic booms as they fly through the air. Many weapons with built-in silencers have small holes drilled in the barrel, which bleed off some of the propellant gases as the bullet travels past them. With less energy behind it, the bullet never reaches supersonic speed, so it travels silently through the air. Some weapons require cold-loaded subsonic rounds for silent action, which simply don't have enough powder in the cartridge to accelerate the bullet past the speed of sound. Finally, some detachable silencers employ

baffles, or "wipes," which act as brakes and slow the bullet as it passes between them. Typically, wipes require replacement after a limited number of firings.

Most silenced weapons don't suppress mechanical noise, which is pretty low-key compared to the noise sources above. Nevertheless, a weapon's action is usually quite audible, especially at close quarters. Some weapons have slide-stops or similar devices to prevent the action from cycling. This eliminates all but the sound of the falling hammer, but requires the user to cycle the bolt manually between shots.

It's left to the GM to determine how much noise a given weapon makes, based on the information above. Weapons that deal with all three noise sources are pretty darn quiet, but many do not. In general, a weapon which is suppressed—which silences the muzzle blast but doesn't slow the bullet—is loud, but hard to pinpoint (the noise is heard as the bullet passes the target—without hearing the muzzle blast, it's hard to tell which direction it was fired from). Mechanical noise is audible only nearby, but may be quite distinct if there is little background noise.

Defending Against Projectile Attacks

It is not possible to take direct defensive action against a projectile attack. However, a victim may make him- or herself a more difficult target by running, dodging (no roll required), hiding, or getting behind cover. These actions affect the attacker's roll by creating some of the aiming penalties listed on the Attack Modifiers Table.

Damage and Wounds

Millennium's End uses a non-ablative damage system, in which individual wounds are rated for severity and real-world effects are derived from the rating. It is through these effects that damage and wounds take on their meaning—that they affect a character's behavior and abilities and allow the player to visualize and understand his or her character's plight. In order to determine wound effects, you must first figure the Delivered Damage of the attack, account for the protection of armor, and then consult the Damage Table to determine the final Trauma Level and effects of the wound. While these steps may seem cumbersome at first, damage determination moves quickly and easily once you're used to it.

Delivered Damage

A successful attack in combat generally leads to a wound. The first step in assessing the damage of a wound is to determine its Delivered Damage. Delivered Damage is fixed for firearms, based on the ammunition type (see the Firearms Table). Delivered Damage for hand-to-hand attacks is calculated, based on the Damage Rating of the attacker and the Damage Factor of the weapon used.

Determine the Delivered Damage of a hand-to-hand or thrown object attack by rolling (1d10 + 1) for each point of the attacker's Damage Rating, and dividing the total by 10. Then multiply the total by the Damage Factor of the weapon.

Find the Delivered Damage for firearms by consulting the ammunition section of the Firearms Table.

Once Delivered Damage is determined, move on to account for armor effects. Once this has been done, or if no armor exists, convert the Delivered Damage to a Trauma Level and look up the wound effects on the Damage Table. These topics are covered below.

Armor

When a combatant is protected by armor, the damage he or she sustains from an attack decreases, and may change type. How much it decreases and what form it takes depends upon three factors—the strength of the armor, the type of armor, and whether the armor is worn by the target or comes between him and the attack in some other way.

All armor and armoring materials have an Armor Value, or AV, a Conversion Number, or CN, and a type. Armor worn on the body comes in two types—flexible and rigid. Both types stop some damage outright, based on AV, and may, based on CN, convert the remaining from its original form to Impact damage. Materials that act as armor but are not worn—trees, walls, and car doors, for example—are called incidental armor. Incidental armor has an AV but no CN, and never converts damage types.

Armor Location

Determine armor effects by first deciding whether or not the Body Zone hit was actually protected. If the victim is wearing body armor, the areas covered by the armor are indicated on the Armor Table and should be written on his or her character sheet. If incidental armor is a factor, the GM must decide whether or not it interferes with the attack, by visualizing the scene. If the GM decides that the incidental armor came between the attack and the Body Zone that was hit, the armoring material will protect the victim.

Armor Types

For purposes of this game, armor takes two forms—rigid and flexible. Rigid materials, like steel, do not generally bend or flex much when acting as armor. Flexible materials, like ballistic nylon, do. As explained above, all armoring materials have an Armor Value and a Conversion Number. Even materials which are generally not thought of as armor—wood, plastic, and glass, for example—may act as incidental armor, and can be rated in these terms. An armor's AV determines how much damage it stops outright, while its CN indicates whether or not the remaining damage will come through in its original form, or as an impact wound.

Both flexible and rigid armors stop some damage and can convert what remains. Generally, rigid armor stops more damage outright than flexible armor of the same class. However, flexible armor is more likely to covert what remains. Incidental armor—flexible or rigid—never converts damage, but stops more outright than body armor of the same strength.

Anytime armor is a factor, **subtract the Armor Value (AV) from the Delivered Damage of the attack.** If the AV is larger than the Delivered Damage, all damage is stopped and the victim is unaffected by the attack. If the AV is less than the Delivered Damage, the remaining damage penetrates to affect the victim. It may, however, be converted from its original form to that of Impact damage.

Compare the armor's Conversion Number (CN) to the remaining damage. **If the CN is greater than or equal to half the remaining damage value, the wound converts Impact damage.** If the CN is

Laenna received a stab wound from her attacker. Immediately after the wound was inflicted, the GM rolled for the attacker's damage. The assailant was fairly strong, with a Damage Rating of 6. Rolling five dice, the GM got a result of 37. Following the Delivered Damage formula, he added 6 and divided the total by 10, getting a result of 4 ((37 + 6 = 43) / 10 = 4.3, rounded to 4).

Next, the GM accounted for the knife by multiplying the total by the weapon's Damage Factor. The DF for a small knife used to stab is 2.0, so the total Delivered Damage is 8 (4 x 2.0 = 8).

The GM calculates the damage to the assailant shot by Laenna. Her first shot hit the man's thigh, which was hidden behind the wall, under the window through which he had just climbed. The GM rules that the wall is made of cinderblock, or some equivalent, and finds on the Armor Table that it has a total value of 14. Subtracting that from the .40-caliber bullet's Delivered Damage of 18 leaves 4 points. Since the wall is incidental armor, there is no possibility of the damage type converting to Impact, so that bullet creates a 4-point Hydrostatic Shock wound.

The other shot hit the assailant cleanly in the chest. He is wearing a Class II undercover ballistic vest, with AV and CN values of 7 each. Again, the bullet's Delivered Damage is 18. The AV stops 7 points, leaving 11 (18 - 7 = 11). The CN of 7 is more than half the remaining damage. Because of this, the 11 penetrating points convert to Impact.

less than half the remaining damage, it penetrates in its original form. The effects of Impact damage are generally less severe than those of other damage forms.

Local and Incidental Armor

Armor which is worn, held, or supported by a victim's body is termed "Local Armor." Armor which is not supported by the victim is "Incidental Armor." Examples of local armor include ballistic vests, riot shields, motorcycle helmets, or even a trash can lid picked up to fend off a blow. Examples of incidental armor include walls, car doors, and furniture. A ballistic vest would even be considered incidental armor if it were, for instance, slung over a chair behind which a character was hiding.

The effects of local armor are described above. When incidental armor is a factor, look up the material on the Armor Table, and use the "total value" figure as the armor's AV. There is no chance of any damage being converted, so any penetrating damage remains in its original form. If the victim is protected by some material not appearing on the table, estimate its value based on the other materials listed.

Armor values are cumulative. If both a wall and a flak jacket come between a bullet and its target, the effective armor value is equal to the Armor Value of both the wall and the jacket. Wearing too much can be a problem, however, as cumbersome body armor tends to slow characters down in combat (see Armor Encumbrance, below).

Shields

As explained above, under Hand-to-Hand Combat, a character with a shield or similar object can use it to block or parry a hand-to-hand attack. Shields also have an armoring effect even if they are not deliberately blocking a specific attack. If the GM decides that a character's shield covers an attack's target point, handle it just like normal armor even if the character was not deliberately trying to fend off the attack. Keep in mind, however, that the penetrating damage may be more likely to affect the arm supporting the shield than the targeted area. Such a determination is left to the GM.

Armor Encumbrance

Materials acting as body armor tend to be heavy, stiff, and generally cumbersome. The Armor Table (p. 195) lists a variety of body armors, along with their AVs, the hit zones they cover, and their Speed Modifiers. Whenever a character wears body armor, subtract the armor's Speed Modifier from his or her Base Speed for all initiative rolls.

Damage Effects

Millennium's End handles damage by rating individual wounds according to severity. The severity of a wound depends on the Delivered Damage of the attack that caused it, modified by the Body Zone in which the wound is located, and sometimes the size and bulk of the victim. These three factors determine a final Trauma Level for the wound, and it is from this Trauma Level that all wound effects are derived. The primary concern for game purposes is the wound's Impairment—the wound will have on a character's actions. Other damage consequences can include stun, blood loss, and shock. All are determined using the Damage Table.

Using the Damage Table

The Damage Table is the source of all information on wound effects. It looks fairly complex, but is actually quite easy to use. Listed along the top, heading each column, are twenty-five Trauma Levels. Down the left side are listed the damage types and, further down, the Body Zones.

There are three main bodies of information on the Table. The topmost block lists Heal and Decline Rates for each Trauma Level, which indicate the time required to heal, or to die in the case of fatal wounds.

The next body of information is the Impairment Level section. Impairment affects a character's ability to act, applying a negative modifier to some or all types of actions.

The third and last part of the table determines the secondary effects of damage. Each entry has one or two numbers, and possibly one or more letters. The numbers indicate the rate of blood loss and chance of unconsciousness. The letters indicate broken bones, lost limbs, and eventually fatal or instantly fatal wounds. All of these effects are dependent on the wound's Trauma Level.

Trauma Levels

The first step in using the Damage Table is to determine the Trauma Level of the wound. To do so, start with the Delivered Damage of the attack, after accounting for armor effects. Look up the Body Zone hit, along the left of the Damage Table, and find the Trauma Modifier for the location. Check the victim's character sheet to see if he or she has a Mass Factor—if the Mass Factor is 1.0, ignore it. Otherwise, to determine a wound's Trauma Level, multiply its Delivered Damage by the Trauma Modifier for the location hit and the victim's Mass Factor. The resulting number is used to determine all damage effects. Any Trauma Level over twenty-five is instantly fatal.

Laenna's stab wound had a Delivered Damage of 8. At home in her living room, she wasn't wearing any body armor, so all of the damage contributes to the wound's final Trauma Level. The wound is in Body Zone 4, the torso, which has a trauma modifier of 1.4. Laenna is pretty light, with a Mass Factor of 1.2. The GM multiplies the Delivered Damage by the trauma modifier and Laenna's Mass Factor, getting a 13 (8 x 1.4 x 1.2 = 13.4, rounded to 13). He then consults the Damage Table.

Impairment

Wounds tend to make some actions more difficult. A gunshot in the leg will probably make driving a car nearly impossible, while a solid whack on the head may make mental efforts difficult. The first effect to look up after finding a wound's Trauma Level is its Impairment, which reflects this difficulty. To find impairment, crossreference the wound's Trauma Level by the Damage Type, listed to the left near the top of the Damage Table. The resulting number is a negative modifier, to be applied to any actions affected by the wound.

To determine what sorts of actions are so affected, find the wound's Body Zone on the lower half of the Damage Table, then look all the way to the right, under "Impairment Effect." The impairment effect descriptions are pretty self-explanatory. Results labelled "All" effect all actions and mental efforts. Results labelled "All physical" effect only physical actions (in other words, the impairment would not apply to Intelligence rolls or knowledge skill rolls). "Leg" impairments effect actions requiring the use of the legs, and "Arm" impairments effect actions requiring the use of whichever arm is impaired. For wounds sustained in Body Zones one, two, three, and six, the impairment level is halved.

The Trauma Level of Laenna's stab wound is 13, and the damage type is Puncture (due to both the weapon and the method of attack). By crossreferencing these two items, the GM finds that Laenna's impairment is 20. By looking to the extreme right of the Damage Table, the GM finds that the impairment affects all physical actions. From the point at which she took the wound until the wound begins to heal, Laenna will suffer a -20 modifier to any roll she makes for a physical action.

Trauma Level	1	2	3	4	5	6	7	8	9	10	11	12
Heal Rate	48	24	24	24	30	30	30	36	36	42	42	48
Decline Rate												

Damage Type	STM	BLM	Impairment Level											
Concussive	+10	-15	1	1	2	2	3	4	5	6	7	8	9	11
Impact	+4	-5	1	1	2	2	3	4	5	6	8	10	12	14
Puncture	+1	-2	1	2	3	4	5	6	8	10	12	14	16	18
Cut	—	—	1	3	5	7	9	11	13	15	17	19	21	23
Burn	-2	-8	2	4	6	8	10	12	14	16	19	21	23	25
Hyd. Shock	+2	+4	3	6	9	12	15	17	19	21	23	25	27	29

Body Zone		Trauma Mod.	Secondary Effects											
1	Head	1.6		+80	+70	+60	+50	+40	+30 60	+20 50	+15 40	+10 30	+5 25	0 20**B**
2	Face/neck	1.4			+80	+70	+60	+50	+40	+30	+25	+20 60	+15 40	+10 20
3, 6	Shoulders	1.0									+80	+70 **B**	+65	+60 60
4, 7	Torso	1.4							+80	+70 60	+65 40**B**	+60 30	+55 23	+50 18
5, 8	Vitals	1.6					+80	+70	+65	+60 60	+55 40	+50 30	+45 23	+40 18
9, 11	Hips	1.0											+80	+70
10	Groin	1.2							+80	+70	+65	+60	+55	+50 60
12, 14	Upper arms	0.8											+80 60	+70 45**B**
13, 15	Forearms	0.8												+80 60**B**
16, 19	Thighs	0.8												+80 60
17, 20	Knees	1.0											**B**	60
18, 21	Calves	0.8											60	45**B**
22-25	Hands, feet	0.6									**B**	60	50	40

13	14	15	16	17	18	19	20	21	22	23	24	25
54 40	60 34	66 30	72 26	78 22	84 18	90 14	102 10	114 8	126 6	144 4	168 2	204 1

Impairment Level

13	15	17	19	21	24	27	30	34	38	42	46	50
16	18	20	22	25	28	31	34	37	40	43	46	50
20	22	25	28	31	34	37	39	41	43	45	47	50
25	27	29	31	33	35	37	39	41	43	45	48	50
27	29	31	33	36	38	40	42	44	46	48	49	50
31	33	35	37	39	41	43	45	46	47	48	49	50

Secondary Effects

													Imp. Effect
-5 18	-10 16	-15 14	-20 12	-25 10**E**	-30 8	-35 6	-40 5**S**	-50 4	-60 4	-70 3	-80 3	-90 3	½ all
+5 8	0 4	-5 2**B/E**	-10 1	-15 1	-20 1	-25 1	-30 1**I**						½ all
+55 45	+50 35	+45 30	+40 25	+40 20	+35 16	+35 13	+30 10**S**	+30 7	+25 5	+24 3**E**	+20 2	+20 1	½ all physical
+45 15	+40 12	+40 10	+35 8**E**	+35 6	+30 4	+30 3	+25 2**S**	+25 2	+20 1	+20 1	+15 1	+15 1	all physical
+35 15**E**	+35 12	+30 10	+30 8	+25 6	+25 4	+20 3	+20 2**S**	+15 2	+10 1	+10 1**B**	+5 1	+5 1	all physical
+65 60	+60 45**B**	+55 35	+50 30	+45 25	+40 20	+40 16	+35 13**S**	+35 10	+30 7	+30 5	+25 3	+25 2	legs
+45 45	+40 35	+40 30	+35 25**E**	+35 20	+30 16	+30 13	+25 10**S**	+25 7	+20 5	+20 3	+15 2	+15 1	legs
+65 35	+60 26	+55 18	+50 12	+45 8	+40 4	+40 2	+35 1**S**	+35 1**M**					leading/following arm
+75 40	+70 24	+65 16	+60 8	+55 4	+50 2**M**								leading/following arm
+75 60**B**	+70 45	+65 35	+60 25	+55 18	+50 12	+50 8	+50 2**S**	+50 1	+50 1**M**				legs
+80 45	+75 32	+70 16	+65 8	+60 4	+55 2	+50 1**M**							legs
+80 35	+75 26	+70 18	+65 12	+60 8	+55 4	+50 2	+45 1**S/M**						legs
+80 20	+75 10	+70 5	+65 2**M**										leading/following arm/leg

Looking to the right of the damage type listings, the GM sees that Puncture wounds have a +1 stun modifier. He crossreferences TL13 with Body Zone 4, the location of the wound, then moves one column to the right. The "+40" indication means that Laenna will have to make a Constitution roll with a +40 modifier. Laenna's Constitution of 55 makes the target roll total 95, which Roselyn makes easily.

Stun

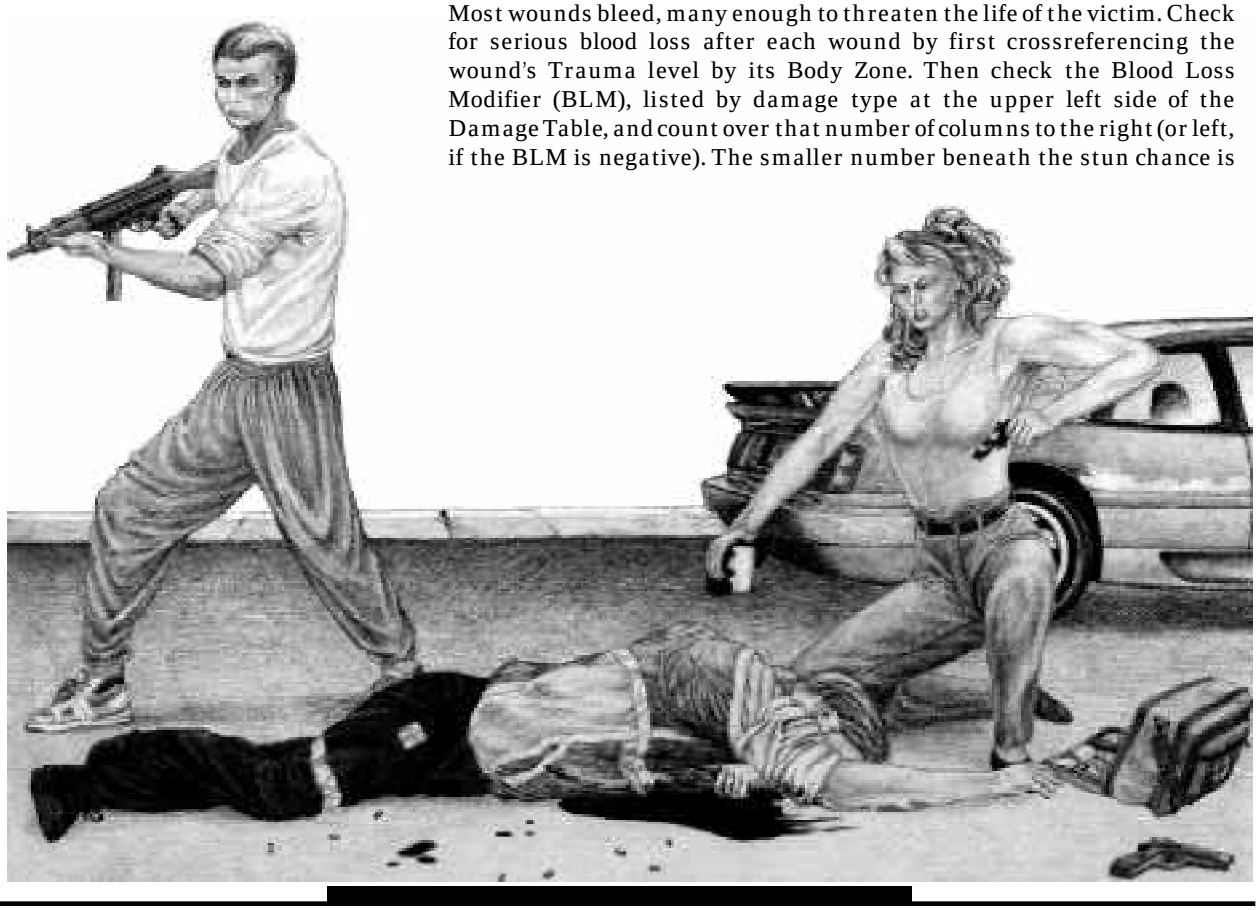
Some wounds are severe enough to render a character unconscious or stunned. A stunned character cannot act and is unaware of his or her surroundings. However, being stunned is generally a short-term effect, and will not directly cause any additional damage.

Check for stun after each wound by first crossreferencing the wound's Trauma level by its Body Zone. Then check the Stun Modifier (STM), listed by damage type at the upper left side of the Damage Table, and count over that number of columns to the right (or left, if the number is negative). The large number listed there is the stun chance modifier. Have the wounded character make a Constitution roll, modified by the stun chance modifier (many light wounds have no modifier is listed—when that's the case, no roll is required). A successful roll indicates that the character is not stunned, and may act normally. A failed roll indicates that he or she is stunned.

A stunned character may make an unmodified Constitution roll to recover on the third turn after becoming stunned. If the roll fails, he or she may try again once every other turn. When the player succeeds in making the roll, the character recovers and may act the following round. If the original roll to avoid becoming stunned was missed by a large margin, the GM may decide that the character has become totally unconscious, and will remain so for an indefinite period.

Blood Loss

Most wounds bleed, many enough to threaten the life of the victim. Check for serious blood loss after each wound by first crossreferencing the wound's Trauma level by its Body Zone. Then check the Blood Loss Modifier (BLM), listed by damage type at the upper left side of the Damage Table, and count over that number of columns to the right (or left, if the BLM is negative). The smaller number beneath the stun chance is



the blood loss rate—the amount of time that will pass, in minutes, before the character loses one unit of blood. For the purposes of this game, one unit of blood is equal to one-fourth the amount a character or creature may lose before dying. For humans, one unit equals two pints, more or less, and a character will die once he or she loses four units.

There are two immediate consequences of losing blood. First, the character automatically goes into shock, described below. Also, if the victim has any eventually fatal wound (also covered below), decrease its decline rate as if the Trauma Level of the wound were increased by one, unless the wound is already TL25. Decrease the decline rate like that for every unit of blood lost.

A character or creature loses one unit of blood after an amount of time equal to the Blood Loss Rate, in minutes, passes. A second unit is lost after an equal period, and a third, etc. When the fourth unit is lost, the character or creature dies. At any point, bleeding may be stopped by a successful Medicine/Emergency Medicine roll. If a character has more than one bleeding wound, all Blood Loss rates are honored. In other words, if a character has a wound bleeding at a fifteen minute rate, and another at a twenty-five minute rate, he will lose his first unit of blood after fifteen minutes, the second after twenty-five minutes (total), the third after thirty minutes, and will die after forty-five minutes. A separate medical roll for each wound is required to stop the bleeding.

Looking again to the right of the damage type listings, the GM sees that a Puncture wound has a -2 blood loss modifier. Starting from the same point on the table, he counts two columns to the left. The small "18" below the stun roll modifier means that Laenna will lose one unit of blood every eighteen minutes. Without medical attention she will go into shock when the first unit is lost, and die after losing four units, in one hour twelve minutes.

Broken Bones and Maximum Damage Levels

A bad wound may include a broken bone or even a severed limb. Neither of these possibilities causes any short-term effects other than those already covered, but they do have longer-term consequences. To determine if a bone is broken or a limb lost, reference the Trauma Level of the wound by the wound's location. If the Trauma Level column is to the right of the "B" for that Body Zone row, then a bone has been broken. If the column is to the right of an "M" result, the limb has been severed, or so badly damaged that it is effectively severed.

Broken bones slow the healing process (covered below), while severed limbs might not be saved at all.

Using the Impairment Box

When a character is wounded, he or she becomes impaired. Impairments can run from one or two points—pretty trivial—up to a much more severe fifty points. Keeping track of a single impairment—and how it affects different types of actions—is pretty easy, regardless of its severity. Keeping track of multiple overlapping impairments is another story.

There is a smallish box marked "Total Impairment" on the front of the character sheet, in the lower center. The grid in this box makes keeping track of multiple impairments easy. Along the left of the grid are all twenty-five Body Zones, sorted into five rows. To use the grid, find the wounded Body Zone along the left. Then copy the wound's impairment from the back of the character sheet into each empty box to the right of the Body Zone listing. If there is already an impairment listed in these boxes, add the new impairment to the existing number, putting the total in each box. All boxes within a single row should always list the same impairment total.

Once all impairments are represented, add down each column, writing the total in the highlighted row at the very bottom. This result is the total impairment for each of the four types of actions.

In this example, the character has three wounds—one in Body Zone 6, with an impairment of 32, another in Zone 8 with an impairment of 6, and the third in Zone 13 with an impairment of 7. The Body Zone 6 and 8 wounds are both recorded in the second row, with their impairment levels added together. The impairment for the wound in Body Zone 6 is halved, however, making it 16 (32 / 2 = 16). Added with the Zone 8 wound, the impairment for that row is 22 (16 + 6 = 22). All boxes in that row are marked with a 22.

The Body Zone 13 impairment is marked in the only box on that row. By totalling all four columns, it's clear that mental actions are totally unimpaired, while actions requiring the use of the leading arm suffer a total impairment of 29 and all other physical actions suffer a 22-point impairment.

Total Impairment	Mental		Foll. Arm	Legs
1, 2 (imp x ½)				
3, 6 (x ½), 4, 5, 7, 8		22	22	22
9-11, 16-21, 24, 25				
12, 13, 22		7		
14, 15, 23				
Total Impairment	0	29	22	22

Obviously, if a limb is lost, the impairment to any action requiring the limb is one-hundred percent.

Shock

Any time a character suffers a wound of Trauma Level twenty or higher, or loses one or more units of blood, he or she goes into shock. Shock is a condition in which the body's systems begin to shut down due to trauma or loss of blood. Left untreated, shock leads to death. A character in shock is effectively stunned, although he or she may not actually be unconscious. The character may make mental skill rolls, call out, or try simple physical actions, but only after succeeding in a Willpower roll.

If the worst wound a character has is TL20 or higher but not eventually fatal, the character will die of shock in a number of hours equal to the decline rate for the wound's current Trauma Level. If the worst wound the character has is TL20 and is eventually fatal, the character will die of shock in a number of hours equal to half that decline rate. If the shock is due only to blood loss, the character will die of shock in forty hours (if, of course, he or she doesn't die of blood loss first). Shock can be treated with a successful Medicine/Emergency Medicine roll.

Eventually and Instantly Fatal Results

The GM looks once again at the Damage Table and sees that for a wound in Body Zone 4, Trauma Level 13 is to the right of the "B" result (at TL9), and to the left of the "S" and "E" results (at TL20 and TL16, respectively). That means that while Laenna's wound does include a broken bone, it is not severe enough to cause shock or become eventually fatal. The broken bone has no immediate effect on play, but will increase the time required for the wound to heal.

Any time a wound exceeds TL25, or an Instantly Fatal result is found on the Damage Table, the victim of the wound dies immediately. An instantly fatal result is represented by an "I" on the Damage Table, and only occurs in Body Zone two, the neck.

Any time an Eventually Fatal result, represented by an "E," is found on the Damage Table, the victim will die unless he or she receives medical attention. Until an eventually fatal wound receives attention (see *Healing*, below), it will grow worse. The decline rate for the Trauma Level added to the character's recovery modifier is the number of hours that will pass before the Trauma Level is increased by one. Every time the Trauma Level increases, the impairment level increases accordingly. When the Trauma Level reaches twenty-six, the victim dies.

Multiple Wounds

A character may be wounded more than once, in one or several hit zones. If the wounds occur in different locations, the Trauma Levels do not accumulate. Impairments, on the other hand, are cumulative where they overlap. For example, if one wound produces a right arm impairment, and another produces a leg impairment, the impairments are not added together. However, two right arm impairments, from different wounds in different zones, are added together and applied to any roll involving the use of that arm. All-physical impairments apply to all physical actions, and are therefore added to any other body impairment, regardless of location.

Treat any two wounds that occur in the same hit zone as a single wound. Add their Trauma Levels assign the wound type the larger of the original wounds—whichever had the highest TL. For example, if a TL7 Burn occurs in the same hit zone as a TL5 Cut, treat it as a TL12 Burn. Handle all wound effects as a TL12 Burn from that point forward. If the Trauma Levels are tied, consider the wound to be the worst of the two types, that is, whichever type is listed lowest on the Damage Table.

Treating Wounds

Saving a severely wounded character is no simple task. Several rolls are required. The first roll, if the victim is suffering from serious blood loss, should probably be to stop bleeding. Blood loss can kill a character in as little as four minutes from just one wound, and loss of blood reintroduces shock even if it has been successfully treated. Shock, if present, should be treated next—it can kill in as little as one-half hour. Third, a roll must be made to stabilize an eventually fatal wound, or the wound will get worse until the character dies, in one hour to nine days, typically. And lastly, the wound itself should be treated. If not treated, it will heal—but in twice the normal time (see Healing, below).

Treat Blood Loss and Shock with Medicine/Emergency Medicine rolls. Each roll requires one minute, whether or not it is successful. Stabilizing an eventually fatal wound and treating a wound require Medicine/G.P. rolls, according to the rules described under the General Practice subskill. Performance time for these rolls varies from situation to situation, and should be determined by the GM.

All applicable rolls, except for the treatment of shock, must be made for each individual wound. Shock can be dealt with in one treatment, regardless of how many wounds cause it.

Damage Types

There are six damage types—Concussive, Impact, Puncture, Cut, Burn, and Hydrostatic Shock. They are listed here and on the Damage Table in increasing order of detriment. While a TL26 Concussive wound will kill a character just as dead as a TL26 Hydrostatic Shock wound, the wound effects for lesser injuries—impairment, blood loss, etc.—are generally much less severe for the former.

Concussive Damage

Concussive damage is caused by crushing forces which affect all areas of the body uniformly. While that means that any concussive attack should cause twenty-five individual wounds—one for each Body Zone—that's too much effort and complication. Instead, handle all concussive attacks as attacks to Body Zone one, the head, ignoring any effect on other Body Zones. Armor is not fully effective when protecting against concussive damage, and offers only one-half normal AV and CN. In *Millennium's End*, concussive damage is almost exclusively caused by explosives.

Impact Damage

This type of damage is caused by crushing blows affecting single body zones. It is most typically brought about by attacks with blunt objects. Body armor sometimes converts other types of damage to impact, as it distributes the energy from attacks made with edged or pointed weapons.

Puncture Damage

Puncture damage is caused by attacks with pointed objects, and is characterized by a wound that is as deep or deeper than it is wide. Because of this ratio, puncture wounds may have severe effect while causing relatively little tissue damage.

Cut Damage
Cut damage is caused by slashing or chopping attacks with bladed weapons. Cuts are generally not as deep as they are wide. Because cut wounds tend to have substantial tissue damage relative to wound severity, they cause relatively heavy blood loss.

Burn Damage
Burn damage is characterized by severe damage to the skin and outer regions of the body. This class includes damage due to acids or abrasion.

Hydrostatic Shock
This class of damage is caused exclusively by firearms. It is characterized by a cavity created within the flesh as a bullet travels through it at or near the speed of sound. Hydrostatic shock wounds cause terrible amounts of tissue damage, and are typically deep, often going completely through the body.

Healing

To determine the time required for a wound to heal, subtract the wound victim's Recovery Modifier from the Heal Rate. The result is the number of hours required to drop one Trauma Level. The first drop in Trauma Level for any wound always takes twice the required time to heal. In addition, if the wound includes a broken bone (see above), the first Trauma Level will double again, taking a total of four times as long to heal.

If a wound is eventually fatal and is not stabilized, healing will not occur, and the wound will increase in Trauma Level until the victim dies. If the wound is stable but untreated, it will heal, but at twice the time described above.

Lost blood is recovered at the rate of one unit per day. If a character is suffering from untreated shock due to blood loss, he will recover from it when his blood level returns to normal—if the shock doesn't kill him first.

As the Trauma Level drops, so does the respective Impairment Level. Every time the Trauma Level is decreased determine the new impairment by cross-referencing the new Trauma Level with the wound type. Stun, blood loss, and shock are all one-time effects, to be ignored during the healing process. All wounds heal simultaneously.

Permanent Impairments
Any time a trauma level exceeds an eventually fatal result by three or more levels, the area damaged will become permanently impaired. It will not heal correctly, and some vestige of impairment will always remain. Healing will decrease the Trauma Level as usual, but the impairment will remain at a level equal to the number of Trauma Levels higher than the EF level plus three of the original wound. It is possible to avoid a permanent impairment through surgery either directly after the wounding, or at a later date.

Other Damage Sources

Up to this point, only wounds and injuries due to combat have been discussed. There are many other ways for a character to get hurt, some of which are discussed here. Regardless of how a character gets him- or herself wounded, all wound effects are determined through the Damage Table, just like combat wounds.

Random Damage Locations

Sometimes a character will be injured in a random location not determinable with an attack overlay. Overlays are useless, for example, in determining where a character gets hurt when falling from a height, getting hit by a train, or being blown up by an explosive. The damage sources discussed below are random in nature. When they occur, roll against the Random Damage Location Table to determine the wound location.

Falling and Major Impacts

A character will probably take damage any time he or she falls from a substantial height. Injuries from major impacts—like car crashes—are similar in nature, and handled the same way.

The damage a character suffers from a fall or major impact is a function of the distance he or she falls or the speed of the impact. The Fall Damage Table lists the total number of Trauma Levels suffered from such a fall or impact. These Trauma Levels distribute into one or more individual wounds. To determine the location and severity of the wounds, start by rolling 2d10. The first wound sustained is equal to the total of the roll or the number listed on the Fall Damage Table, which ever is less. If the number rolled is less than the total Trauma Levels from the table, the balance remaining will distribute into one or more additional wounds. Subtract the Trauma Level of the first wound from the total, and roll 3d10. The second wound is the total of that roll, or the total remaining Trauma Levels, whichever is less. Again, if the result of the second roll is less than the remaining value, subtract it too, and make a third roll, this

Fall Damage Table

Fall height (meters)	Impact velocity (kph)	Total damage (TL)
2	20	10
5	35	20
10	50	30
15	60	40
20	70	50
25	80	60
30	90	70
35	95	80
40	100	90
50	110	110
60	120	130
70	130	150

Random Damage Location Table

Roll	Body Zone damaged		Roll	Body Zone damaged	
01-05	1	head	57-60	14	following upper arm
06-08	2	face/neck	61-63	15	following forearm
09-14	3	shoulder	64-69	16	leading thigh
15-18	4	torso	70-73	17	leading knee
19-22	5	vitals	74-76	18	leading calf
23-28	6	shoulder	77-81	19	following thigh
29-32	7	torso	82-85	20	following knee
33-36	8	vitals	86-88	21	following calf
37-41	9	hip	89-91	22	leading hand
42-44	10	groin	92-94	23	following hand
45-49	11	hip	95-97	24	leading foot
50-53	12	leading upper arm	98-00	25	following foot
54-56	13	leading forearm			

Laenna's assailant, who was climbing out of her window when she shot him, fell from the fire escape as a result. Her apartment is on the fourth floor, so the GM judges that the attacker fell about ten meters. According to the Fall Damage Table, the assailant will suffer injuries totalling 30 Trauma Levels. For the first wound, the GM rolls 2d10, getting a result of 12. Then, consulting the Random Damage Location Table, he rolls d%, getting a 01 result—the head. He still has 18 points of damage coming (30 - 12 = 18). For the second wound, the GM rolls 3d10, this time totalling 17. The location roll result is 93—the following hand. These wounds total 29 points—so there is one more wound, of just 1 point. The location rolled for it is the leading thigh—the same location as one of his bullet wounds.

With the asphalt of the alley below (Damage Factor 1.0), the Delivered Damage for the falling wounds are 12, 17, and 1, in the head, hand, and thigh, respectively. None of the Body Zones are covered by armor. Applying his Mass Factor of 1.0 and the trauma modifiers for the Body Zones (1.6, 0.6, and 0.8), the final wounds are TL19 Impact to the head and TL10 Impact to the hand. The single Trauma Level to the thigh is added to the existing TL9 Hydrostatic Shock wound, elevating it to TL10.

time with 4d10, against what remains. Continue this process until the total of all wounds suffered equals the number listed on the table. These wounds will all be Impact damage, and will be randomly located according to the Random Body Location Table.

The results found in this manner represent the strength of the impact, as if the energy of the fall were an attack on the victim. Just as with weapons damage, the strength rating result can be multiplied by a Damage Factor for the weapon—in this case the ground. Don't bother with a damage factor for the ground unless it is especially soft or hard. A grass lawn, for example, might have a damage factor of 0.8, whereas the factor for sharp rocks might be 1.6. A haystack might have a factor of 0.1. A typically hard surface, however, like asphalt or packed earth, has a damage factor of 1.0, which requires no multiplication.

Accounting for the ground's damage factor determines the Delivered Damage of the fall. From there, armor effects may be considered, as well as the victim's mass factor and the Trauma modifier for the body zone hit.

Armor is only effective at half normal values when a victim is taking damage from a fall or major impact.

Explosives

Explosives cause damage three different ways: through concussion, fragmentation, and burns. Although most explosives can actually cause all three types of damage, for simplicity any given explosive is classified as just one type. Explosives are also rated according to two other factors, which cover how an explosive attacks, and how much damage it does.

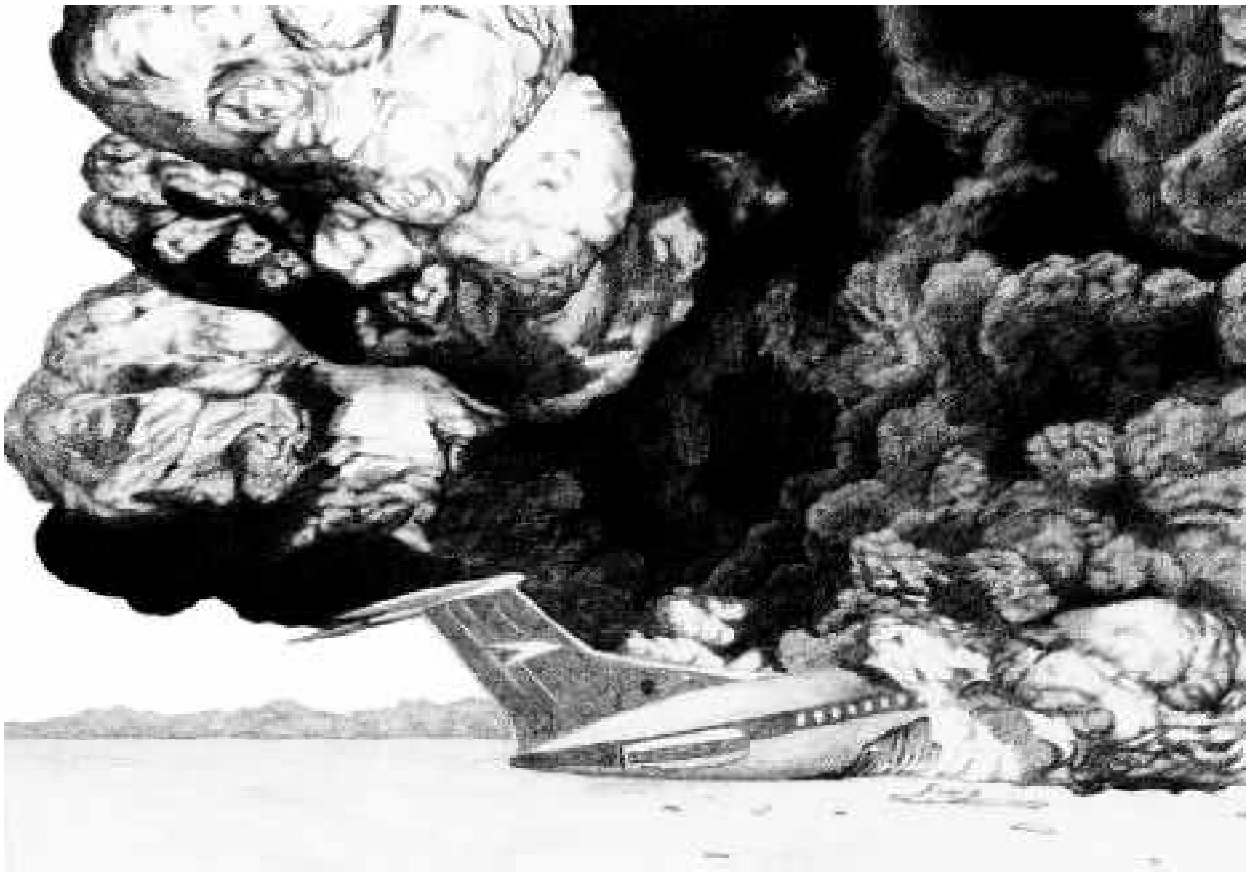
The first of these ratings is called the Attack Number, and represents the number of "attacks" the explosive makes on a victim within the blast range. Each of these attacks always hits, generally in a location determined by the Random Damage Location Table. The Attack Number for most explosives drops off with range, so that a victim far from the explosion will take fewer hits than someone closer.

The second rating is the explosive's Delivered Damage, which rates the amount of damage each attack does. The damage also usually drops off with range. The exact manner in which damage is inflicted varies according to explosive type, and is explained below.

Concussive Explosives

Explosives which cause concussive damage automatically damage anybody in range. Concussive explosives always make just one attack, regardless of range, and the attack always hits the victim in the head (Body Zone one). The only question, then, is damage. Start with the explosive's Delivered Damage and subtract one point for every meter the victim is the explosion's source. If a character is ten meters from a twenty point concussive blast, he or she will automatically suffer a concussive wound to the head with a Delivered Damage level of ten (20 - 10 = 10).

Concussive effects have the unique ability to turn corners, reaching even characters behind cover. However, every corner the blast has to turn to reach a victim adds five meters to the effective distance. In other words, hiding behind a corner effectively puts a character five meters further from the blast. Conventional armor protects at only half value against concussive damage.



Fragmentation Explosives

Explosives which cause fragmentation do so by blasting small projectiles in random directions, some of which will strike characters within range. The Attack Number of the explosive represents the number of fragments that strike the character. It drops off with range, at a rate of one attack for every five meters from the source of the explosion. The Delivered Damage is reduced at the same rate. Use the Random Damage Location Table to determine the location of the hits. Fragmentation causes Puncture damage.

Burn Explosives

Explosives which cause burn damage do so in exactly the same manner as those that cause fragmentation damage, except that the damage type is Burn, and the damage level does not reduce with range.

CHAPTER FOUR
THE *MILLENNIUM'S END* CAMPAIGN

It's 1999. The city of Miami is a sweltering grid of noisy, dirty streets. Abandoned cars decorated with colorful graffiti rest beneath strings of laundry and rusty fire escapes. Sirens wail in the distance, punctuated by occasional gunshots. Closer by, a news broadcast in Spanish, or perhaps French, paints a somber scene as police clean up after yet another bombing in Washington, and America's sprawling metropolises brace once again for a weekend of endless riot.

Downtown, corporate towers dominate the smoggy skyline. Most glisten with office lights and bright logos, while others sit dark and quiet, the jagged gaps of broken windows like missing teeth in their facades. The sparse traffic sticks to well-lit avenues, avoiding the darker side streets and pausing with locked doors only at the few traffic lights that still function. Police toting submachineguns and ballistic vests move cautiously in groups of three or four, never far from the relative safety of their scarred but well-armored Jeeps.

Far over the distant horizon, destitute farmers hack and burn their way through the few stands of rainforest that have yet been spared. On another continent starving families huddle in the searing shade of burned-out relief trucks, their last hopes of salvation long evaporated like the heat waves shimmering above their scorched fields. Petty bandits quarrel and bicker over a jerrycan of gas, a fistful of rice, or a few dozen guns, and before the exchange is over three or four lie dead. Elsewhere men huddle and plan, plotting the number of lives they must end to put their cause on a few million television screens. But it won't matter—theirs will be just another piece of bad news no-one can do anything about.

This bleak and desperate vision forms the background of *Millennium's End*. It is not a dark future—it is the near-present, at dusk. It's a world where today's headlines have spiralled into an uncontrolled plummet, where crime, chaos, terrorism, war, and environmental cataclysm have come together to bring humanity to the brink of eternity. It's a world where the traditional authorities have lost their teeth—an unscrupulous and cutthroat world where those with economic, military, or social power

are no longer burdened with a code of ethics, and justice comes only to those with the money, technology, and willpower to seek it out.

The world is on the brink of chaos. The news is a constant barrage of petty and brutal warfare, of bombings and assassinations, of impotence and frustration. Techno-terrorists can bring the world's powers to their knees without lifting a weapon, while conventional terrorists have the will and the means to rain death on millions. Environmental catastrophe is a daily issue. And the world's governments find themselves in debt to huge commercial conglomerates with the power to move mountains—but which won't accept the responsibility, or even the ethics, that their power mandates.

The BlackEagle Campaign opens in the spring of 1999, in Miami. It revolves around the exploits of a group of operatives of the BlackEagle/ BlackEagle Security and Investigations Company, Inc. These operatives are hired guns, private eyes, troubleshooters, spies and soldiers all wrapped up together. They work for a company with a reputation for getting any job done, any time, by almost any means.

BlackEagle, headquartered in Atlanta, Georgia, provides security services, investigative work, surveillance and other para-military and espionage tasks to individuals, governments, and companies all over the world. BlackEagle has a solid and respected reputation as a firm that will get things done, when other recourse has been tried, and failed. At the close of the second millennium, the world is a chaotic place, with society on the edge of collapse, or violent upheaval. It is in this world that BlackEagle operatives—skilled, professional, and respected men and women—ply their dangerous trade.

By the final years of the twentieth century, society on this planet has become a nearly global entity. Technological development has continued its acceleration, complicating the social problems brought on by the conclusion of the cold war, a failing economy, and an evaporation of values and ethics. Class divisions are more pronounced than they have been for a century or more, both between first- and third-world nations and within these nations themselves. Economy is more an overt force than ever before, and economic might perhaps dominates military might in any competition for power. The cold war, with its neat division of power into two spheres of influence, is a distant memory. Now there are no superpowers, and geographical divisions of influence have become vague or have disappeared. The growth of information has brought the world into one global community, only to discover that it cannot control the ancient animosities that have kept humanity warring since the dawn of history. Attempts to mitigate feuds large and small have proved expensive and difficult, and have had disastrous results as the spread of genocidal weapons has brought them into the hands of despots and criminals. In the end, no power on Earth has the stomach or means to bring about peace, and the world, without leaders, continues to tear itself down.

The World at Millennium's End

On the surface, the *Millennium's End* world looks a lot like our own, on a bad news day. In fact, the setting of *Millennium's End* is somewhat different than our world, in history, technology, and atmosphere. The following sections cover the course of events that turned our world into that of the game, as well as some of the technological, social, and political results of that history.

A Near-Future History

The last decade of the twentieth century—indeed of the second millennium—has been one of enormous upheaval throughout the world. As society has globalized, discarding outdated systems of oppression and disunity, so has it also become reactionary, nationalistic, and quick to create new systems of oppression and disunity. Although the decade marked the end of the cold war, promising an unprecedented era of compromise and cooperation, the seeds were already being sewn for the economic exploitation, ethnic strife, and political division that became the hallmark of the later nineties. As the decade progressed, the world slid into a depression as bad or worse than that of the thirties. Nuclear war, long held in check by the old superpowers, has finally run its course in the Middle East, and the unsuppressed spread of cold-war weapons has made its threat a daily fear. And throughout this decade unchecked population growth, environmental catastrophe, cultural erosion, nationalism and religious extremism, and overwhelming third-world debt continued to crack and erode the global social order.

Running Millennium's End

Millennium's End is set in a world that seems a lot like our own—but it isn't. It's a fictional universe, where the uncertainties of our world have become unavoidable facts. To really build upon the *Millennium's End* atmosphere, it's important to understand how that world is like ours, and how it differs. The text over the next few pages outlines some of the factual differences—the political events and technological growth that take the *Millennium's End* world on its separate path. The atmosphere, however, is something just a little beyond that.

Set *Millennium's End* in the world as you know it. Feel free to use current maps, plans, locations and other physical settings with little or no modification. Pull events, personalities, and issues out of today's news, altering them just enough to conform with the history and technology of the game. In short, feel free to make the *Millennium's End* world—at least on the surface—largely indistinguishable from our own.

The differences are in the details. The skyscrapers in your local city might be the same as those in its *Millennium's End* counterpart—except that in the latter, every fourth or fifth building stands empty, dotted with broken windows and streaks of rust. The carefully-manicured plantings of malls and plazas are choked with weeds and vines. Graffiti sports swastikas and death-threats. Subway trains sit idle, rusting in their vandalized stations.

The mood of *Millennium's End* lies not in the bush wars, terrorism, hate crime and corporate combat that lie behind most adventures, but in the feeling that nobody can or will do anything about these things. This decay, this slow erosion of our world by the inexorable flow of news nightmares, is what will set a *Millennium's End* campaign apart from any other modern or near-future game.

1990

The millennium's last decade opens with an eventful and promising year. Months after the fall of the iron curtain in 1989, peace seems to be breaking out all over, and the formation of a new post-cold-war order brings hope to people everywhere.

The Soviet Central Committee strikes from the constitution of the U.S.S.R. the guarantee of communist party rule. This hastens the process of democratic reform and promises an age of peace and cooperation between the U.S. and its cold-war adversary.

National elections are held in Nicaragua. The opposition wins the presidency and the majority of the parliamentary seats, but the Sandinista party still remains a strong political force. The U.S. and Nicaraguan governments normalize their relationship, and it looks like another stormy region is headed for lasting peace.

Although Escobar and other principal leaders elude capture, the major drug cartels in Colombia are essentially shut down. The U.S. and the Andean nations cooperate to provide alternative crops for the hundreds of thousands of peasant farmers who had become dependent on the coca industry for their livelihood. The flow of drugs into U.S. cities is reduced dramatically.

Following the lead of several other NATO countries, including Canada, the U.S. military begins an experimental program allowing women to take combat roles in the military.

East and West Germany reunify. It is agreed that the new Germany will remain a member of the European Community and of NATO, but will also retain close ties with the Soviet Union. The Warsaw Pact disbands.

Iraq invades Kuwait, and appears to threaten Saudi Arabia. Reaction from the United Nations is surprisingly rapid and strong. Faced with the prospect of thirty-percent of the world's oil in the hands of Iraq, the U.N. imposes a tight embargo, honored by virtually all nations on earth, with the exception of a few sympathetic Arab states. In an unprecedented action of international cooperation, troops from twenty-three countries bolster the defenses of Saudi Arabia, including almost 400,000 troops from the United States.

1991

The year opens with a bang. On January first, 750,000 Iraqi troops cross the border dividing occupied Kuwait and Saudi Arabia. Over 150,000 enter and occupy Jordan. The defending allied troops, numbering almost a half million, put up a spirited and effective defense, but within two weeks the remnants of the Iraqi army control most of the Arabian peninsula. Simultaneous to the ground attack is a chemical missile strike against Israel, and a single nuclear warhead is detonated in the Arabian desert, presumably a warning against counter-attacks. Israel ignores this warning, and hits Iraqi cities hard with chemical and conventional attacks.

Two months pass before a counter-invasion is mounted. During the intervening period, a multi-national air force decimates Iraqi air capabilities and begins massive air attacks against Iraq. The invasion force, running under the blue flag of the U.N., is met with heavy chemical attacks, as Iraq carries out a scorched-earth withdrawal.

In May, Iraq launches a counter-attack. Its ground movements are weak, but are accompanied by nuclear strikes against the U.N. lines and Israel. Six Iraqi warheads are detonated, which are met with eight Israeli responses. Panic grips western cities as Iraqi terrorists claim to have placed bombs around the globe, but the threat proves groundless. Iraq itself dissolves in the aftermath of the Israeli strikes, and the U.N. forces take Baghdad in June. Four million people are dead, three-quarters of them civilians, and large portions of Iraq, Jordan, and Israel are now totally unlivable. But around the world people celebrate, as the costly victory seems to end forever the era in which despots can rule through terror and aggression. The U.N. enjoys a new sense of authority and importance, and plans are made to increase its role in enforcing peace.

Elsewhere things are not so optimistic. Ethnic violence increases throughout many parts of the Soviet Union and central Europe. Several Soviet states vie for secession, which the central government reluctantly grants through a slow and deliberate process. In August, an attempted military coup is put down when the Muscovites and some elements of the Army refuse to go along. After a tense week, civilian government regains power, although Mikhail Gorbachev loses political ground to Boris Yeltsin. Once again, it appears that the post-cold-war order is vindicated, and that brutality is no longer a viable political tool.

The South African government pursues the dismantling of apartheid. Despite a wave of petty violence on both sides of the issue, negotiations for a new South African constitution make headway.

Oil prices, already high at the end of 1990, hit an all-time high of over $200 a barrel in mid 1991. Although the end of the war brings some relief, the destruction of Saudi, Kuwaiti, and Iraqi oilfields leave the world's oil output dangerously low. Around the world, hastily-built oil fields are springing up to meet the demand, and few people object when environmental corners are cut. Dust and smoke from the Iraqi war are visible in the sky as far away as Hawaii.

1992

Political fallout from the Iraqi war continues, as the world's powers adjust to post-war realities. Japan and Germany both revise their constitutions, allowing them to send military forces overseas. The U.N. retains an expanded permanent military force. In the Middle East, U.N. troops occupy much of the war-torn region, as the local governments reconstruct themselves. The U.S., however, lost nearly one quarter of its ground forces in the conflict, and with an economy hard-hit by soaring oil prices appears to have neither the will nor the funds to rebuild. Although the feared chemical and nuclear weapons fail to appear, isolated terrorist attacks against the U.S. and other western nations continue to be carried out by middle-eastern groups.

The U.N.'s second big post-cold-war test is initiated, as the organization sends a contingent into the ruins of Somalia. While the effort does bring relief to millions of Somalis threatened by famine, attempts to help build a new government meet no success as local warlords shun arbitration. International political support for the U.N.'s actions is enthusiastic, but troop commitments are scanty, and the U.N. finds itself unable to confront and disarm the locals. The situation stagnates.

The European Community begins the long awaited big jump into unification. Spurred ahead by a changing political climate and a deepening global recession, the 1992 changes are more aggressive than originally planned. They include the removal of all internal trade and immigration barriers, standardization of tariffs, the adoption of a single currency, and an increase in the power of the central E.C. government. Additionally, plans are made to create a single standard military, to create an overriding judicial system, and to issue a single passport.

Having been silent for two years, the Medellín Cartel begins to quietly reassert itself in the Andean region. Although its members have diversified their capital into many legitimate enterprises, contraband continues to be the Cartel's main source of income. The Cartel now offers an expanded selection of illegal narcotics to its American distributors, and it strengthens its imports into Europe as well. Legitimate enterprises provide convenient money-laundering opportunities, while making the Cartel wealthier and harder to prosecute.

Growth in organized crime is not limited to Latin America. In Italy, the Mafia carries out a vicious bombing campaign against the few prosecutors and judges honest and brave enough to seek it out. Evidence that the majority of ruling-party politicians are in the Mafia's pocket enrages Italians, and politicians are booed and attacked at the funerals of anti-Mafia prosecutors. Many corrupt politicos are ousted by election and impeachment, but the situation is not resolved by year's end.

Just across the Adriatic Sea, Yugoslavia crumbles as four of its six republics secede. Almost immediately, a three-way war begins between Serbia, Croatia, and Moslems in Bosnia. The U.N., already overcommitted in Africa and the Middle East, reacts hesitantly, and despite outcry over

the atrocities beamed out daily by television crews, little international action is taken.

The summer of 1992 sees weeks of record-high temperatures throughout the northern hemisphere. Despite the efforts of the U.N. and dozens of committed relief agencies, starvation once again becomes a major problem in eastern Africa. AIDS continues to spread as well, gaining a major foothold in southeast Asia while killing hundreds of thousands in Africa.

1993

1993 proves to be a bad year for the U.N. In Somalia, U.N. troops take heavy loses as they try to move in against local warlords, several of whom band together in attacks against the U.N. and relief organizations. Helicopters are shot down with sophisticated black-market weapons, and the U.N. headquarters in Mogadishu is leveled by a powerful bomb. Facing a growing crisis in Bosnia, and lacking sufficient military support from its members, the U.N. pulls out of Somalia in August.

In the former Yugoslavia, a tiny and beleaguered U.N. force tries desperately to limit the atrocities committed by all sides. Its efforts generally keep relief supplies flowing to Bosnia's civilians, but with little political or military support from its members, the U.N. can only slow the process of "ethnic cleansing" carried out by Serbians and Croatians. In September, the last Moslem-held city falls, and Bosnia is divided between the victorious Croatia and Serbia, which, with Montenegro, remains part of Yugoslavia. U.N. forces in the region withdraw.

The World Trade Center in New York is rocked by an enormous bomb blast in a basement parking garage. Although casualties are light and the structural damage minimal, the alarming event signals the return of major terrorism to the United States.

A rough peace accord is drafted for the Middle East. Much of what was once Jordan, and some of pre-war Israel, will be used to form the nation of Palestine. Although the plan has broad international support, there is resistance from Arab extremists, who continue to oppose Israel, and many Israelis, alarmed that the majority of the new nation's population had supported Iraq in the war.

The states of the former U.S.S.R. continue the process of disentanglement. Some tensions flare between Russia and the Ukraine of possession of military assets, most importantly the Soviet nuclear arsenal. Several of the new nations grapple with ethnic violence, as hatreds long held in check by the Soviet government are given full reign.

Despite a number of economic reforms, the otherwise hardline Chinese government maintains a vice-like grip on its population. So little news comes out of China that a spring uprising comes as a complete surprise to the west. The revolt, led more by peasants and poor workers than by students, is stemmed in the countryside and provincial towns. After several weeks of crisis and bloody repression, the Army changes sides and installs a new, reform-minded government. Unfortunately, this new government is almost instantly gridlocked by issues of regional autonomy and isolationism.

The reform process continues in South Africa. The African National Congress and the Inkata Freedom Party clash over constituency, and their violence does nothing but inflame white extremists opposed to the reforms. South African violence is in the news for most of the year.

By late 1993, the global recession begins to look more like depression. Although it too is troubled, Japan has one of the healthiest econo

mies in the world, and finds itself in an almost superpower-like position of influence. Japanese foreign aid, which had been on the rise for several years, increases to rival that of the U.S. and the E.C, both of which are in rapid decline. In addition, Japan beefs up its diplomatic corps, and, following the changes to its constitution, increases the ability of its tiny military to represent itself around the world.

1994

In the first incidence of what comes to be known as "techno-terrorism," the Washington, D.C. area is brought to a twelve-hour standstill by simultaneous electronic attacks on telecommunications and transportation systems. While alarming and very costly, this attack leads to no direct loss of life. Responsibility is claimed by a previously-unknown pro-environment group. While the perpetrators are never caught, investigators conclude that the attacks were carried out by freelance hackers hired by the eco-terrorists.

Small-scale border conflict between India and Pakistan erupts into full-fledged warfare in Cashmere. The world watches nervously, as both sides are believed to be nuclear-armed. Action is considered in the U.N., but with neither a mandate nor a clearly-defined enemy, none is taken. The conflict remains in the headlines for most of the year, then subsides.

The Palestinian accord is signed, bringing a new nation into existence. Most Arab states recognize Israel's right to exist, and diplomatic relations are established.

In South Africa, government investigators uncover a plot to assassinate president DeClerk and several other high officials in the constitutional reform congress. Implicated in the investigation are several high members of the South African national police. Two weeks after the arrests, well-armed white supremacists storm the parliamentary building, killing several members of the reform group. Attacks on blacks continue at a fever pitch, but the reform process moves on.

Fidel Castro steps down as president of Cuba. A constitutional committee is convened to convert Cuba to democracy, and millions of Cuban expatriates make plans to return to their homeland. The new constitution, however, doesn't make many changes, and it soon becomes clear that Castro's totalitarianism has been replaced by a military junta.

A nuclear-reduction pact is agreed to by the U.S., the E.C., Russia, and the Ukraine, which effectively reduces all classes of nuclear weapons by about eighty percent. Unfortunately, it appears that several dozen warheads and an untold amount of weapons-grade plutonium from ex-Soviet arsenals are unaccounted-for. A new terrorist group, the Worldwide Islamic Jihad, announces that it holds several nuclear weapons.

The economic slowdown in America and throughout the world has become a full-fledged depression. In the U.S., which is dealing with a slow revival of racist organizations and hate-crime, congress produces increased levels of protectionist policy. The E.C. faces the staggering burden of financing the eastern European recovery. Russia, on the other hand, has a growing economy, as consumer production develops gradually, and Japan stays afloat largely through heavy trade with Russia. Many developing nations find it impossible to rein in their economies, and Third World inflation skyrockets as debt burdens continue to mount.

1995

The GenNet is instituted in the U.S., linking the federal government with state and local government, businesses, and individuals throughout the nation. Public interest in the project is light at first, but business jumps

right in, and by year's end virtually every computer sold is GenNet-ready.

FARC, a communist insurgency which has been operating in Colombia for over twenty years, begins a new offensive backed by armored vehicles and helicopter gunships. The initial attacks quickly secure the mountains around Medellín, although most of the forces are centered around the Pacific port city of Buenaventura. Within a month FARC controls 5000 square miles of the Cordilla Central mountain range. The Colombian government, seemingly taken off guard, requests assistance from the United States and the U.N., claiming that the insurgency is nothing more that the Medellín drug lords trying to take over the country. The U.S. Navy blockades Buenaventura.

A right-wing backlash in Israel culminates in the violent reoccupation of Jerusalem and the northern Negev region of Palestine. This brings Israeli troops into conflict with the U.N. force. The situation is extremely unclear, with elements of the Israeli government disavowing responsibility for the military's actions, and emerging evidence that some of the violence was instigated by Islamic fundamentalists. Diplomatic ties are broken between Israel and all Arab nations except Egypt and Kuwait.

Massive decontamination efforts lead to the reopening of some Saudi oil fields. Despite this, and the slow growth of alternative transportation technologies, high fuel costs continue to prevent recovery of the world economy.

The European Community admits Poland as a signatory to the Maastricht treaty. The Czech Republic, Estonia, Latvia, and Lithuania are admitted into the E.C. on an associational basis.

1996

After much political debate, the U.S. agrees to send about 100 military advisors to Colombia. Despite the ever-increasing problem of drug-related violence in the U.S., and the obvious link between FARC and the Medellín Cartel, the mood in the U.S. is against intervention, and the advisors are to assist in a training role only.

Algeria, one of several north-African states combatting an Islamic fundamentalist movement, succumbs. The army stands by as hoards of workers and students storm government buildings, executing dozens of officials and cabinet members. An interim government is convened, which instantly implements a fundamentalist Islamic constitution.

In the U.S., an organized network of white-supremacist and neo-nazi groups stages demonstrations in cities across the country.

The government of Belize is decimated by a violent coup attempt, in which the Prime Minister and five other cabinet members are killed. The coup, carried out by a small group of Guatemalans claiming sovereignty over the small neighboring country, is quickly defeated. Rumors are floated that the Guatemalan group had a corporate sponsor.

The second year in four of record-breaking high temperatures raises crop prices throughout the world. In the U.S. alone, grain production falls by almost forty percent compared to 1990. Surprisingly, this boosts the U.S. farming industry, as world prices come up to par with U.S. production costs. The U.S. Cancer Institute reports a twenty-five percent rise in skin cancers in the U.S., and reports indicate that glaucoma and other conditions linked to solar radiation are also on the rise.

Students and young workers in Japan protest the government's militarization and protectionist policies, which, combined with the world economic conditions, have led to a scarcity of western goods and a rapid

decline in living standards. Radical left wing groups step up their small terrorist campaigns against what they claim is a resurgence of Japanese imperialism.

The international arms market sees the arrival of numerous low-cost, very high-tech weapons being produced by developing Pacific-rim nations. The source of technology for these weapons, thought to be beyond the capacity of these nations, is unknown. These weapons are put to good use in, among other places, Colombia, where the Federal government often finds itself out-equipped by the rebels.

A large oil platform off the coast of northern California, hastily constructed during the Gulf war, becomes the site of the largest oil spill ever. 140 million gallons of oil flow uncontrolled into the sea after the platform collapses during a storm.

1997

Immigrants and neo-nazis clash during week-long riots in Germany. In the aftermath of the violence, Germany threatens to pull out of the E.C. unless given its own immigration controls. Countercharges abound that Germany, which benefited from E.C. help during costly years of reunification, wants out of the organization now that its economy is finally stabilizing. France, which has had justifiable fears of Germany for most of the century, and Poland, which claims that its emigres to Germany have been mistreated, lead the campaign against Germany's threats. The issue subsides, with Germany remaining in the E.C.

In Japan, living standards continue to fall and unrest continues. The summer sees riots and mob violence in several Japanese cities.

The Provisional Irish Republican Army announces an extension of its war against Britain to the whole of the E.C. This announcement is quickly followed by several dozen bombings in Paris, Brussels, Berlin, Amsterdam, and of course London. Clearly regretting not having thought of it first, the ETA, a Spanish group of Basque separatists, makes a similar announcement following the assassination of a Spanish E.C. parliamentarian in Brussels.

Scientists cite skyrocketing carbon-dioxide emissions, mostly in the Third World, and dust kicked up by the nuclear exchange in the Gulf as reasons for the rise in world temperatures. Evidence of substantial ice-cap melting is visible at both polar regions. Some scientists declare that the Earth has entered a period of environmental holocaust.

After four years of democracy, Haiti suffers a violent and oppressive coup, which brings members of the Tonton Macouts back into overt power.

The Czech Republic, Estonia, Latvia, and Lithuania are all admitted into the E.C. as full members. Eight eastern European nations await associational admission.

1998

An F.B.I. investigation implicates six federal judges, fourteen D.E.A. agents, and a variety of Justice Department officials in dealings with drug importers. None go to trial, as key witnesses are assassinated and evidence in the hands of the F.B.I. disappears.

In Japan, scandal breaks out when a newspaper reveals that several major industrialists, many of them also government officials, have been illegally exporting high-tech weapon designs and components to producers in Korea and the Philippines. The rioting of the past year rekindles with a vengeance. The government fractures, cracking down hard on

rioters in a last-ditch attempt to maintain order and control. After several weeks, the Japanese military steps in, taking control of governmental functions. The military's provisional government promises to uphold the constitution and hold elections in 1999.

An unusual off-season hurricane strikes Vietnam and portions of Burma and Thailand. Eighty-thousand people are killed by storm conditions and the flooding that follows.

Oil prices begin to stabilize, but at over eight times the level of early 1990.

1999

It's the final year of the millennium. Under the shadow of the Iraqi war, in the depths of a seemingly endless depression, facing a rapidly deteriorating ecology, the world is on a slippery slope leading rapidly into chaos. The U.S. is paralyzed by corruption, bigotry and fear. Europe is fragmented and chaotic. Japan is in the grip of social upheaval, while Russia struggles with its poverty and China is simply disintegrating. Terrorism strikes blindly at the remnants of wealth and power, while war wracks the troubled third world. Humanity stands at the gate to the third millennium—and sees no future there.

The World's Powers

There are no superpowers in the late nineties. There are no leaders, no nations willing to move past their own problems to tackle those of the world. But that doesn't mean there are no powers at all. This section covers several of the countries and organizations into which the influence of the superpowers dissipated at the close of the cold war.

The European Community

The European Community, or E.C., is a confederation of seventeen European nations—Belgium, the Czech Republic, Denmark, Estonia, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Spain, and the United Kingdom. Originally conceived as an economic alliance of twelve nations, the E.C. by the end of the millennium is virtually a single country. The internal borders still exist, as do the national governments. But the borders denote no barriers to trade or immigration, and the national governments have deferred a substantial portion of their power to the government of the E.C. A single E.C. currency—the "Ecu," worth about two dollars in 1999—is used by all the member states, and a single E.C. passport is issued to its citizens. Although the member nations maintain their own military forces and conduct their own foreign policy, portions of these forces are always under the command of the E.C. government, and the foreign policy conducted by the E.C. government tends to be more consequential.

Although these changes have strengthened Europe economically, they have also led to some distress. The lack of immigration restrictions has led to small migrations from the less developed nations like Portugal and Poland, to the wealthier states like Germany and the U.K. The cost of reunifying Germany and bringing eastern Europe into the twentieth century has put the squeeze on many of the expensive social programs enjoyed in most European nations. These and other factors have fuelled nationalistic and anti-E.C. movements in several countries.

Europe has seen a rise in terrorism this decade, from extremists in the far left and the far right. Neo-nazi groups have been vocal and violent in Germany and other countries. The I.R.A. and its splinter groups have spread their attacks from Great Britain to the whole of Europe, as have the Basque separatists of Spain. Acts of eco-terrorism, generally aimed at industrial centers, have been on the rise as the environmental situation has deteriorated. The Red Brigade and other far left groups have suffered from the fall of the world's communist powers, but still exist, and still carry out their attacks against perceived imperialism. The Worldwide Islamic Jihad strikes out in the name of Islamic fundamentalism, and as always, the troubles of the Middle East generate seemingly endless attacks.

Another great concern for Europe is the environment. Eastern Europe was poisoned by forty years of communist rule, and converting Soviet-bloc factories to cleaner modern production has been a slow and expensive process. Even now, a few ancient industrial complexes continue to pour unrestricted toxins into the water and air of eastern Europe. And although the prevailing winds kept most of it away, Europe still received a disturbing amount of fallout from the nuclear exchanges of the Iraqi war.

By 1999 the future of the E.C. is somewhat in question. Despite the trend through most of the decade towards greater unity and central control, the last few years have seen unrest and divisiveness. The poorer nations feel that they are at a disadvantage in the agreement, that they do not receive equal benefits in membership. The wealthier nations resent the erosion of their economic advantage. Many social and private interest groups would like to see the E.C. disbanded, while others feel it should take greater control, socializing many programs and industries.

Japan

In 1998, two years of severe social unrest in Japan culminated in a military takeover of the country, which has yet to be resolved. Japan's coalition government, fractured by the unprecedented upheavals and fraught with corruption, could not maintain political control, and the country was on the brink of chaos. The military does not seem to want the government's job, though, and promises to return the nation to constitutional civilian rule as soon as possible. Meanwhile unrest continues, as living standards steadily decline, corruption remains entrenched, and the Japanese youth accuse the government and military of an imperialist conspiracy.

Up until the Iraqi war, Japan's constitution banned the country from maintaining all but a very small military. After the war, however, pressure increased for Japan to take on the responsibilities of a major world power, and a very controversial revision was made to the constitution. As the decade progressed, opposition to Japan's growing military remained strong. By 1999, the new Japanese military is still not large by most standards, and with the exception of a few U.N. peacekeeping missions, it has never fired a hostile shot. It remains a target of criticism nevertheless. The revelation that many of the black-market high-tech weapons flooding the world market originated in Japan did little but fan the flames.

Japan's economy, relatively strong in the face of world depression, was dealt a death blow by the coup. Heavy trade with Russia had been a saving grace for the Japanese, keeping their economy alive if not healthy. The uncertainty brought on by the coup has ended that, and Japan is

rapidly heading into the same economic straights as the rest of the world. Crime, never much of a problem in Japan, has been on the rise since the unrest began, and drugs have begun to make inroads as well.

Japan's dramatic social problems have led towards some progressive thinking, but they have had another effect as well. As Japan's youth pushes for reform and civil unrest continues, a growing conservative movement is lashing out against progressive organizations, corrupt politicians, and western interests (especially those businesses, like fast-food chains, that represent invading western values). Despite their law-and-order platforms, these groups simply add to the confusion with their random and often violent demonstrations and attacks. Fortunately, the disorder seemed to peak with the military takeover, and things have calmed down a little in Japan in the later months of 1998.

Russia

Following the failed coup of 1991, the U.S.S.R. was disbanded and its republics became independent states. The largest and most powerful of these new nations is Russia, which inherited over half the population and three quarters the land area of the Soviet Union. Russia also retained the vast bulk of the Soviet military, including the majority of the nuclear arsenal.

The 1990s have been a tempestuous decade for Russia. The roads to capitalism, which has been embraced enthusiastically, and democracy, which has had a harder time, have been rocky. Despite endless political infighting over economic and democratic reform, the Russian economy has moved in the only direction it could—up. Despite the fact that fuel costs have limited overseas trade, Russia has the only major economy in the world that has grown throughout the 1990s.

Russia is still one of the biggest military powers on the planet. But after taking heavy losses in the middle east, and seeing mass desertions after the dissolution of the U.S.S.R., Russia has been reluctant to extend its military might beyond its borders. Foreign policy is in fact almost isolationist. The Warsaw Pact is a fixture in history, and Russian military support for Third World regimes is non-existent. Russian weapons are still common around the world, however, as the nation has sold off vast stockpiles of Soviet weaponry on the international market.

In addition to the bulk of the Soviet Union's conventional forces, Russia also inherited most of the U.S.S.R.'s nuclear stockpile. Although neighboring Ukraine—which held a sizable portion of the Soviet nuclear arsenal when the U.S.S.R. fell apart—had originally expressed no nuclear aspirations, it later refused to give up its weapons. The issue was resolved when the Ukraine agreed to sign a limitation treaty, reducing nuclear arms by eighty percent. Unfortunately, in the turbulent days of the early nineties, Soviet military forces were for some time accountable to no-one, and a number of nuclear weapons are unaccounted-for to this day.

The United Nations

Although not a superpower, the United Nations has dramatically increased its influence since the Iraqi war. U.N. observer forces have been around since the 1950s, but involvement in Iraq, Somalia, Namibia, Bosnia and Cambodia in the early '90s gave the U.N. a higher profile and a changed mandate. U.N. actions since include Guatemala, Angola, Burma, Lebanon, Chad, Peru, and most notably Palestine, all of which involved substantial combat. In 1999, the U.N. has military forces in

twenty-six nations. And while the U.N. mandate once required requests from all involved parties before interceding, the post-war U.N. now has the international authority to take action wherever the security council sees fit.

Unfortunately, the U.N.'s many military involvements, the enormous requirement for foreign assistance, recent environmental catastrophes, and the blossoming of AIDS have overwhelmed the organization's budget. The world economic situation has also put a squeeze on contributions, forcing the U.N. to pull out of areas where its stabilizing influence is badly needed. Just when it seemed the U.N. might grow into the most influential body on Earth, tight times have cut it off at the knees. The leadership vacuum it might have filled remains.

Of course the U.N. is not the only international aid organization, even if it is the only one with an army. Many private organizations have responded to the growing crises of disease, famine, war and poverty in the Third World. Unfortunately, many countries in Africa and Southeast Asia have fallen into anarchy, with little or no governmental control. Relief agencies become targets for bandits and warlords, or get caught in the crossfire between warring factions. Many rely on local or international mercenaries when U.N. or government troops are unavailable. Even so, relief work grows more and more dangerous and expensive, and the help needed so desperately in the Third World comes along with less and less frequency.

The United States

The United States remains one of the dominant political forces on the globe, but things have changed quite a bit since the Iraqi war. American military power was never rebuilt after the heavy losses in the war, and a weak economy has been further shaken by a movement towards isolationism. Class division in the U.S. has reached an all-time high, as automation, third-world industrialization, and general world-wide depression have slashed the number of middle-class jobs available. American inner cities are in an advanced state of decay. Riots are common in the headlines, as the growing underclass lashes out in frustration over lack of jobs, insufficient social programs, and corruption and injustice. The only factor which has put a dent in the importation of drugs is the total lack of money in the communities most affected by them. By the end of the millennium, crime in urban and suburban areas has reached record levels.

The drastic decline in military spending since the end of the cold war has only added to the economic spiral, but it has had one silver lining. American high-technology companies had to shift their focus from military to industrial consumer development. The result has been that the U.S. has begun to be a respected supplier of automobiles and home electronics once again, and a leader in the development of computer chips and high-tech research—although the depression has kept this success from turning into economic growth. The installation of the GenNet has also been a positive factor, giving the U.S. an edge in the flow of information and the efficiency of business.

Terrorism, virtually unknown in the U.S. during the late eighties and early nineties, has been revitalized in the later years of the decade. Hate crime is one major source, as an increasing number of fringe groups have lashed out at whatever scapegoats they choose. Police seem to be impotent in the face of the anarchy on American city streets, and vigilante and gang groups spring up everywhere. Often just hate crime in another form,

vigilantes generally add more to the problem than the solution. Problems fighting hate crime, terrorism, drugs and narco-terrorism have been compounded by a rise in corruption in all levels of government and law enforcement. This became strikingly apparent in 1998, when a major FBI investigation into corrupt officials failed to produce indictments after the murder of several witnesses and the mysterious loss of important evidence.

Another major problem in the U.S. is the environment. An increasing sense of despair has undermined the hopeful, optimistic ecological movements of a decade earlier. Most Americans seem to have given up, resigned to the idea that a clean planet is a thing of the past. Although automobile use is way down, the cost of petroleum has forced an increase in the use of coal and other dirty power sources, and air quality in most American cities is way down. The need to cut corners in a desperate economic environment has tempted many companies to disregard pollution control laws, and a corrupt government has let them get away with it. The result is smog, industrial dumping, filthy harbors and rivers, declining health and an unspoken suspicion among many Americans that today's children may be the last human generation.

The Third World

The depression has hit the undeveloped world even harder than the U.S., Europe, Japan and Russia, which between them control an increasingly large portion of the world's economy. As poverty and desperation go from bad to worse, extremism and violence take root. Hostility is often internalized, in the form of civil war and factional violence, directed against neighbors in the form of petty regional conflicts, or focused outwards as terrorism. In 1999, regional and civil wars flare on almost every continent. These conflicts absorb enormous amounts of resources from the countries involved, usually towards goals which seem trivial or incomprehensible to the rest of the world. Tragically, this phenomenon just multiplies the troubles of the Third World.

But Third World problems are not limited to conflict and war. Most developing nations have staggering birth rates. With no comparable economic expansion, millions of children born each year have no jobs to look forward to. Additionally, these nations suffer from enormous debt burdens, which, despite the radical attempts to reduce them made in the early nineties, have only increased. As if that were not enough, the Third World has been hit the hardest by the environmental problems of the last few years, and by disease—especially AIDS, which has virtually wiped out the working-age population of many equatorial African nations.

The Third World also faces bullying from commercial powers, legal and otherwise. Mineral exploiters, oil companies, drug cartels, mercenary organizations, and other multinationals all often have greater military resources than many chaotic Third World nations. Without the help of the U.N. or their neighbors, some developing countries have found that these international bullies just ignore their borders and authority. In a few cases, corporations have simply staked out the territory they want, effectively declaring independence. While still rare, such events must be chilling to small nations around the world that already have enough problems to deal with.

With the increased influence of the European Community and Japan, few countries remain in the grey area between power and poverty.

Those that do, such as Canada, Australia, South Africa, and Saudi Arabia, either rely upon their natural resources or upon close ties to the big four to prevent economic backsliding.

Commercial Powers

Although not political organizations, many multi-national corporations wield considerable economic power, often backed up by enough military resources to protect their holdings in the world's more lawless corners. Corporations have no mandate to be socially responsible, unlike governments, which at least in theory exist to serve people. They exist solely to serve themselves and their stockholders. As such, the power of many multinationals is all out of proportion with their influence for good.

Major corporations can be key players in world affairs. Because they deal in large amounts of money, they can be important donors of international aid—provided, of course, that it suits their interests. A few have been known to wage dirty wars against unfriendly regimes, or to simply ignore the authority of small countries when working within their borders. Some commit economic blackmail, strongarming international banks and monetary agencies into supporting their agendas in the Third World. Others have supported terrorists or insurgents who work towards their ends. In short, the big corporations have become a powerful—and irresponsible—force on the international scene.

Hot Spots

With so much desperation and violence in the world, it would take hundreds of pages to even outline the world's hottest trouble areas. This section covers just a few of them, focusing mostly on those that involve BlackEagle operatives working from Miami, but covering a few of the more newsworthy conflicts from around the world as well.

Colombia

Although thought defeated in 1990, the heirs of the Medellín and Cali Cartels made a strong comeback by the mid-1990s. Economic and military efforts to stem the Cartel's trade have had little effect. In 1995, the Cartel joined forces with the twenty-year old communist insurgency FARC (*Frente Actionista Revolucionario Colombiana*), providing large amounts of capital for military equipment, personnel, and training. FARC turned that capital into a major offensive, converting their long guerilla struggle into a conventional ground war. In 1999, FARC controls over twenty percent of the country. While no government on the planet recognizes FARC's efforts as legitimate political struggle, intervention on the federal government's behalf has been light. With the exception of a naval blockade, a few dozen advisors, and some technical support from the U.S., no-one wants to get involved.

Colombia is not the only country struggling with drugs. Other Andean nations have also felt pressure from the Cartel and local producers. Most, fearing for their sovereignty, have stepped up coca eradication efforts. Peru has even brought in U.N. forces to fight the well-financed and dangerous drug producers within its borders, and although the U.N. support has been light, it's seen a lot of action. The U.S. has military and drug eradication advisors in almost every Andean nation, especially Peru and Bolivia. Most Latin American countries accept this sort of aid

hesitantly, though, and are resentful that the U.S. and Europe seem unwilling to seriously tackle demand for drugs at home.

Haiti

For decades, Haiti has seemed unable to escape a desperate cycle of poverty and oppression. In 1993, Haiti's first democratically-elected president in years came back into power after having been ousted three years before. The stage seemed set for a real change in Haiti's fortunes, and the following four years saw significant improvements in social conditions in the island nation. But the entrenched elite resented any erosion of their power, and in 1997 Aristide was killed in a violent coup. The military junta that overthrew him in 1990 thrust themselves back into power, but with a new leader. Claude Méchant (an adopted name that translates roughly to *hateful*) was a junior leader under Baby Doc Duvalier, and a member of his feared secret police, the Tonton Macouts. Reviving the semi-official organization, Méchant has brought on a reign of terror the likes of which even Haiti has never seen. Living conditions in Haiti are as miserable as any place on Earth.

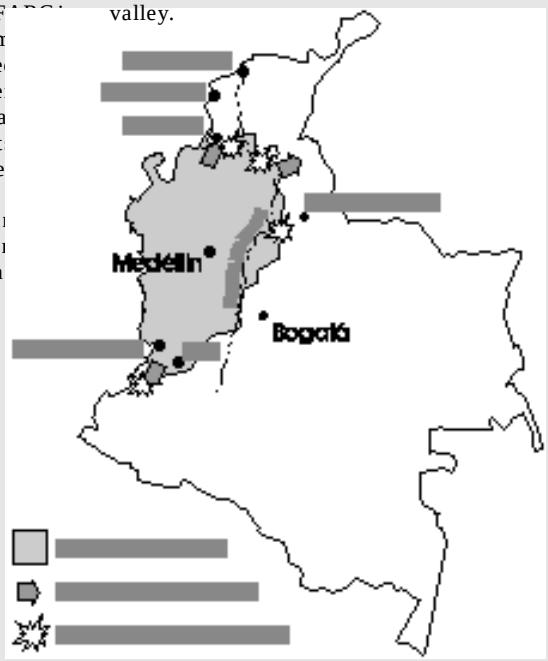
Méchant's policies have differed in many ways from those of Haiti's past dictators. As in the past, there has been a heavy exodus of boat people from Haiti to south Florida, but rather than let them go, Méchant maintains patrols to sink fleeing craft. This brings Haitian patrol boats into frequent conflict with the U.S. Coast Guard—which has orders to interdict the refugees, but also to step in when they are under attack. Some human rights organizations have also documented a slave trade between Haiti and banana growers in the neighboring Dominican Republic. The environment is not a safe one for human rights interests, though, and several investigators that have entered the tightly sealed country have not come back.

Currently, Haiti is a mess. It is under embargo from almost every country on Earth, although a strong smuggling industry keeps goods essential to the government trickling into Haitian ports and across the border from the Dominican Republic. News reports are scanty, but rumors indicate that Méchant has lost the backing of the wealthy, and is now as busy battling them as he is oppressing the poor.

The Colombian Civil War

In 1995 the communist insurgency FARC, whose guerillas often worked as part-time enforcers for Colombia's drug bosses, was absorbed by the country's largest drug empire: the Medellín Cartel. By 1999, F a respectable—if not legitimate—m force, backed by a considerable colle tanks, armored vehicles, helicopte river patrol boats. It is protected by a the-line air-defense network, and it sive capabilities easily rival those Federal Colombian military.

The Colombian insurgency began mountains around Medellín and the port city of Buenaventura, on th Pacific coast. Since then, FARC has consolidated its hold on the northwestern portion of the country. With its ports blockaded by Colombia, the U.S., and several other sympathetic navies, coastal holdings are strategically critical to FARC, and for the past year most of its offensive attention has been on the Caribbean coast. The Federales have managed to hold the beleaguered town of Sincelejo, however, and while fighting in that area has remained fierce, in 1999 FARC began turning its attention to the Pacific coast and the Magdalena river valley.

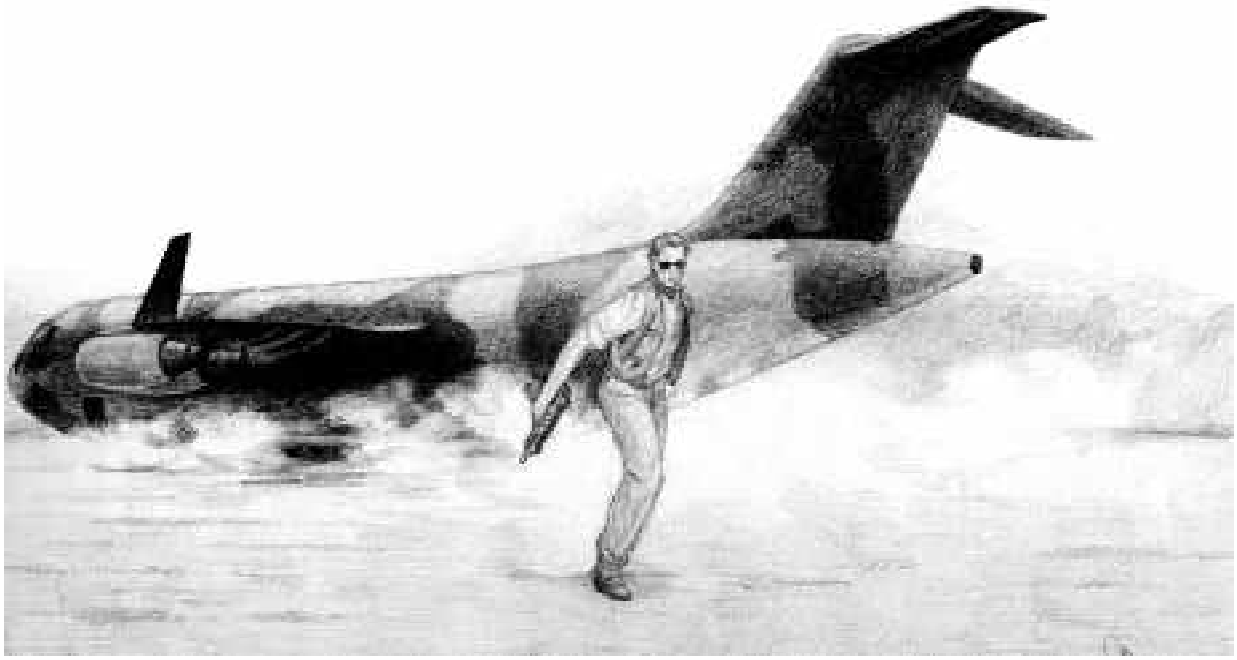


Cuba

The Castro regime could not outlive the '90s, but the death of communism did not mean the death of totalitarianism in Cuba. Castro abdicated his command in 1994, in what may have been a quiet and bloodless coup. As hundreds of thousands of Miamiites celebrated the end of the regime, a junta of military leaders quietly took control of Castro's institutions. Since then, democratic and economic reforms have been slight, just enough to fend off pressure from the U.S. and the international community. Living conditions in Cuba are not great, but despite the lack of freedom they are better than in most of the Third World. In fact, Cuba is a relatively placid place. Its problems arise less from the oppression of its population than from the pressure of millions of Cuban expatriates—most of whom live in and around Miami.

South Florida's Cuban community is very active in trying to overthrow the Cuban junta. Dozens of radio broadcasts pour into the island every day, urging revolt. Enterprising black marketeers smuggle guns and western goods to in-country malcontents. Fringe "action groups" train in Everglades camps, preparing for some unspecified future assault. Sometimes they make quick raids on the Cuban coast, generally scoring more media points than military victories. Many of these groups are far-right extremists, and it is doubtful that a Cuba under their control would be any more pleasant than it currently is.

While most of the pressure comes from the outside, there are insurgent groups acting within Cuba. They aren't big and don't have a lot of popular support, although the gradual infiltration of American media and consumer goods is changing that. The Cuban military is no longer well-supplied by the Soviet Union, and has been slowly downsizing through attrition. As a result, the tight seal kept on the island is slowly loosening. The big assault envisioned by the action groups may not be far off.



Central America

One more region that seemed headed for peace in the early '90s, Central America moved backwards throughout the last few years of the decade. While Nicaragua seems to have made the leap to democracy with fair success, El Salvador and Guatemala have failed to shrug off the vestiges of their civil wars. Two traditionally peaceful countries—Belize and Costa Rica—have both suffered at the hands of terrorists and powerful outsiders.

There is nothing new about the wars in El Salvador and Guatemala. In both cases, violent left-wing insurgencies control large areas of the countryside, while hardline right-wingers, largely under the thumb of a military elite, control the government. Both sides have atrocious attitudes towards human rights, but fortunately neither can afford much of the high-tech weaponry that have made the wars in Colombia, Bosnia, and Cambodia so vicious and bloody. Attempts at mediation that almost brought peace to the region in the late eighties and early nineties have fizzled out, as both sides have proved intransigent and the world has lost interest.

The problems in Belize and Costa Rica are more unique to the times. In 1996, a band of mercenaries, working in coordination with a group of Guatemalan nationalists (Guatemala has long claimed sovereignty over Belize), attempted a violent takeover of the government. The coup was put down by a British SAS unit training in the country (Belize is a former colony and member of the British Commonwealth), but not until after the prime minister and several cabinet members were dead. All had opposed mineral exploitations by foreign corporations in Belize, and there was speculation that the results of the "failed" coup were just what the sponsors intended. In fact, shortly after the incident, Techtonics, Incorporated, a corporation with major mineral interests in Central America, began a number of commercial operations in Belize. Attempts to link Techtonics to the coup have been inconclusive.

Costa Rica has not been victimized by such well-organized violence, but has found itself a major training and staging area for mercenaries in the region. These groups operate in Costa Rica's extensive nature preserves, terrorizing locals and occasionally lashing out against the government.

The Balkans

The breakup of Yugoslavia in the early 1990s led to wholesale slaughter as Catholic Croatians, Moslem Bosnians, and Orthodox Serbians all attempted to consolidate their populations and their power. The Serbians, who inherited the bulk of the Yugoslav military, proved the most powerful, and carried out vicious campaigns of "ethnic cleansing" to rid their regions of non-Serbians. By the end of 1993, the republic of Bosnia, which had been home to the majority of the areas Moslems, was overrun by Serb and Croat forces which divided it between them. Croatia remained independent, Serbia remained a part of Yugoslavia, and Bosnia was erased from the map.

Throughout the war, the U.N. attempted to control or at least stabilize the situation. Despite the threat of a larger conflict, enveloping Albania and Greece, the world organization got little support from Europe or the U.S., and was doomed to failure. Nevertheless, the war did not spread, although the situation has remained tense in the years since. Terrorist attacks by nationalist groups, especially Serbian and Bosnian, are common in the area and around the world. The border between Yugoslavia and Croatia is a scene of constant tension and frequent

conflict. Yugoslavia and Greece posture over the fate of Macedonia, a tiny ex-Yugoslav state between the two. And all sides bicker over Kosova, a Serbian town that, with large Albanian and Bosnian populations, is yet another ethnic tinderbox.

The Balkan war was in the news a lot, but it wasn't the only conflict of its kind. In several ex-Soviet states, most notably Armenia, similar wars and similar atrocities were played out. The fact that they received little media attention did not reduce their bloodiness, or the hatred that lingers afterward.

The Middle East

The Middle East remains much the way it has been for most of this century. Arab-Israeli tensions, which came close to resolution after the Iraqi war, have rekindled into bloody warfare. The gulf war also splintered Arab unity, forcing Arabs to make a choice between siding with a leader who would dare to nuke Israel, or fighting against obviously unprovoked attacks on other Arabs, including the invasion of the holy cities of Mecca and Medina. The nuclear and chemical exchanges left large areas of Iraq, Saudi Arabia, Kuwait and Israel unlivable, and wiped Jordan off the map.

Israel currently occupies a portion of Palestine, although it has pulled back from the positions taken in the 1995 invasion. Discussions continue in the U.N. and diplomatic circles for a total withdrawal, but in the mean time sporadic fighting and frequent acts of terrorism continue.

The Iraqi government, autonomous after the U.N. withdrawal in 1993, did little to oppose Iran, which moved to take over regions in southern Iraq after the fall of Baghdad. However, this issue is occasionally the basis for terrorist actions around the globe. Pro-Iraqi terrorist also frequently act on behalf of Iraqi officials jailed after the war.

Lebanon remains a battlefield and a staging ground for extremist groups on all sides of all middle-eastern conflicts, even though the major Israeli and Syrian occupation forces have been withdrawn. The real breeding ground for middle-eastern terrorism has moved, however, to the Sudan. The focus of many fundamentalist groups, including the large conglomerate Worldwide Islamic Jihad, has shifted away from the Great Satans and even Israel to the secular Arab states. Support and training for these groups comes primarily from Iran and the Sudan.

Equatorial Africa

By far the poorest continent on the planet, Africa is beset with a unique set of problems, in addition to those suffered by the rest of the developing world. Civil and factional wars have reduced once stable nations to total anarchy. AIDS has swept away millions. Famine is worse than ever before. Poachers, black marketeers, and drug producers are increasingly violent, proving a serious menace even to strong and stable governments.

Of all these cataclysms, the worst in central Africa is AIDS. Over the course of the last decade, AIDS is known to have taken tens of millions of lives in equatorial Africa. Isolationist governments, local wars, and dwindling relief resources mean many AIDS victims go uncounted, so total figures may be much higher. Even worse, the majority of AIDS victims are working-aged people, while those spared are generally children or older people, unable to support themselves, let alone deal with the problem. One tragic silver lining is that AIDS has reduced the effects of two other major issues—skyrocketing birth rates and famine—in some of

the countries which it has affected. Unfortunately, these affected countries have little or no resources to curb any of these issues, and international aid levels go down each year.

Technology at Millennium's End

The last decade has seen many important developments in technology. Although these changes seem minor at first glance—technologically, the world in 1999 looks much the same as ten years earlier—they've had subtle effects on the average lifestyle, and have greatly increased the resources of those who can afford the price. A few of the more important and visible technological developments are outlined here.

Electronics, Software, and Communications

Developments in electronics and computers have probably not been the most dramatic of the last decade, but they have been the most visible. Electronics have extended themselves into every aspect of business and home life, from the prevalence of palmtop computers connected by continuous cellular link to the GenNet, to the ever-increasing appearance of robots on loading docks and construction sites.

Cellular Phones

By the end of the decade, portable phones are about as common in the cities of the developed world as are briefcases. Only the most rural areas of the U.S. and Eastern Europe are not consistently covered by cellular service, although coverage in the Third World is limited to major cities. Typical portable phones weigh only a couple hundred grams, and can easily be carried in a purse or pocket. Roam privileges are generally standardized, so an individual can usually carry his phone around the country or even the world and remain connected. Cellular GenNet links are also common (most portable computers sold in the U.S. have GenNet-ready links built in). The quality of cellular service varies somewhat, which often limits some sorts of transmissions. High-quality video, for example, often can't be sent real-time, even though it can through standard GenNet connections.

A project to create a world-wide satellite cellular network was initiated in the early '90s, but was never completed. The system is functional, but with only about half the satellites are in orbit coverage is limited. Users with special portable phones (regular cellular phones are not compatible) can communicate with any normal telephone on earth from any point on the planet. Service is available in most areas fifteen to twenty hours a day, and it can carry data as well as voice. Satellite phone service is expensive, however, and is used mostly by people who travel or live in inaccessible regions with no alternative phone service.

Computers

Computer hardware and software have improved dramatically in the last years of the century. Optical chips now process at speeds unheard of just a decade earlier. Neural networking architecture has opened a whole new field of applications, based on processes which more accurately mimic those of the human mind than does standard architecture. Optical storage media allow convenient storage of data in tiny spaces, making it practical to permanently store very sophisticated software within a

computer itself. And while much of this technology is still new and expensive, in 1999, even the most basic palmtops and home units are many times faster, more powerful, more sophisticated, and easier to use than those around ten years earlier.

The effect on business life has been dramatic. The palmtop computer—a device about the size of a large calculator, often pen-based rather than keyboard-controlled—is as common a business tool as the briefcase and the portable phone. Laptops are still the preferred tool of serious users, although the laptops of 1999 are many times more powerful than those of just a few years earlier. Almost all portable computers sold in the U.S. are GenNet-ready, meaning they have a cellular datalink built in.

The GenNet

The GenNet is the first telecommunications network purpose-built to provide computer and entertainment links to government, business, and private homes. Designed to consolidate many of the functions of existing computer and telecommunications networks, the GenNet by the end of the century connects tens of millions of personal computers, voice lines, digital faxes, and entertainment systems to almost twenty percent of the homes, sixty percent of the businesses, and virtually all federal and state governmental agencies in the U.S. Although still separate from conventional phone and cable video systems, the GenNet has the capability to carry almost all existing telecommunications in the U.S., and these services are quickly becoming available by GenNet in many areas of the country.

GenNet services are vast and growing. In general, every user maintains an address, which reads much like a standard mailing address. One can communicate by sending a message (e-mail) to a given address, or by connecting with the address the way a telephone user might call a friend or business. A connection allows a voice or data conversation, the transmission of real-time recorded sound or video, or the use of computer services on a distant machine. GenNet connections are commonly used in business for sales and promotions, for access to public and private databases, to make plane reservations and to order pizza. The uses are endless, and have only begun to be explored. Rules for using the GenNet in the game are described in Chapter Two.

The GenNet is an American network, covering only the U.S. directly. Connections to and from other computer networks abroad are easy and common, but generally do not offer the GenNet's range of services (like the ability to transmit high-quality real-time video) or ease of use. There is no equivalent in Europe or anywhere else in the world, except Canada, which offers a similar private network.

Optical Media

The emergence of optical digital storage has numbered the days of magnetic media. In fact, while magnetic disks and tape are still around in 1999, they have been largely replaced in high-end computer and entertainment systems, and even on the back of credit cards and electronic keys. Optical storage density has increased tenfold since the invention of the compact disc, and the current development of three-dimensional storage media is likely to have the same effect again. As it is, a standard compact disc can now hold over two hours of video or eight hours of stereo audio. Furthermore, signal formatting has been standardized, so that many disc readers can output to a stereo, a video system, or

a computer with equal ease. Discs come in read-only, write-once, and erasable formats, and optical reader/recorders are fairly common parts of home entertainment and computer systems. A recent addition to the market is the optical-disc camcorder, which records video right onto standard compact discs.

Debit Cards

"D-cards," as they are known, have become increasingly popular in the last few years, especially in Europe and the U.S. Debit cards allow purchases to be made directly from bank accounts, using electronic devices similar to those used to verify credit card purchases. D-cards work just like standard ATM cards—a device at the store reads the optical strip, then prompts the user for his I.D. number. Assuming sufficient funds in the user's bank account, payment is made electronically, and no cash changes hands. Most D-cards are really nothing more than ATM cards, but others offer credit lines, allowing the card to also be used as a credit card. D-card services are available in most businesses in and around cities in the U.S. and the E.C., and in major cities abroad, but are not always available in rural regions and are rare in the Third World.

Automation

Automation technologies, of course, have become quite sophisticated by the end of the century. With computer software technology creating smarter and more efficient "expert systems," optical chips allowing computers to operate faster than ever, and neural networking architecture creating CPUs approaching artificial intelligence, the field of automation has been opened to even broader potential than ever. Most "robots" are, still, simple assembly machines bolted to factory floors. Mobile automatons are gaining popularity not only in industry, however, but also in agriculture, security, and even some service businesses. Their squat forms can be seen loading warehouses and trucks, digging trenches and mixing concrete, spraying citrus orchards and patrolling corporate compounds. There have even been prototype fast-food restaurants, where food production and service is totally automated. Applications are limited and costs remain high, so robots are still not common sights. Nonetheless, the technology continues to improve and become cheaper, and new applications continue to be found.

Robots in the work force are usually single-minded and stupid. Assembly-line robots are typically oblivious to stimuli, and capable of performing only specific sets of movements which must be programmed. Some mobile automatons are more sophisticated—capable of evaluating stimuli and reacting, even if the reaction is simply to call a central computer or controller to get help or further instructions. Watchdog security robots, for example, are generally not capable of engaging intruders, but are able to identify them, photograph them, radio for help, and track them until they leave the secure area, generally with a high degree of success.

Transportation

The streets and highways in 1999 may look much the same as those of a decade earlier, but there has been a quiet revolution in transportation. Environmental concerns and the skyrocketing cost of fuel have cut car traffic in the U.S. and Europe by almost half, and alternatives to fossil

fuels have become practical and acceptable. The vast majority of alternative-powered vehicles are electric or gasoline-electric hybrids. But the fuel crisis has not just forced changes in car engines—it has also led to different forms of public transportation.

Electric Vehicles

Electrically-powered and fuel-assisted vehicles, until recently far from practical, have been increasingly common in the last few years of the decade. Although electric automobiles cannot begin to rival the power of high-performance gasoline-powered cars, by 1999 electric cars can commonly reach speeds of 120 kph, drive 400 kilometers between recharges, and carry four passengers in reasonable comfort. While gasoline-powered cars are still common, electric cars are becoming increasingly popular for commuting and suburban life. The smell of ozone has become common in American cities and suburbs.

A compromise alternative are fuel-assisted electrical vehicles. These vehicles run on electric motors, but have onboard gas-powered engines which constantly keep the batteries topped off. The advantage over conventional vehicles is that the gas engine is always running at peak efficiency, and can therefore be smaller, lighter, and cheaper to run. More expensive to operate than conventional electric cars, fuel-assisted vehicles offer slightly better performance without requiring long battery-charging periods. While many models of fuel-assisted cars are available, the technology is much more common in the transportation industry and mass transit vehicles.

Maglev Rail

Although magnetic levitation technology has existed for several decades, it took major advances in superconductors and the exploding cost of jet fuel to make maglev practical. Popular in Japan and the E.C. (more than twenty lines link fifteen major European cities), only four notable maglev projects have been initiated in the U.S. Routes linking San Diego and Las Angeles, Boston and New York, and Milwaukee, Chicago, and Gary have been running for several years. A fourth project, to extend the Boston/New York route to Washington D.C. was begun in 1997, but funding cuts killed the project about a third of the way into construction. Although the trains in California and the northeast have proved economically viable, the enormous startup costs of such systems have prevented their development in other U.S. regions.

Maglev boats have been successfully developed in Japan, but are not cost effective. Aside from a few very expensive private yachts, only prototypes have been built. They can only operate on seawater.

Commuter Systems

The incredible increase in energy costs has changed driving habits everywhere. In the U.S., which is probably more dependent on the automobile than any other place on earth, many people have cut way back on the time they spend behind the wheel, or have stopped driving all together. Mass transit systems are more viable and popular than ever.

Bus use in American cities is way up. Subways and commuter rail systems are also increasingly popular, but most American cities, bankrupt or nearly so, cannot afford to do much building or upgrading.

Consumer Products and Scientific Progress

Entertainment

Interactive entertainment is a big buzzword of the late '90s, one of the few business fields to grow healthfully in a turbulent and depressed world. Standard broadcasting, in which a user watches a show or movie when it happens to be on, is about to become a thing of the past. Many cable systems, some transmitting through the GenNet, offer their programming on demand—the user selects a program from a menu on the screen, which is then transmitted directly to his or her home. This sort of programming gives the viewer as much control as watching a videotape—the show can be paused, stopped, rewound and fast-forwarded at will. The only difference is that the viewer doesn't actually own the program—and special coding prevents recording. Interactive entertainment is putting tape-rental stores out of business just as fast as they went into business in the early eighties.

Virtual Reality

Strides in virtual reality have not been as strong as once promised. While excellent for use in high-end simulators and training devices, true VR systems have just not proved cost effective as computer interfaces or entertainment devices, two of their biggest potential uses. There have been some spinoff technologies, however. Video sunglasses are not uncommon—they project a video image onto the inside of a pair of innocuous-looking shades, superimposing the image on the user's view of the real world. Video sunglasses can be used with portable computers, games, or TV receivers, but they require some background light, and images can get lost if the user is looking at a complicated or moving background. In fact, video glasses are best used when staring at a blank white wall.

Genetic Engineering

Genetic engineering is the unsung technological revolution. With little or no fanfare, the strides made in genetics promise to dwarf the importance of computers and nuclear energy put together, if humanity survives long enough to enjoy them. Genetic engineering promises better food, longer and healthier life, a self-cleaning environment, and an end to extinction. But the industry is untested and unregulated. Thousands of small companies, each guarding its developments with paranoid secrecy, move along tangential paths of development. The world's governments have not caught on to the magnitude of the gene's power, while the people—the ultimate beneficiaries or victims of that power—live in ignorance.

The human genome project, intended to map out every link in the human gene chain, is years away from completion. There are no *ubermen* on the horizon, or reconstructed dinosaurs, for that matter. But the things that can, or can almost, be achieved are amazing.

In 1997, several dozen rats escaped from a laboratory in Massachusetts. The incident briefly made the headlines, as the engineered rats were three times the size of normal specimens. Nervous citizens didn't have to worry about cat-sized rodents for long, though, as most of the docile animals were quickly recovered. Those that weren't were engineered to die within a few weeks if they didn't receive a special dietary protein. What the locals and reporters weren't told was that the rats were immortal—assuming they got their protein fix, they could theoretically

live forever. This incident, which received little press and even less government inquiry, hints at the powers, the danger, and the secrecy concerning genetic engineering.

In 1999, genetic engineering is little more than a promise of things to come. Aside from a few larger and shinier tomatoes at the supermarket, advances in genetics have few effects on daily life. But genetic engineering is a hot and competitive business field—a corporate underworld where the stakes are high and ethics have gone by the wayside.

Firearms

There has been a quiet revolution in firearms use and design. Although no radical changes in technology have occurred in the last decade, many of the experimental efforts of the previous twenty years have been refined and implemented. By 1990, bullpup weapons were already not uncommon. In 1993, caseless ammunition hit the market with introduction of the first production caseless assault rifle. By the end of the decade, the E.C. and many other nations have adopted the G11 or its successors, and other caseless rounds are in development. Caseless rounds allow a weapon to operate without having to eject a shell, simplifying the action and negating the need for an ejection port.

Other innovations to hit the firearms market include transparent plastic magazines that allow the user to check ammo levels at a glance, top-feeding designs such as the FN P90 and the Calico M960 that eject brass straight downwards for ambidextrous use while keeping the magazine on top for better balance, and burst settings that allow automatic fire while controlling recoil and ammo expenditure. A few weapons offer special snap-together magazines, which allow multiple magazines to be clipped side-by-side for easy access. Optical sights are becoming increasingly common, and are standard equipment on the HK G-11, Steyr AUG, British L85A1, and several other popular military rifles.

Miscellaneous

A few other technological developments are worth a brief note. Technological advances have allowed batteries to become smaller and lighter, meaning that many electrical devices which previously needed external power can now be made portable. Standard batteries, especially rechargeables, are lighter, longer-lasting and cheaper, increasing the portability of consumer and business electronics.

A technique has been developed to allow one-way tinting of glass, which appears virtually opaque from one side while remaining transparent, albeit darker, when seen from the other. Glass is treated with this process gains a flat, uniformly colored appearance, like formica or dull plastic. The expensive process was originally developed in an attempt to reduce the sunlight reflected from the optics of military sighting devices. Most public applications seen so far have been gimmicky, like solid-colored sunglasses. Potential applications abound, however, in providing privacy, in surveillance use, and in the field of optics.

BlackEagle/BlackEagle: The Company

BlackEagle/BlackEagle is a commercial organization originally set up as a private investigation firm. Founded in 1990 with just a handful of employees by Clifton and Sheppard BlackEagle (hence the double name), BlackEagle/BlackEagle grew in size to become the largest organization of

its kind in the world. Paramilitary, espionage, and security operations have expanded the list of services. In fact, with a few exceptions, B/E (as it is often abbreviated) will perform virtually any sort of service, for virtually anyone. The company has a respected reputation for accomplishing the objectives of its operations. Its fees are high, and its operatives, whose work is often dangerous, are well paid.

Much of the company's success in the early years was due to the BlackEagle brothers' personal involvement in the company's operations. In later years, the founders' commitment to employing only the most skilled and professional personnel and the esprit within the company's ranks have been the major factors in the success of the company.

Organization

BlackEagle/BlackEagle has grown from a tiny firm employing just a few investigators to a large corporation with not only hundreds of operatives, but also a large logistical and legal support system. Assignments are handled by operatives working in small groups called cells. A cell generally contains three to six people, and is headed by a cell leader. Cells are more or less autonomous, handling their assignments with some support from the company, but with little outside interference. B/E is a company that believes strongly in the qualifications of its personnel, and for this reason, it has only a minimal centralized command system.

BlackEagle has sixteen regional offices, in seven countries around the world. Each office is headed up by a Senior Cell Leader, who is always a Veteran operative. From each office operate a number of cells, generally no less than two or more than eight or ten. The offices also have a legal advisor, who assists in the preparation of contracts and in any legal difficulties, and, depending on the size of the office, one or more representatives from the Administrative and Logistics branches of the company.

Operation cells are simply organized. They contain several operatives, one of whom acts as the cell leader. The cell leader is responsible for the success of the mission and the safety of the operatives. He is also paid much more than other cell members. His authority, however, is not definitive. Cells are encouraged to be democratic in nature and to work well as a single organism. Those that do are kept together indefinitely. Those which are disharmonious are usually broken up, with their members distributed into other cells. Individuals which are consistently unable to work with others have no place in BlackEagle.

Each cell elects its own leader. To be eligible, the leader must be of Veteran status (having completed twelve or more assignments). Each vested member of the cell gets one vote, although Rookie operatives—those who have completed four or fewer assignments—can't participate.

Operative Status

BlackEagle/BlackEagle uses an informal ranking system to recognize experienced operatives. Status is not a big issue within the company, and most operatives don't really think much about rank. But it can be important when L&P assistance and other resources are spread thin and seniority becomes an issue.

Status promotions are awarded by the office Senior Cell Leader, based on the number of assignments a given operative participates in. In general, every assignment counts towards promotion, although sometimes exceptionally short or easy assignments, or those in which a given operative did not really participate, might not be counted. Likewise, a particularly long, dangerous, or difficult assignment can be counted as two or more assignments. Status promotions are awarded according to the following table:

No. of assignments:	Operative Status:
0-4	Rookie
5-11	Operative
12-19	Veteran
20-29	Veteran 2
30-39	Veteran 3
each additional 10	one additional level

The office's Senior Cell Leader has veto power, and changes in cell leadership can't be made during the course of an assignment except under emergency conditions. Outside of these restrictions, each cell can handle its leadership as it sees fit.

The company is organized into four Branches: Operations, Administration, Legal, and Logistics and Procurement. All operatives are, of course, part of the Operations Branch.

BlackEagle Miami

The BlackEagle/BlackEagle office in Miami, Florida is one of the company's largest. Recently moved from a smaller facility, it's currently home to ten operations cells, with room to grow. It serves not just Florida, but much of the southern U.S. as well as Central and South America. The office is located in a large downtown high-rise, which is mostly unoccupied in the aftermath of the depression. Listed here are some of the office's features, numbered to correspond with the map.

1. Reception area. This is the first area encountered by anyone entering the office. The receptionist is not only responsible for greeting clients and routing phone calls, but is also the first line of defense in the security system. There's someone in this area twenty-four hours a day (usually an off-duty operative outside of regular business hours). The office doors are blast resistant and are always locked. Operatives have electronic passkeys, but clients and visitors must be buzzed in. There are also video monitors at the reception desk, showing the office and the lobby outside. All video images, as well as phone calls, are taped.

2. Administrative area. This office has three people on administrative staff—a receptionist, an office coordinator, and the Senior Cell Leader's secretary.

3. Senior Cell Leader's office. Raleigh Tykes, a veteran operative with more than eighty assignments under his belt, runs the Miami office.

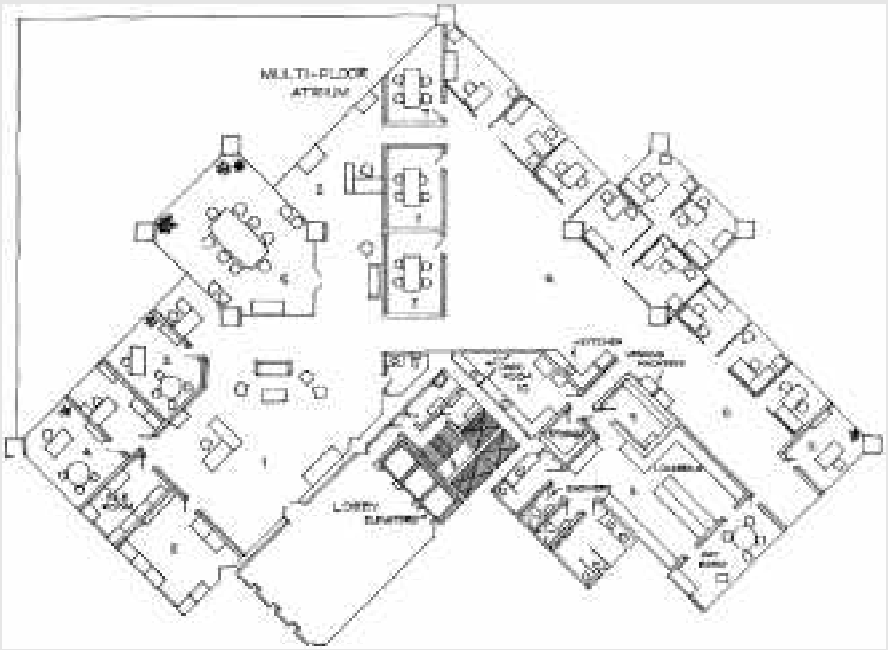
4. Legal Counsel's office. There are three Legal Branch personnel—Armand Bounassissi, the office lawyer, and two legal aides.

5. Conference room. This is used when meeting clients and for intra-office meetings. There is enough room for fifteen or twenty people.

6. Cell offices. This open area is subdivided into cubicles, giving each cell an office area of its own. There are currently ten cells operating from this office, and there is still space for another four or five cubicles.

7. Private meeting rooms. These rooms, big enough for eight or ten people, are used for meetings when the conference room is not available.

8. Locker and day room. Individual operatives can keep their gear here. There are also showers and cots, for operatives on call or on assignments that keep them in the office long hours.



9. Vault. Weapons, evidence, and other sensitive items may be stored here. In addition, the telephone tape machines and security video recorders are kept here.

10. Forensics lab. This office has rudimentary forensics capability, including a darkroom. The lab is run by the L&P liaison, Morris Wiley, but any individual operative who knows how to use the equipment is welcome to.

11. L&P staff office. Morris Wiley runs the lab, keeps some commonly needed items on hand, and to assists operatives in getting logistical and forensic support from the corporate office in Atlanta. He is assisted by Valerie Manuel.

Operations Branch
As mentioned above, the Operations Branch handles all B/E assignments, and is in fact the entire company's reason for existence. All player characters are members of the Operation Branch, and the other branches exist to support it.

Most BlackEagle offices have between ten and fifty operatives, in cells of three to six personnel each. Additionally, every office except for the corporate headquarters in Atlanta and the Logistics facilities in Atlanta and London is headed by a veteran operative and member of the Operations Branch. The organization of the Ops Branch, and its activities, are expanded on below.

Administrative Branch
The Administrative Branch is responsible for the day-to-day running of the company, and handles such items as clerical support, office management (although the office head is always a member of the Operations Branch), payroll, and medical and other benefits. The Administrative Branch is also the backbone of the corporate structure, providing communications between offices and branches, and handling corporate affairs.

Every B/E office has an administrative staff, generally two or three people in the smaller offices, to six or eight people in the larger ones.

Legal Branch
Just as BlackEagle/BlackEagle has a reputation as hiring only the best and most able personnel as operatives, the company is also known for its powerful legal support. This is critical in a business which frequently brings its operatives into potential conflict with the law. B/E provides unconditional legal support for its operatives who get into trouble in the line of duty, and this support has occasionally blossomed into well-publicized and precedent-setting court cases. One of the most important occurred in 1996, when BlackEagle lawyers established in Illinois State Supreme Court that the content of B/E contracts constituted client privilege (normally reserved for doctors and lawyers), and that a B/E operative could not be jailed for failing to divulge contract information.

More frequently, B/E lawyers are called upon to assist in the writing of contracts for assignments, or advising operatives on the legal issues involved in an assignment. Every BlackEagle office has at least one legal counsel on staff.

Logistics and Procurement Branch
Perhaps the most important branch for the field operative is the Logistics and Procurement Branch, which provides equipment and forensics support for operations. L&P is capable of obtaining almost any piece of equipment an operative might need, usually quickly (commonly needed items are kept in stock in Atlanta and London, and can be shipped to any office with twelve to twenty-four hours notice) and at below retail cost. Although operatives are encouraged to purchase their equipment, L&P sometimes lends expensive or unusual equipment to operative cells.

From its facilities in Atlanta and London, the L&P Branch also provides forensic support, including photographic, ballistic, and materials analysis, fingerprint and genetic identification, criminal files and databases, and worldwide intelligence bulletins. Both forensic and equip

ment support is limited, and is given according to availability, need, and seniority (in that order). Rules for obtaining L&P support in play are covered in Chapter Two.

Most medium or large offices have one or two L&P coordinators to handle equipment and forensics requests. Some even have limited forensic resources of their own. Smaller offices must deal directly with the Branch facilities in Atlanta or London.

Carrying Out Contracts

BlackEagle/BlackEagle takes on all sorts of jobs on a no-questions-asked basis. Many of these jobs are for governments, large corporations, or other organizations, but many are also for private citizens. The assignments range from investigating robberies, murders, and missing persons, to carrying out specialized paramilitary activities such as extractions, search-and-rescue operations, and difficult reconnaissances. Illegal activities are not out of the question, but are undertaken with caution. B/E generally maintains a good relationship with the government, and has powerful legal resources, but the company is not omnipotent, and operatives are not above the law. There are only two definitive guidelines: B/E does not contract for freelance terrorism (there are organizations that do), and does not carry out gratuitous assassinations within the U.S. or the E.C. Beyond this, assignments are contracted at the discretion of the operatives that will be carrying them out.

The contract process is as follows: A client contacts the regional office and is connected with the Senior Cell Leader. The Senior Cell Leader gets a feel for the nature of the assignment, then decides who should handle the assignment based on each cell's schedule, experience, seniority, and the types of skills the cells' operatives have. The members of the selected cell, and usually the office legal advisor, then meet with the client and get the specifics of the operation. They decide whether or not to accept the assignment, and if they do, they work out the contract. It is entirely up to them to set up the fee and any other parameters, such as a time limit or reduced fee for partial completion. Written contracts are required for all assignments. As assignments frequently involve goals or activities of questionable legality, however, these contracts are often vague in content and are almost never made public. B/E has only had to take clients to court over contractual disputes on a few occasions—in general, B/E's reputation, and the mere fact that a written contract exists, keeps troublesome clients in line. On average, contract fees in the U.S. and Europe run about $1500 to $3000 per day per operative in the cell—so a cell with four members taking on a job expected to last three days might set the price around $25,000. Of course, rates vary according to the level of danger, chance of failure, and the legality of the assignment. Fees are generally paid half in advance, and half after completion.

Once a contract has been arranged, the cell gets to work. From this point they are on their own—the cell does not answer to anyone except the client, unless they really mess things up. Logistics support, including transportation, specialized equipment and weapons, and forensics analysis is available, but is limited. Logistics resources are allocated based on need and seniority, but sometimes even high-seniority cells cannot get all the support they may desire.

BlackEagle maintains, and demands from its operatives, a high reputation for successful contract completion. Cells are expected to complete assignments even when they run into difficult or unexpected

snags—when they spring for the best, clients demand results, so operatives must take their obligation seriously. Occasionally it becomes clear that a client deceived or withheld valuable information from a cell while setting up a contract. Only in these cases is an unsuccessful completion acceptable.

Upon completion of the assignment, the balance of the fee is collected. The entire fee is paid directly to the company, which keeps half of it. The remainder is divided into shares—one per operative, with an extra share for the cell leader. The company issues checks to the operatives in the appropriate amounts, making the usual withdrawals for Social Security, income taxes, and other payroll deductions.

Benefits and Lifestyle

In addition to logistic support, the company also offers any other form of assistance an operative may require in connection with his duties. All medical expenses incurred by an operative which have anything to do with an assignment are paid in full. The same goes for legal expenses, should an operative get into trouble with the law. These benefits are offered unconditionally, but the company does not look kindly on abuses, and any operative who incurs frequent or expensive legal or medical bills due to negligence will not remain an employee for long.

Most BlackEagle operatives work only thirty or forty weeks a year. Even so, the average operative makes over $150,000 a year. Operatives are often in the news, and perhaps for this reason, many of them seem to enjoy high-profile lifestyles. Despite the frequently light workload, operatives are often on short call, and can generally expect less than twenty-four hours notice prior to a new assignment. Although the offices are regionally located, operatives are often called upon to travel. For this and many other reasons, few have families, and most, while enjoying their jobs, stay at them for five or fewer years.

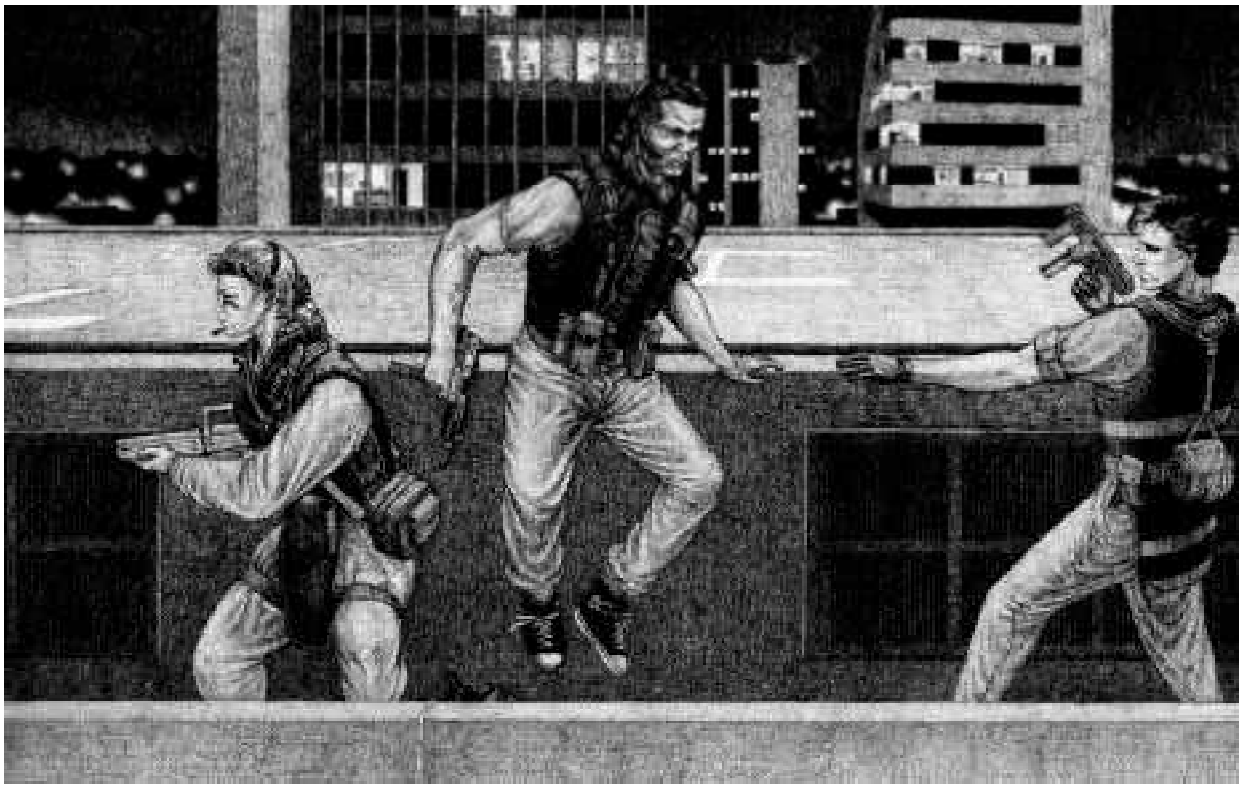
Competing Organizations

BlackEagle/BlackEagle is unique in its size and scope, but in a world devoid of ethics and hungry for quick solutions, it is hardly alone in its activities. In fact, there are many organizations—some covert, others open—that specialize in the types of operations in which even BlackEagle won't engage. A few of these organizations are outlined here.

Marrion Contractual Services Corporation

Probably the biggest mercenary organization in the world, Marrion is an above-board, respectable company. Although it doesn't publicize it's numbers, Marrion probably has close to 5,000 permanent troops and 200 armored vehicles, engaged in six or seven conflicts around the world. Thousands of additional troops can be subcontracted on short notice. Although professional and well-equipped by most Third World standards, Marrion's soldiers are not highly trained, and are no match for an equal number of American or European troops.

Marrion is not highly regarded by BlackEagle, in part because of the low professionalism of its soldiers, but largely because of a joint operation in Ghana, in which seven operatives were killed as a result of the mercenary company's negligence. While not openly hostile to Marrion's soldiers, BlackEagle no longer works for or with the mercenary corporation.



Parallax Personal Services

A shadowy organization working in Europe and the U.S., Parallax is a unique company that trains killers, then bids them out for assassinations. Parallax operates by training individuals for specific jobs, then sending them out to do the dirty work or setting them up as patsies for other, more professional killers. Parallax trainees are usually sociopaths or even psychos, but they are always smart and stable enough to get the job done. Few survive the task—Parallax usually kills them off once the job is done. It's a delicate but successful scam, and Parallax can only succeed because few people know it exists.

BlackEagle has had few run-ins with Parallax. While a couple of L&P analysts may have noted some odd trends, there has never been an investigation to link most of the seemingly unrelated killings. Nobody in BlackEagle's leadership or rank-and-file has any knowledge of the organization, but that's bound to change sooner or later.

Securitech Corp.

The pace of international business has fallen back some over the last few years, but there are still tens of thousands of executives and sales reps travelling the globe, and they all make tempting targets for kidnappers and terrorists. In fact, executive kidnapping rates are thought twenty to fifty times higher than the few hundred reported every year. Securitech specializes in evening these odds, by providing training, consulting, and bodyguards to businesses and individuals on the go.

Securitech provides bodyguards in teams of one to six individuals, for general security while travelling or security against specific threats in specific regions. Their personnel are generally drawn from the local areas, if possible, and they are always well-trained and competent.

Securitech personnel are occasionally encountered on BlackEagle assignments, as allies or foes. Because B/E is not generally in the assassination business, however, operatives don't often cross swords with Securitech personnel. In general, the relationship is one of professionalism and mutual respect.

The Triad

This rather obscurely-named organization consists of one or more hackers who carry out mild acts of techno-terrorism. The Triad seems to have some sort of pro-environmental agenda, but also works for hire. Subject to a number of investigations by governments and other victims, the physical location of the Triad members has never been ascertained.

WIJ (Worldwide Islamic Jihad)

The end of the Iraqi war left the world of Islamic fundamentalism in disarray. Arab unity was as far away as ever. Peace with Israel was on the horizon. The Great Satans were jubilant over the gulf victory, and years of violent terrorism seemed to have had little effect on attitudes at home or abroad. Support for insurgency and terrorism was at an all-time low, and the even the most hardline fundamentalists were divided on how to proceed.

From this chaos was born the WIJ. An organization with a new mandate, the WIJ sought to reach its long-term goals—destruction of Israel, subjugation of the western powers, and predominance of fundamentalist Islam—through a series of small steps. The first was to build a constituency by inciting revolution in moderate, secular Arab states. The WIJ hoped to take advantage of the poverty and despair of the '90s, turning the suffering in many secular Arab nations into fundamentalist fervor. Target countries included Egypt, Algeria, and Tunisia, where assassinations of secular leaders and attacks on tourists became common. In 1996, Algeria became the WIJ's first real success.

A second objective of the WIJ was the renewal of international Islamic terrorism. This objective was seen not as a major threat to the west, but as a way of invigorating the fundamentalist movements at home—of showing that the WIJ could strike out at will against the biggest world powers. The WIJ infiltrated Europe and the U.S. with hundreds of agents, attacking high-profile targets almost at random. The vast majority were caught, often well before any attack, but that didn't matter. The few successes made great headlines.

The WIJ has gained strength throughout the Islamic world. Wherever there is poverty and suffering, the WIJ is there to exploit it. With hundreds of agents around the world, trained in Iran, Libya, and the Sudan, terrorist attacks big and small are in the news almost monthly. Secular Arab states combat rioting fundamentalists on the streets while moderate leaders are forced to surround themselves with armies of bodyguards.

In 1998 BlackEagle operatives working for the Tunisian government helped close down a number of WIJ facilities (the organization is banned in Tunisia). The event made headlines, and within weeks the WIJ lashed out against both Tunisian officials and BlackEagle, killing two operatives in Burma. Since then, the WIJ and off-duty BlackEagle operatives have carried out a tit-for-tat assassination campaign, tracking down and

murdering one-another's agents and officials. By spring of '99, about a dozen BlackEagle ops and twenty or so WIJ agents and officials are dead, and no end is in sight.

Running BlackEagle Adventures

BlackEagle campaign adventures are as diverse as the assignments the company takes on. They range from complicated investigations, full of mystery, intrigue, and doublecross, to straightforward tactical situations. Most combine elements of both. In designing and running B/E adventures, keep several elements in mind. First, know what type of adventure your players will enjoy. Some players are quite scrupulous about the assignment they will take, and may not wish to be involved in activities of questionable ethics or legality. Others are totally mercenary. This is fine—BlackEagle takes on enough contracts of either kind to give the players what they want. A second consideration is the pace of the play. Some players are not happy unless an adventure consists of constant action. Others prefer more cerebral assignments. Again, accommodate. Whatever type of play is preferred, the campaign will be most enjoyable if the players get what they want.

An introductory adventure begins on page 158.

Preparing Adventures

There are several important components to any *Millennium's End* adventure published by this company. They help organize the material, allowing complex adventures to run smoothly without overtaxing the GM. While by no means required, using these components when building scratch adventures makes GM-ing *Millennium's End* a little easier.

The most important adventure component is the Real Scoop. This is the definitive outline of the actual situation, explaining not only the events that the characters experience, but also those that go on behind the scenes, shaping the adventure. These are the facts that must be fully worked out before play for the adventure to run smoothly and make sense in the final analysis.

The next important item is the Clue Tree. A Clue Tree is a table, sort of like a flow chart, that outlines the connections between the events, people, and bits of information that characters may come across. It should have at least one route from the beginning of the adventure to the end, preferably two or more, so that the players won't be railroaded into a certain line of thinking or course of action. But never let on that there are multiple routes to success, even after the players successfully wrap things up. Players enjoy the belief that they unearthed the single, all important clue in the only place it could be found.

The final pieces of information necessary to run an adventure are the descriptions, maps, illustrations and other supplements detailing the people the characters will meet, the places they will go, and the things they will see. Many of these elements will appear as events on the clue tree. In any professionally produced adventure, these should be well developed. In scratch adventures, give these items as much attention beforehand as needed, or wing it if that will do.

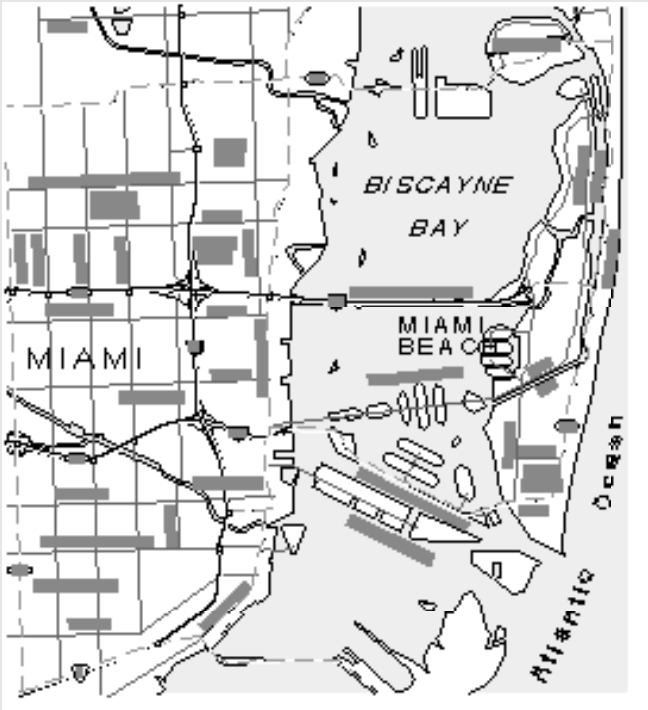
Adventure Ideas

BlackEagle/BlackEagle takes on all sorts of assignments, from investigating disappearances for worried mothers to carrying out anti-terrorist operations for major governments. Almost every sort of contemporary adventure is within the company's scope, so an enterprising GM should have little trouble generating adventure ideas. The following is a brief list with a few examples of B/E's more common types of assignments.

Miami

BlackEagle assignments can be set anywhere around the globe. The campaign presented here, however, is based in Miami, Florida. An ideal environment for BlackEagle adventures, Miami is an exotic, tropical city that combines cultural diversity with a booming drug trade, a constant flow of immigrants, and a thriving market for arms and smuggled goods. In addition to poverty, homelessness, crime, and a crumbling infrastructure—the dangers of modern urban life—Miami presents a gateway to the Caribbean, Latin America, the Everglades and the Florida keys. In short, Miami offers a broad spectrum of settings and no end of potential adventure conflicts.

Adventures may center around the many major corporations doing business in Florida and abroad, foreign governments and agencies with offices in Miami, organized crime and drug empires, or of course everyday individuals living in the city. Adding to the backdrop are the war in Colombia, the struggles of Cuba, the constant fighting of street gangs, and the government's futile attempts to stem the flow of drugs into the state.



Bag'em and Tag'em

A client comes to BlackEagle to retrieve a kidnapped or hostile individual. This adventure category alone can generate dozens of assignments—in a world where competitive corporations stoop to new lows every day, where governments don't have the resources to tackle dangerous terrorists and criminals, and where impromptu bush wars spring up over every minor cultural and ethnic difference in the Third World, kidnappings, bounty hunting, "covert" arrests, and disappearances are an everyday occurrence.

Straightforward rescues or snatches make great little tactical scenarios on occasion, but they get boring if overused. To make the most of a *bag'em and tag'em* assignment, be sure it has some twist. The target might, for instance, hold some secret so important that the operatives must fend off one or more rivals in order to snatch (or rescue) him. Perhaps the target isn't so important after all—but the client had some ulterior motive for getting the operatives involved. Maybe the target was misidentified, or doesn't want to be rescued. The possibilities go on.

Covert Investigations

Sometimes crime victims come to BlackEagle because they don't want to involve conventional authorities. Perhaps they feel that the police can't or won't help them. Perhaps they are afraid that corrupt authorities will act against them. Sometimes they are criminals themselves, or simply don't want the government involved in their activities. Whatever the reason, BlackEagle cells are often called upon to perform investigations behind the back of—or even in competition with—the authorities.

Covert investigations can take all sorts of forms. They can be straightforward or complex. Police involvement can be intensive or peripheral. The investigation can be combined with other premises or tactical challenges. In every case, however, forcing the operatives to carry out their investigations in secrecy increases the challenge and complexity of the assignment.

Deliveries

A client has a document, object or person that needs to get from point A to point B. It is valuable, or dangerous, or somebody wants it or wants it destroyed. This sort of assignment can be an interesting tactical exercise, but it forces the operatives into the defensive, which is never too much fun. A twist can liven things up. What if a threat exists, but it's something the operatives and the client never expected? What if the delivered object is worthless, a ruse to divert the client's enemies onto the operatives? What if the object was handed over to the operatives damaged, or missing, and the client holds BlackEagle liable? These twists will put the operatives on the offense, as they try to unravel the mystery behind an assignment gone sour.

Picking Up the Pieces

BlackEagle cells are often called in by governments or businesses when they lack the resources to get some dirty job done. Sometimes, however, they try to take care of their problems themselves—and things go bad. Then they turn to BlackEagle to clean up the mess. These operations usually occur when the government or corporation—or some corrupt element within—has been up to something it shouldn't have been doing, and it doesn't want to get caught as a result of its bungle.

This kind of assignment presents great opportunities for intrigue. What went so wrong, and why? Perhaps there are more forces at work than at first meet the eye. Throw in a time limit, and perhaps a little media interest, and this sort of adventure makes a for a convoluted and challenging tactical exercise.

Provocative Actions

The world is ripe for conflict, and everyone has an agenda. It's no surprise then that organizations like BlackEagle are often employed to "start something"—to apply a little spark to the tinder. Maybe a drug distributor wants to start a war between two of his rivals. Perhaps some splinter group wants to prevent a cease-fire from going through. Maybe a small government is looking for an excuse to act against a multinational. The operatives might be hired to attack the client's foe, or some neutral party, an ally, or even the client itself. Of course, clients don't always tell BlackEagle operatives what their real objectives are, and the target may have plans of its own. With any such convoluted premise, throwing in an additional twist is a piece of cake, and well worth the effort.

The Raid

In a civilized world, people and their possessions are protected by the rule of law and the voice of authority. In the *Millennium's End* world, protection comes from guns and walls. BlackEagle operatives are often called on to break through those walls.

Raids are tactical assignments, generally pretty straightforward, at least in premise. They can take place in any environment—from an assault on a gang house, to an infiltration of a corporate tower, to an attack on an insurgent supply point deep in the jungle. They may be covert, or guns-blazing open. Their objectives might be pinpoint, like the destruction of an uplink dish or the retrieval of some off-line data, or they might be simple death and mayhem. The possibilities are endless.

As with the bag'em and tag'em sorts of assignments, above, raids can get boring quick. They require a hook, something to keep the players on their toes. The twist can be tactical, like more opponents or better defenses than predicted, or a bit more cerebral and plot-oriented. Perhaps the target has greater significance than the client let on, or even knew about. Perhaps the client had some ulterior motive for sending the operatives into the area. Maybe some other group is out to raid the same objective, for the same reason. Or a completely different one. Maybe the objective isn't at the target, and the operatives will have to extricate themselves and stage a second raid elsewhere.

Security and Protection

BlackEagle cells make good bodyguards for serious threats. Like the *delivery* assignment above, however, a protection operation puts the operatives in a defensive role. With the proper twist, however, a security job can be exciting and unusual. What if the protectee doesn't want to be protected? What if the client is an ordinary person, with no idea why he or she has been targeted? What if the client is hysterical, complaining about attacks that don't seem to be real? All of these possibilities and many more involve some mystery, giving the operatives something to go after as they struggle to keep their client alive.

Surveillance

Surveillance assignments are boring, not really suitable for a real gaming assignment. They can form a decent starting point, however, given a few twists. Perhaps the surveillance target is more important than the client or the operative realize, for completely unexpected reasons. Maybe the operatives learn something that they shouldn't—or one gets caught, and must be rescued. Perhaps their observations take them someplace that embroils them in an unrelated matter. In any event, a surveillance operation makes perfect sense as a BlackEagle assignment. It only works as adventure, however, if it takes an unexpected or dangerous turn.

Adventures Between Assignments

Most *Millennium's End* adventures are BlackEagle assignments, but they don't all have to be. Like anyone else, a BlackEagle operative can be mugged, robbed, or held hostage by terrorists. BlackEagle ops are also subject to occasional retribution from past foes—even foes that are striking out against the company in general, not the specific operatives that did them wrong. And of course, a character can always stumble into a criminal plot of one sort or another. Any of these entrees can lead into a major full-blown adventure, without the benefit of a client—or a paycheck at the end.

Employment with BlackEagle sometimes also leads to unofficial or company-sponsored assignments. Sometimes cells that get themselves into trouble must be located and rescued. Sometimes the company must unleash its vengeance on clients that have double-crossed them, or who just aren't paying their bills.

Adventure Elements

The dark and dangerous world of *Millennium's End* offers endless possibilities for adventure topics. Creating an exciting and satisfying assignment is not difficult, but turning a bunch of unrelated adventures into an engaging, fulfilling campaign is another matter. *Millennium's End* stands apart from other modern and near-future games in a number of ways. Emphasizing some of these unique themes and background elements is one way to ensure that your BlackEagle campaign will be novel, cohesive, and entertaining throughout.

Corruption

The world of 1999 is cutthroat. In the face of war, ecological disaster, political impotence, and economic collapse, ethics and morals seem to have fled forever. In actuality, the fact that some ethics remain contributes to the conflicts of *Millennium's End*. Many local cops, for example, are on the take. But a few hold out, trying to do their jobs honestly and uphold the honor of the force. Some are trustworthy, but who knows for certain which ones? This kind of corruption is present in every level of government, and in the private world as well. It's a major problem in the *Millennium's End* world. Reflect that fact in scratch adventures by forcing characters to work against (and occasionally with or even for) the agents of corruption and malaise. But don't leave out the odd good guy. Nothing illustrates the desperation of the *Millennium's End* world like the occasional beleaguered individual fighting the uphill battle for integrity.

Ecology

The Earth is going downhill fast, and everyone knows it. Unlike the '80s, however, the mood of the public is not positive. People are giving up—many seem to think it's a foregone conclusion that the final generation of human beings may already have been born. This attitude could be the biggest contributor to the irresponsible, almost hysterical behavior that crops up throughout business, government, and the population in general. The truth is, however, that the Earth is savable, and there are many who believe and are doing something about it. While the Earth's downward spiral doesn't need a starring role in every adventure, it does make an occasional interesting and topical backdrop—one that will test the characters's ethics and attitudes as well. The advent of eco-terrorism is one entree into ecologically-related adventuring. The client—an unscrupulous chemical manufacturer or desperate crusading Green—can bring in the issue as well.

Espionage

The demise of the cold war heralded the end of an era in espionage—but certainly not the end of espionage altogether. Knowledge is power, in commercial as well as military affairs, and economic powers guard their information every bit as jealously as the paranoid giants of the cold war.

Fanaticism

The decline of civilization has produced in the population at large a sense of resigned apathy. But there's something about social chaos that brings out extremes in some people. Some fanatics have legitimate, albeit extreme, views, but most take up causes that are tangential, at best, to the

world's real problems. Neo-nazis and white-supremacists, religious fanatics and cultists, political nuts and single-issue extremists, and separatists and revolutionaries are among the many types of causes that draw from the fringes. Some of these groups involve themselves in terrorism. More frequently, they make headlines through petty crime, violent demonstrations, and harassment of their enemies.

Technology

Millennium's End has a love-hate relationship with high-technology. On the one hand, the realism of the game and the fierceness of the foes means that to succeed, the players must be not just smarter and stronger, but also better-equipped. This game isn't about gee-whiz spy gadgets or far-flung future fantasies. It is very much about the amazing things we can do, or almost do, today. On the other hand, the *Millennium's End* world is in a downward spiral, a spiral ignored in the manic scramble for the newer and the better. Technology isn't just failing to fix the problems—it isn't even really trying. The emperors fiddle with new chips and entertainment systems while Rome burns.

Technology has an obvious direct role in *Millennium's End* adventures. Night-vision scopes, laser mikes, and GenNet laptops are all valuable resources for player characters. Don't limit technology's role to these toys. Center adventures around technology and its possibilities.

Terrorism

There have been two trends is terrorism over the past ten years. On the one hand, a new breed of techno-terrorists have sprung up, who believe in making emphatic points with as little life lost as possible. These new kids aren't any more altruistic than their forebears—they're just smart enough to know that alienating the masses is not the best way to win their hearts and minds. Terrorism of this sort is generally found among groups that are pushing for internal change, such as eco-terrorists and (believe it or not) left-wing radicals. It tends to take the form of localized electronic or physical attacks on information systems and infrastructure.

On the other hand, the good old blood-and-guts terrorists have become more violent and reckless than ever before. Those groups that are lashing out against external threats have cast away any vestiges of civility and humanity in their attacks. Neo-nazis, narco-terrorists, Islamic fundamentalists, and separatist groups are all increasingly violent in the scale and nature of their attacks, which they usually target indiscriminately at people and institutions.

Terrorism is a great adventure element for several reasons. First, it highlights the sense of impotence in *Millennium's End*—the feeling that no authority has the might to stem the growing social chaos. More importantly, terrorists provide perfect foils—identifiable black hats in an increasingly grey world. Of course, many misguided groups have taken up arms in the name of otherwise good causes—most notably the eco-terrorist—and players may often find themselves empathizing, or perhaps even working, with their foes.

Violence

Like terrorism, violence in the *Millennium's End* world is increasing by leaps and bounds. Not only are crime, terrorism, war and strife overwhelming the headlines, but the nature of these horrors is changing as well. Genocide, once a horror perpetrated only by the foulest of criminals,

now seems an everyday news event in bush wars around the globe. Gangs patrol American streets, randomly attacking hapless victims, well-armed police, and other gangs with incredible brutality and near-total impunity. Institutions that were once somewhat immune—the Red Cross, the U.N., relief agencies, hospitals, even local police—are now open targets. There are no longer any limits.

Violence, like terrorism, creates foils for player characters—bad guys they love to hate. The sense of brutality also adds the atmosphere of desperation, the feeling that the laws of civilization hold no sway. Don't go overboard with the violence—constant scenes of gore and brutality will seem gratuitous, and will desensitize the players to the effect. But apply it judiciously, and when that right bad guy shows up, bar no holds.

Campaign Tips

The elements above will keep players interested and give adventures a unique *Millennium's End* flavor. But even a series of successful and exciting adventures does not necessarily add up to a fulfilling campaign—the kind of campaign that keeps players talking between sessions and pining for more. The tips listed here will insure continued enthusiasm about the campaign.

First, connect adventures within the campaign. Every so often, run an adventure that is a direct outgrowth of something the operatives did previously. Perhaps their success in destroying a FARC camp has led to an additional assignment in the area. Perhaps their failure to kill a vicious assassin means that they're next on the hit list. Maybe a previous assignment exposed a client's corrupt activity, and that client wants to ensure that the operatives never spread the word. Connections such as these add a sense of continuity to the campaign—the feeling that individual adventures don't happen in a vacuum. Don't overdo it, however. Throw in just enough connected adventures to keep the players on their toes, but not so many that they always assume a connection.

Keep up with outside events. There's a lot going on in 1999—come up with a couple news headlines for every game session. They don't have to be related to the adventure at hand—in fact, it's better if most aren't. Unrelated news gives the feeling that there is more going on in the game than the players know. The campaign world takes on a feeling of complexity and depth. News headlines also provide good introductions to future adventures—when the operatives are hired to participate in a Peruvian drug-eradication offensive, for example, they will remember the campaign being announced in the news several weeks before.

On the subject of news, put the characters in the spotlight every so often. While most assignments will take place in back alleys and steaming jungles far away from the public eye, some might make headlines, or even change the course of history in some small way. Give the players a little limelight. And don't be afraid to drop names. Throw in an occasional real-world politician, journalist, or celebrity.

Encourage players to develop an outside life for their characters, then include it in the adventures. Not all adventures come along through the normal channels. A character might, for example, stumble across a drug transaction while out fishing in her boat. Even in a more conventional adventure, it's not beyond a foe to try and intercept a character at home, or at his favorite bar. These types of interactions will help develop the player characters, and give a sense that they have some life beyond their work.

Recycle clients, foes, and other NPCs. Some NPCs, like the Black Eagle office staff, will naturally recur throughout the adventures. Give them a little personality. Also, don't hesitate to bring back NPCs from past adventures, who might normally never be seen again. A corporate client, pleased with the operatives' success on a past assignment, might specifically request the cell for another job. A stymied gang leader might be on the lookout for them on the street. Contacts in the government might come through with additional information, right out of the blue. Creating relationships in the campaign will help players establish a relationship with the campaign. And there are few exclamations so gratifying to hear as "not *that* guy again!"

Finally, vary adventures in length and complexity. Keep the players a little off guard, so they never know quite what to expect. Complex, convoluted assignments are always fulfilling, but it's a good idea to mix in a few simple ones every so often. That way, the players never know if it's safe to say "thank goodness that's all over."

Adventure Resources

Running a *Millennium's End* campaign—or indeed any RPG—requires a lot of resources. Every adventure demands maps, building plans, non-player characters, diagrams and player handouts. The close resemblance between the *Millennium's End* world and our own means that a real-world data can be easily converted into game material, and a lot of that data is available. Atlases, encyclopedias, catalogs, and travel books are just a few of the many types of useful sources.

There are a handful of books and map sources worth checking out for any determined *Millennium's End* campaign. First and foremost are the U.S.G.S. 7.5-minute (1:24,000) quadrangles—without a doubt the most informative maps available for gaming purposes. Each of these large (22" x 27", typically) maps covers a rectangle roughly seven by nine miles, at a resolution high enough to show individual buildings. They cost $2.50 each (plus $1.00 shipping if the total order is less than $10.00), and can be ordered through USGS Map Sales, Box 25286, Denver, CO 80225. Payment in the form of a check or money order made out to "Dept. of Interior—USGS" must accompany the order. The "Miami" quadrangle covers the center of Miami's urban sprawl. Other maps of the region include "North Miami," "Opa-Locka," "Hialeah," "Key Biscayne," and "South Miami." Maps are available for every other square inch of the U.S. as well.

At a larger scale, a U.S. road atlas is a handy item. Many are available in the $5.00 to $10.00 range, particularly good ones cost a bit more. Most have good maps of all fifty states, with rudimentary close-ups of major cities. Travel guides are good for detailed information on specific cities, regions, and countries, although they are geared towards the tourist. The *Fodor's* series is fairly comprehensive, with over 100 guides updated yearly. A *Fodor's* focussing on Miami and the Florida Keys is produced, but a better guide for gaming purposes is the *Insight City Guides* series' *Miami* (Joann Biondi, ed., 1991 APA Publications, ltd., $19.95).

A final publication for a diehard *Millennium's End* gamer is *Over Miami*, by David King Gleason (1990, Louisiana State University Press, $39.95). This oversized book is filled with hundreds of aerial photographs

NPC Stereotype: Cheap Thugs

These guys are low-end toughs. They might appear as gang-bangers, insurgents, cheap mercenaries, or hired muscle.

Gender	male	male	male	female	male
Height	184cm	177cm	187cm	175cm	186cm
Weight	70kg	60kg	70kg	65kg	85kg
Int	42	32	36	40	48
Sen	38	24	46	44	50
Agl	45	53	37	44	55
Cor	38	42	36	40	48
Con	42	38	28	41	52
Str	48	42	38	53	62
Per	26	44	48	36	44
App	28	36	52	48	32
Bra	23	41	55	62	51
Wil	38	40	46	62	50
Perception	32	28	48	50	58
Base Speed	14	15	13	14	15
Dam. Rating	5	5	4	5	6
Mass Factor	1.0	1.1	1.0	1.0	0.8
Skill rolls:					
Aim	**28**	**26**	**36**	**38**	**36**
Autofire	**36**	**34**	**48**	**53**	**48**
Longarm	**36**	**39**	**51**	**57**	**51**
Smallarm	**44**	**36**	**54**	**53**	**54**
Armed H-to-H	**24**	**34**	**20**	**26**	**28**
Swing	**36**	**49**	**30**	**39**	**42**
Hiding	**48**	**36**	**38**	**44**	**30**
Unarmed H-to-H	**30**	**36**	**34**	**38**	**46**
Dodge	**45**	**54**	**49**	**57**	**56**
Punch	**45**	**51**	**51**	**57**	**69**

Weapons:

weapon	speed/roll	speed/roll	speed/roll	speed/roll	speed/roll	DF/DD	dam. type
Punch	14/**45**	15/**51**	13/**51**	14/**57**	15/**69**	1.0	Impact
Browning Hi-Pow	14/**58**	15/**50**	13/**68**	14/**67**	15/**68**	17	Hyd Shk
IMI Uzi	6/**66**	7/**58**	5/**76**	6/**75**	7/**76**	17	Hyd Shk
Colt M16A2	4/**62**	5/**65**	3/**77**	4/**83**	5/**77**	19	Hyd Shk
RSA AKM	5/**59**	6/**62**	4/**74**	5/**80**	6/**74**	19	Hyd Shk
Mossberg 500	5/**54**	6/**57**	4/**70**	5/**76**	6/**70**	18	Hyd Shk

of the Miami region, with detailed text annotations. On the expensive side, this book is worth at least a trip to the library, as few works do so much to illustrate the geography and atmosphere of Miami.

The NPCs outlined on these pages can fill generic roles in scratch adventures. The ones to the left are lower-grade thugs: use them to fill the roles of enforcers, gangsters, insurgents, rent-a-cops, and other assorted unprofessional riff-raff. Stats are listed for five individuals, with a handful of representative skills and weapons detailed. The Attributes and skills grow increasingly competent from left to right, so if you need a handful of decent bad guys, begin with those on the right side of the table. For more amateur characters, start on the left. Feel free to alter the stats as needed.

To the right are five more professional NPCs. These are better suited for the roles of skilled assassins, well-trained SWAT or counter-terrorist officers, bodyguards, or quality mercs. The characters to the left focus more on hand-to-hand skills than those on the right. In any event, these NPCs are intelligent and well-skilled, making them a dangerous lot for inexperienced operatives. Use them with discretion, and again, feel free to alter them as needed.

In addition to these ten generic NPC stat sets, you can also use the more detailed NPCs in the adventure which follows. They can reappear later in your campaign (if they survive the adventure), or provide the basis for other similar characters.

The Architecture of an Assignment

The Thanatos Factor—the assignment beginning on the next page—is a short-to medium length adventure with a tactical emphasis. Although the plot twists will require characters to do some investigating—and think-

ing—to understand what is going on, their success will ultimately depend on tactical action. Nevertheless, it's a good example of a *Millennium's End* assignment.

The Thanatos Factor is broken up into five main components, plus a number of sidebars and insets. Four of the components are text sections: *The Assignment*, which introduces the client and the conflict; *The Real Scoop*, which tells the GM what is really going on; *The Action*, which details events over the course of the assignment; and *The Players*, which fleshes out the NPCs appearing in the adventure, including stats for many of them. Insets describe the various locations the operatives may visit, encounters they may have, and courses of inquiry they might follow. At the end of this adventure is a one-page player handout, which may be photocopied and given to the players at the start of the assignment.

The fifth critical component is the Clue Tree. It's a graphic representation of the events and clues of the assignment, showing their relationships. Events on the Clue Tree are numbered, corresponding with the numbers in the margins of *The Action* section. This makes quick-references easy. The Clue Tree in *The Thanatos Factor* provides multiple routes through the assignment, so the players need not be railroaded into a single course of action or inquiry in order to succeed.

These five elements, in roughly the same format, are used in all published *Millennium's End* assignments (although some are so straightforward that they don't require Clue Trees). There is no requirement to follow this format for scratch adventures, although it does work well, and Clue Trees are invaluable for the truly complex assignments that give *Millennium's End* its unique feel.

NPC Stereotype: High-End Grunts

A step or two above the thugs opposite, these NPCs are real professionals. They might appear as hit-men, bodyguards, or top-of-the-line mercenaries.

Gender	male	male	female	male	male
Height	188cm	196cm	180cm	185cm	180cm
Weight	100kg	108kg	68kg	80kg	92kg
Int	48	54	51	72	58
Sen	52	56	48	58	64
Agl	53	43	68	47	73
Cor	42	52	48	62	54
Con	62	58	45	44	60
Str	68	70	53	58	52
Per	56	46	34	38	46
App	40	48	56	50	44
Bra	41	53	64	57	53
Wil	50	42	68	60	62
Perception	41	56	63	64	62
Base Speed	15	14	17	14	18
Dam. Rating	6	6	5	6	5
Mass Factor	0.7	0.7	1.0	0.9	0.8
Skill rolls:					
Aim	**40**	**48**	**40**	**55**	**50**
Autofire	**50**	**68**	**60**	**75**	**65**
Longarm	**55**	**63**	**50**	**82**	**75**
Smallarm	**60**	**72**	**60**	**80**	**75**
Drive	**52**	**36**	**45**	**40**	**32**
Automobile	**78**	**54**	**65**	**50**	**48**
Unarmed H-to-H	**48**	**38**	**45**	**50**	**54**
Dodge	**68**	**53**	**65**	**60**	**66**
Grapple	**72**	**48**	**45**	**60**	**54**
Punch	**72**	**57**	**67**	**75**	**81**

Weapons:

weapon	speed/roll	speed/roll	speed/roll	speed/roll	speed/roll	DF/DD	dam. type
Punch	15/**72**	14/**57**	17/**67**	14/**75**	18/**81**	1.0	Impact
Glock 19	15/**75**	14/**87**	17/**75**	14/**95**	18/**90**	17	Hyd Shk
Walther PP	15/**74**	14/**86**	17/**74**	14/**94**	18/**89**	16	Hyd Shk
HK MP5SD6	6/**83**	5/**95**	8/**83**	5/**103**	9/**98**	16	Hyd Shk
SITES M-4 Spectre	8/**81**	7/**93**	10/**81**	7/**101**	11/**96**	17	Hyd Shk
Steyr AUG	7/**82**	6/**90**	9/**77**	6/**109**	10/**102**	19	Hyd Shk

The Thanatos Factor

In Costa Rica on their first assignment, the operatives are diverted to the scene of a corporate kidnapping. The client wants the abductee back with as little fuss as possible. It seems straightforward, but there's something the client isn't saying—and it may hold the key to fast-paced and dangerous jungle assignment

The Assignment

This introductory assignment takes a group of new BlackEagle operatives into the jungles of Costa Rica, in search of a corporate executive kidnapped by local insurgents. As the operatives move deeper into the jungle and into the mystery, it becomes clear that many more elements are at work than at first meet the eye. This can be a tricky operation for new players, especially if they are not familiar with the genre. Advise them to enter the adventure well-equipped for a tactical exercise, but make sure that they are prepared for some investigative work as well. While far from critical, a portable computer with network access (and a character with the skills to put it to work) can be a real asset as well.

You're in Costa Rica on your first assignment—and so far, it's been real slow. The Costa Rican government has contracted a large, multi-cell operation to help it deal with illegal mercenary and insurgent bases, and your cell is on standby. You've spent the past week in a San Jose hotel room, waiting for a call that has not yet come. It's just after 7:00, and you're about to leave for dinner when the phone rings.

It's Raleigh in Miami. Something's come up right there in San Jose, and you're the only cell in the region that isn't already busy. The client—a Mr. Keenan of Unified Chemical—wants you to meet him at the airport in ten minutes, ready to go.

Ten minutes and a short cab ride later finds you outside a hangar at the airport. As you watch, a Bell Jet Ranger touches down and a well-dressed man leans out and waves your group over. You quickly toss your gear aboard and grab a seat. The door is barely closed when the helicopter lifts off and turns north. The chopper's original passenger introduces himself as Douglas Keenan, Unified's executive vice-president for security. As soon as everyone is settled, Keenan begins his briefing, talking forcefully over the whine of the helicopter's engine.

"Sorry about this rather unconventional meeting, but time is critical. We're headed for Unified's Plant 56, one of several of our facilities in Costa Rica. This evening at approximately six twenty-five, Edward Materos, a supervisor at Plant 56, was abducted while on his way to San Jose. His car was ambushed on the road to Tilaran. The driver was shot as he radioed for help. Luckily, his vest stopped the rounds, but he was knocked unconscious. The driver estimates that there were at least six individuals involved in the ambush. He was unable to provide descriptions because they were wearing masks, but from what he saw of their clothing and weaponry, as well as their actions, he didn't feel that they were professionals.

"A Unified security team, responding to the driver's call, were the first people on the scene. There was no sign of the kidnappers, but a note demanding that our plant be closed was found on the hood of the car. Unified has no intention of meeting this demand or any others.

"There is a small village called Merced about two miles from Plant 56. We employed twenty or so villagers when the plant was being built last year, then let them go when construction was finished. Since then they've given us nothing but trouble, demanding work. We can't use the unskilled labor, but they've been demonstrating, making waves with the government, and vandalizing our facilities. The leader of the troublemakers is a young guy named Echeverria.

"A few weeks ago, the local Rural Guardsman arrested Echeverria and a few other youths. They were released a few days later, and since then everything has been quiet. Until now. The truck that Materos' driver saw at the ambush is the same make and color as one owned by Echeverria's father. All evidence so far points to these hooligans."

At this point Keenan pauses, looking at each operative in turn. "Your job is simple: find Materos and get him back. The people holding him are not professionals and they may spook easily—so if we don't act quickly, Materos will probably end up dead. Now, we can't have a Unified-sponsored team slaughtering a bunch of locals, no matter what their crime, or things will get sticky. We'd just as soon resolve matter with no bloodshed and no government involvement. If you can rescue Materos without using lethal force, there's more money in it for you. We'll pay $50,000 for the safe return of Mr. Metaros, with a $20,000 bonus if no-one gets seriously hurt.

"I have with me a report which contains all the information we have on the current situation." Keenan pauses long enough to pull a folder from his attaché and hand it to the cell leader. "Echeverria has apparently gone 'hunting.' The local Rural Guardsman has provided us with the location of a shack he uses when out on hunting trips. He went to check the place out less than an hour ago, so we're still waiting to hear from him. Now, do you have any questions?"

Keenan will answer the operatives' questions to the best of his ability. If the group raises the possibility of corporate espionage he will point out that many important documents were left in Materos' car. If the operatives are concerned about the lethal force restriction Keenan will clarify: "Dead peasants means government interference. Our first priority, however, is Materos' safe return. Use whatever degree of force you feel is necessary.

If the operatives wonder why Materos was on the road with only single bodyguard, Keenan will explain that Materos hates to fly, especially in helicopters. There was no reason to expect an attack like this, so he decided to take a car to San Jose. If asked about the note found at the scene, Keenan will shrug. "Same old rhetoric: capitalist exploitation, close the plant, that sort of thing."

The Real Scoop

The majority of what Keenan has told the operatives is true, but he has misled them in a few areas. No production occurs at Plant 56. It is strictly a research facility. Materos is not a shift supervisor; he is a chemical engineer and the project coordinator for the research team at Plant 56. He and his team are currently at work on a new nerve agent. This project has been code-named Thanatos, and although neither Materos' employer nor his kidnappers know it, Thanatos is the real reason Materos was abducted.

Unified Chemical, like many multi-nationals, has found Costa Rica's combination of stability and lax regulation very inviting, and has several plants in the country engaged in research and production. Plant 56 is located in the rural jungle highlands of northern Costa Rica. The research team at Plant 56 has reached the final developmental stages of a new nerve agent. Lethal and fast-acting even in minuscule doses, the Thanatos agent decomposes quickly after dispersal, becoming completely safe and largely undetectable. The project is nearing completion, and Unified has already had bids for plants and supplies in the Third World.

Security for Project Thanatos has been exceptionally tight. The research team was broken down into small work groups, each responsible for a single facet of the project. Only Materos knows how each step combines with the next. Work on the project cannot continue until either

Materos is rescued or a new project head is appointed. The possibility of an informant at the plant has only increased the need for haste.

All of this means nothing to the villagers who kidnapped Materos, though. Their concern is illegal dumping. In addition to its research, Unified has used Plant 56 as a staging area for dumping waste from other plants in Costa Rica and the U.S. This dumping has contaminated the soil near Merced, causing illnesses, miscarriages, and deaths among the villagers and their livestock. Despite complaints to the government and an investigation by the local Rural Guardsman, Alonzo Mercales, nothing has been done. Government officials on Unified's payroll have declared Merced safe, and the dumping goes on.

With civil action going nowhere, a group of young villagers decided to take things into their own hands. They began a campaign of petty vandalism against Unified, mostly at the dump site. Unified complained to the Rural Guard in Tilaran, but Mercales, angered by his own government's cover-up, was slow to take action. He cautioned the villagers against the vandalism, but they didn't heed his warning. When Echeverria and Perez were photographed by Unified security cameras, he was forced to take them into custody. He held them in the Tilaran jail for a week or so, and then, after exacting promises that the vandalism would stop, he released them. For the following month all was quiet.

Meanwhile, Unified's suspicions of an informant at the plant were correct. Despite their precautions, Hastings Chemical—a small but aggressive competitor—learned of Project Thanatos. Aware of Unified's problem with the villagers, Hastings formulated a plan to steal Project Thanatos, damage Unified, and leave the villagers holding the bag.

Hastings contacted Enrico Cordoba, a major broker of Latin American mercenary talent. Cordoba traveled to Merced and met with Echeverria, claiming to be a member of the Worker's Front—a left wing organization dedicated to ending capitalist exploitation of Central America. Cordoba told Echeverria that he could help the villagers take control of their destinies and end the dumping at Merced. Echeverria agreed. With the help of two local mercenaries, Cordoba trained and armed Echeverria and his friends over the next few weeks. Meanwhile, Hastings learned of Materos' travel plans. Cordoba told the villagers that a golden opportunity had arrived: a chance to seize the ultimate bargaining chip—a corporate executive.

But Echeverria and his friends didn't know the whole plan. They, along with one of Cordoba's men, would abduct Materos and take him to a small shack in the mountains. Meanwhile, a team of Hastings security personnel would set up at the shack, to kill the villagers when they arrived. The Hastings team and the mercenaries would then proceed to an extraction point from which they would fly by helicopter to a nearby plantation. There Materos would be debriefed and later be killed. Not only would Hastings learn Unified's secret, but with the help of a little manufactured evidence, the deaths at the shack would be attributed to a botched Unified rescue attempt. An investigation into the affair would probably expose Unified's illegal dumping as well— a three-in-one gain for Hastings.

But unknown to Cordoba, one of his mercenaries is a member of a Nicaraguan insurgent group, FARN (Fuerzas Armadas de la Resistencia Nacional). Hunted and lacking popular support in Nicaragua, FARN is a beleaguered organization. As the plans were being put together, Juan

The Civil and Rural Guard

Costa Rica is unique in Central America in that the country has been a democracy for most of its history. After a brief civil war in 1949, the constitution was changed and the army was abolished. In its place were established the Civil Guard and the Rural Assistance Guard. The Civil Guard is responsible for policing the larger cities and towns as well as defending the country from outside attack. Undermanned and ill-equipped, the Guardia Civil has been unable to deal with the influx of insurgent and mercenary groups that have set up household in Costa Rica.

The Rural Guard is a smaller organization that polices the lesser populated areas. There is often only one Rural Guardsman for a region, who may double as mailman, social worker, and laborer. Positions in the Guard are determined by political patronage, so most Guard personnel aren't highly qualified. Many of those who leave the service take their equipment with them.

Ramirez—the FARN member—came to realize just what a goldmine Materos could be. Seeing an opportunity to supplement FARN's dwindling funds, Ramirez made preparations to betray his employer.

The day of the attack arrived, and the plans were put in motion. The ambush went smoothly. Materos was quickly loaded into Echeverria's pickup truck and the group made a clean escape. Once clear of the ambush site, Ramirez pulled his gun on the villagers and forced them up a back road towards an abandoned watchtower where other FARN members were waiting. Before they got there, however, Echeverria and Perez tried to overpower Ramirez. Ramirez and Perez were killed in the ensuing struggle. Shaken by the betrayal, the villagers backtracked and resumed their trip to the shack.

While this was happening Mercales—the local Rural Guardsman—was in Merced on an unrelated matter. Unified contacted him there, told him about the kidnapping, and requested he take Echeverria into custody. Worried that Unified might take action into their own hands, Mercales agreed. Upon reaching Echeverria's home, he learned that Pablo and his friends had gone "hunting" for a few days and were probably at their shack in the hills. Radioing in his destination, Mercales roared off to the shack in his jeep.

Due to the villagers' side trip, Mercales beat them to the shack. Cautious as always, he parked his jeep and walked the last few hundred meters. He spotted several well-armed foreigners moving in around the shack, and, assuming these men were a Unified strike team, left to find and warn Echeverria. He returned to his jeep to find two of the Hastings team rummaging through it. As he watched, they smashed the radio and shot out the tires. Mercales moved away quietly and then ran cross-country, hoping to reach the main road before Echeverria passed by.

Mercales emerged from the trees along the main road just as the villagers' truck came into view. He flagged them down, and explaining what he had seen at the shack, tried to persuade the group to surrender into his custody and return with him to Tilaran. Echeverria refused— if they were to be arrested they would at least accomplish what they had set out to do. It was decided that they would take their hostage to a cave Echeverria knew in the mountains. Mercales would return to Tilaran and try to get help from San Jose. The villagers hid the truck on the side of the road and began the long hike to the cave, while Mercales set out on foot for Tilaran.

Once the kidnappers were thirty minutes overdue and the driver of the "mystery jeep" had not returned, Cordoba and Williams, the Hastings team leader, decided that the operation at the shack had been somehow compromised. Cordoba took his remaining mercenary and went looking for the villagers. He quickly discovered Echeverria's truck and the

Timetable of Events

This timetable paraphrases the evening's events, assuming no interference by the operatives. Use common sense determining how events are delayed or altered by the operatives. Obviously some events, such as Materos' interrogation by Hastings, won't occur at all if the operatives are successful.

18:25 The ambush is sprung.

18:33 Ramirez hijacks the villager's truck and diverts it towards the FARN rendezvous.

18:46 Unified notifies Mercales of the kidnapping. Mercales heads for the shack, looking for Echeverria.

18:53 Echeverria kills Ramirez. The villagers head for shack.

19:11 Mercales arrives in vicinity of the shack. He spots the Hastings team and retreats. He is forced to abandon his jeep.

19:20 BlackEagle is called in.

19:44 Mercales stops Echeverria's truck and tries to convince villagers to surrender. They refuse and start toward the cave. Mercales heads for Tilaran.

20:18 The FARN group, looking for Ramirez, starts toward the shack.

20:20 The BlackEagle cell lands at Plant 56.

20:28 Williams starts after the villagers. Cordoba heads to Merced.

20:46 Sunset.

21:09 Sanchez reaches the shack and discovers the Hastings team. After a lengthy firefight, the Hastings team is destroyed. Sanchez interrogates a survivor, then heads off in pursuit of Williams.

22:49 Echeverria and the villagers reach the cave.

23:50 Williams discovers the cave, and begins negotiating with Echeverria.

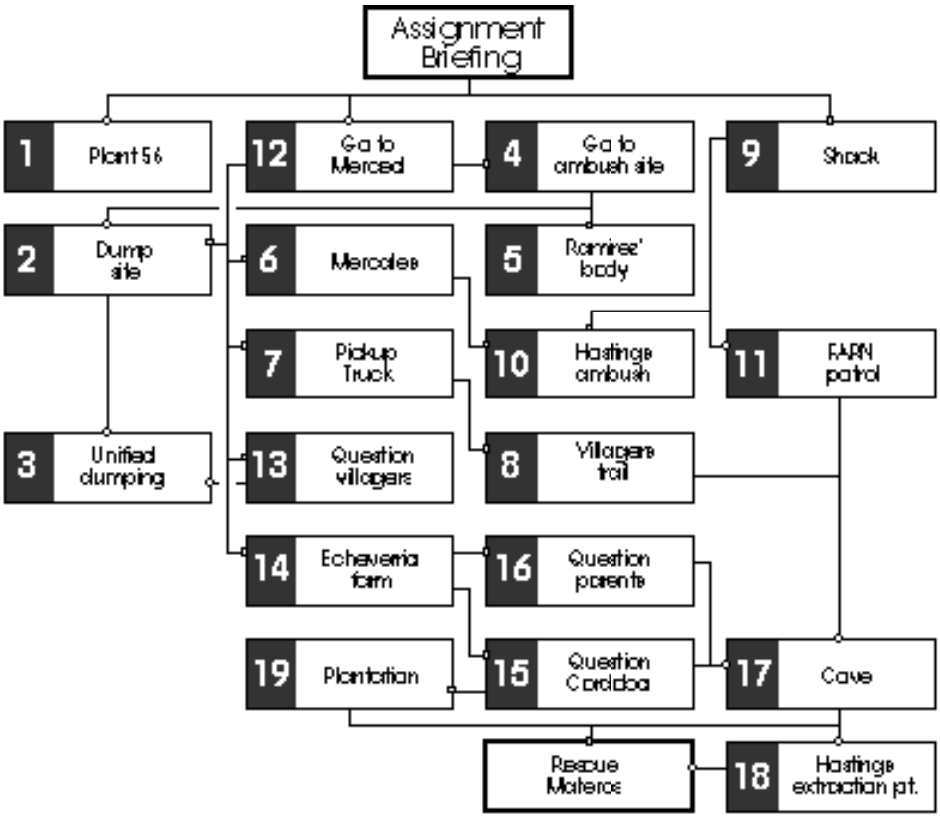
00:02 Sanchez arrives in the vicinity of the cave and deploys to ambush the Hastings team.

00:20 Echeverria surrenders to Williams. With Materos recovered, Williams orders the villagers killed.

00:30 The Hastings team heads for their extraction point. Cordoba kills Echeverria's family and then leaves Merced.

00:37 Williams is ambushed by FARN. She escapes with Materos.

04:10 Williams reaches the extraction point and leaves for a nearby plantation. Materos will be interrogated and killed, while another Hastings helicopter retrieves Cordoba and the Hastings bodies at the shack.



villagers' trail leading into the forest, and reported it back to Williams. Then he headed to Merced to see if he could learn anything there. Williams, meanwhile, split her personnel into two groups. Leaving four at the shack, she took the remaining four and followed the villager's trail into the mountains.

Meanwhile, Ramirez' FARN friends had become anxious because he too was late. Ramirez had filled in his lieutenant, Emilio Sanchez, on the entire operation, including the location of the shack. Sanchez decided to go there and find out what was going on.

When the operatives arrive at Plant 56, Echeverria, Materos, and six villagers are slowly making their way into the mountains. Williams is in pursuit with four personnel. Cordoba is on his way to Merced, with one mercenary. Williams' four remaining men are watching the shack, as seven FARN insurgents travel toward it.

The Action

The helicopter flight takes the operatives well into the foothills of the Cordillera de Tilaran. Rugged mountains rise up to the east and north. Carpeted in lush green and bathed in the orange glow of the evening sun, they seem almost idyllic compared to the smog of Miami and the squalor of San Jose. The beauty of the scene is marred, however, by the occasional

barren swathes of strip mines and renegade logging. From the scattered villages rise thin plumes of smoke; farmers clearing jungle, making room for their hungry crops.

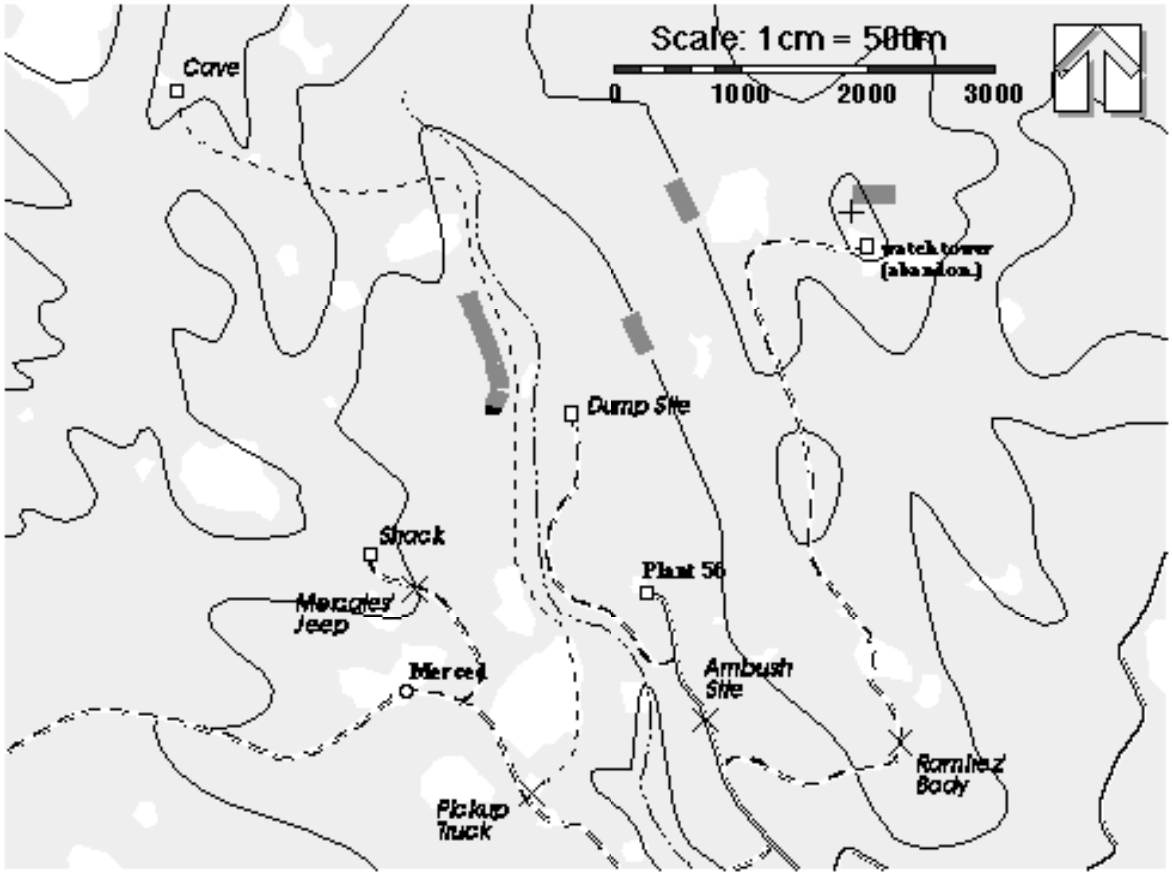
Keenan wants to conceal Unified's dumping site from the operatives and has instructed the pilot to make a low level approach to the plant. Despite this, any operative who makes a successful Perception roll with a -20 modifier will notice an area to the northwest of the plant where the foliage looks mangy and thin. If this is mentioned to Keenan he will explain that workers have just begun clearing that area prior to more construction.

Stepping out of the helicopter, the jungle air is hot and humid, even more so than in San Jose. The din of jungle insects can be heard even over the dying sound of the chopper's blades. Keenan directs the group toward a humvee that sits at the edge of the helipad.

Finding it easier to talk as the helicopter's engine winds down, Keenan explains that the humvee is at the group's disposal, and that the chopper will remain at the plant in case the operatives need it. In the humvee is a radio that can be used to contact Keenan, as well as a case of CS grenades and some protective masks.

The operatives may wish to begin their investigation at the plant. Keenan will discourage this. He tells them that Unified security has already questioned Materos' co-workers and searched his bungalow, finding nothing of interest. He also points out that there might be an informant at the plant in communication with the kidnappers; spending

1



Looking Behind the Scenes

If the operatives have a computer and network access, they may try to check out Unified's computers to obtain more information. Because of the extremely sensitive nature of their work, the computers used by Materos' research team have no network connections. A great deal of useful information can be found, however, in Unified's other computers. Finding Unified's public access gateway on the GenNet requires a Computer Ops/Networks roll at +20. Hacking past the public-access facade and into Unified's restricted subnet requires a Computer Ops/Security roll at -30. Once inside, useful information can be found is personnel, shipping, and correspondence records.

Getting into Unified's personnel records requires a Computer Ops/Security roll. Once inside, finding any particular file requires a additional Computer Ops/Civil Systems roll. Materos' or Keenan's files both make reference to Project Thanatos, and mention that Materos is chief engineer for the project. Neither record mentions what Thanatos is, though.

Having found the reference, or seen the name on the barrels at the dump site (see below), the operatives may try to find other files on Project Thanatos. A system-wide search, requiring two Computer Ops/Security rolls at -20 and an unmodified Computer Ops/Civil Systems roll, will locate a number of memos which have a Project Thanatos header. The text of these memos is encrypted. To read them, the operatives will need to locate, download, and run Unified's the encryption software. Doing so requires a Computer Ops/Security roll at -30 followed by an unmodified Computer Ops/Civil Systems.

The memos provide little hard information. Most are progress reports from Plant 56, with few details on the nature of the project; some refer to the problem with the village. A memo from Keenan mentions payments to a number of Civil Guard and Ministry of Health Officials. Several make references to shipments from Plant #12 in Florida. One of the most recent memos mentions that two East African governments have expressed interest in Thanatos.

Accessing information about Plant 12 requires a Computer Ops/Security roll at -30. Success reveals that production at this plant ceased three years ago, but that a waste disposal incinerator still runs. All records seem routine, but a character making a successful Perception roll will notice a number of suspicious shipping manifests in and out. They show that a large amount of toxic waste, as well as surplus manufacturing compounds, have been shipped there for destruction—and that a similar quantity of innocuous "manufacturing supplies" have been shipped from Plant 12 to Plant 56. Any operative who makes a successful Chemistry roll at -40 will realize that many of the surplus materials shipped to Plant 12 are common nerve gas constituents.

The operatives may also want to search the Ministry of Health's computers. The Costa Rican government is not on GenNet, so discovering a network route to the government's computers requires a Computer Ops/Networks roll at -40. Getting into the system requires an unmodified Computer Ops/Security roll. Once in, searching the records for references to Unified or Merced requires a Computer Ops/Civil Systems roll. A successful search will uncover a single report stating that an inspector was sent to the village of Merced three months previous and performed a soil test. The soil was found to be free of contaminants.

too much time there might jeopardize Materos' safety. He suggests that they begin their search either in Merced or at the shack.

If the operatives insist on investigating at the plant they will be allowed to interview the workers and search Materos' bungalow, learning nothing useful through either route. They will not be allowed to visit the research buildings or to access any of Unified's computers (there is a lot to be learned if the operatives have their own computing power and network access—see the sidebar). The longer the operatives hang around the plant, the more impatient and agitated Keenan becomes. "You know," he comments, "this is the one place in Costa Rica we know that Materos isn't." When the operatives do go on their way, he will request they call in occasionally and keep him up to date.

2, 3

Less than a kilometer from the plant's entrance is a dirt road that does not appear on the operative's map. The pavement at the intersection is covered with muddy tire tracks, clearly made within the past few days by a number of heavy trucks. At the end of this road is Unified's illegal dump site. Recent rain has eroded much of the unprotected soil in the sloped clearing. A successful Perception roll at +20 will notice that a few barrels lie partially exposed on the far side of the clearing. They are lined up neatly and rust-free; obviously recently buried. A stenciled label is visible on one, it reads, "Thanatos." Below this is a chemical hazard

symbol and the words "Respirators required." Although there is no way to tell, the nerve agent in these barrels has decomposed and poses no threat to the operatives.

4 Just over a kilometer from the plant is the ambush site. Investigation of the surrounding jungle easily reveals the area where the villagers waited to spring the ambush. A Tracking roll made by 30 indicates that seven different individuals were involved. If the operatives take a close look at the tracks left by Echeverria's truck they will notice that the truck's tires are almost completely bald. Examination of Materos' car will not reveal anything beyond what was mentioned in the report.

5 Less than a kilometer past the ambush site the group will pass a weed-choked dirt road that leads to the FARN rendez-vous point. If the operatives make a successful Perception roll at -20, they will notice skid marks made by a fishtailing vehicle (with bald tires) as it turned onto the road. Less than 100 meters up this road lies Ramirez' body. An unmodified Perception roll is all that is necessary to spot it in the jungle undergrowth. Ramirez is wearing camouflage fatigues without insignia and has a large bullet wound in his chest. The bullet-hole in his shirt is scorched; a successful Police Science/Forensics roll indicates that the wound was inflicted by a large-caliber pistol fired at extremely close range. It is clear from the foliage that the truck turned around and headed back to the main road.

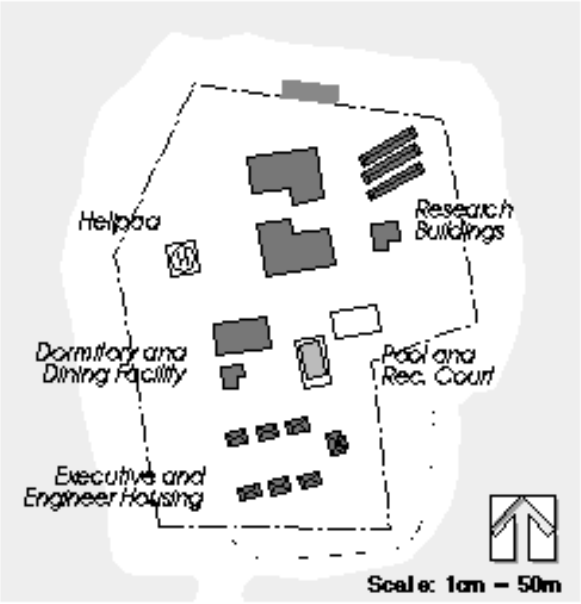
6 If the operatives spend less than an hour at the plant and/or the dump site, they will pass Mercales as he makes his way back to Tilaran. When Mercales first spots their vehicle he will pause for a moment to see if it is someone he can catch a ride with. When it becomes obvious that it is not, he will dive into the jungle and hide. The operatives can spot this

Unified Plant #56

Plant 56 looks more like an armed camp than a production facility. The area surrounding the plant has been cleared of all vegetation and the perimeter is enclosed within a three meter high fence topped with razor-wire. Parked bulldozers and recently uprooted trees attest to the fact that the cleared area is being expanded. Occasional posts sport floodlights and security cameras. The only access to the plant is through a manned gate at the east end of the compound.

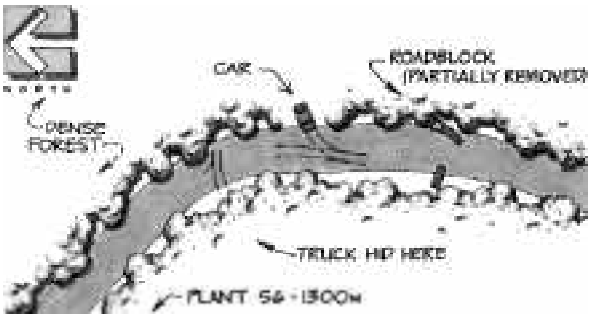
The interior of the compound is a stark contrast to the verdant jungle around it. In the northern end, the harsh glare of floodlights illuminates the exterior of the two windowless concrete buildings—the main research facilities. Surrounded by a carefully trimmed lawn, the helipad at which the operatives landed sits along the western edge of the plant. South of the helipad is a large dormitory-like building, which houses most of the staff, as well as a dining facility. Beyond those are seven bungalows which house the senior engineers and visiting executives.

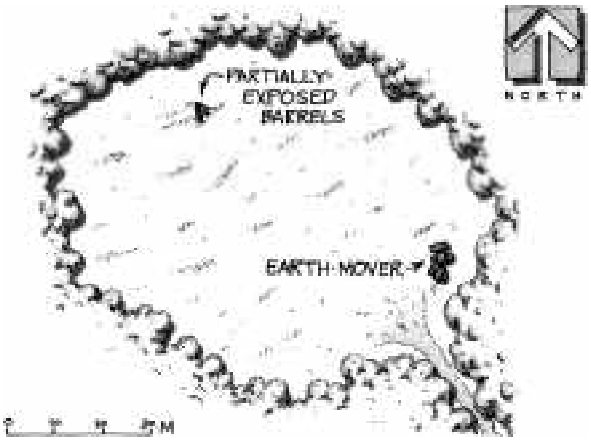
The terrain in this area is primarily rugged jungle highlands 1000 or so meters above sea level. Humid and warm even at night, the dense forest is alive with insects and the cries of birds. The region is sparsely inhabited; the jungle is interrupted only by a peppering of small villages and muddy roads. Most of the people in the region survive through subsistence farming and hunting, raising the occasional cash crops for market in the nearby town of Tilaran.



The Ambush Site

The ambush took place a little over a kilometer from Plant 56, just past a sharp curve in the road. Materos' car still sits with its rear wheels in the ditch. The front driver's side window is shattered and glass particles cover the front seat and floor. Skid marks show where Materos' driver attempted a quick bootlegger reverse, but the car is bottomed out and will need to be winched from the ditch. Crushed foliage and muddy tire tracks pinpoint where Echeverria's truck emerged from the jungle when the ambush was sprung. Thirty meters beyond the car, a recently felled tree still lies partially across the road.





The Waste Dump Site

At the end of a dirt road almost three kilometers long is a clearing about one-hundred meters across. Runoff from the nearby hills has severely eroded the unprotected soil; deep channels crisscross the area. The tracks of numerous trucks are evident and a bulldozer sits at the edge of the jungle. There is little undergrowth in the surrounding jungle and nearby trees are clearly dying. The signs of recent digging are obvious. With a successful Perception roll, an operative will notice that water in the deep tire ruts has a sickly orange tinge.

with a successful Perception roll. If the group pursues him, Mercales will try to hide a hundred or so meters back in the forest.

If captured, Mercales will give the operatives his name and inform them that he is a government official. He will believe that they are allied with the group from the shack and will not answer any questions concerning the villagers. Attempts to bully or torture information from him will just confirm this belief. Some good roleplaying and a few successful Diplomacy rolls may get Mercales to talk. If the operatives treat him decently and identify themselves as BlackEagle operatives (Mercales is aware of the ongoing Civil Guard operation involving BlackEagle), modify these Diplomacy rolls by only -10. If, on the other hand, they threaten him and say that they work for Unified, impose -40 or greater modifiers.

If the group does gain Mercales' trust he will tell them what he saw at the shack. As to the whereabouts of the villagers, he will only say that they have gone up into the mountains to hide until he can get help. He does not know the location of the cave. He can also fill the operatives in about the soil problem in the village. Mercales will insist that the cell take him to Tilaran so that he can contact San Jose. If the group refuses, and does not let him go, he will not resist, but will bide his time and try to escape later, taking the humvee if possible.

If Mercales manages to reach Tilaran he will call San Jose for reinforcements. Due to Unified's influence and the fact that most Civil Guard units are involved in the operatives' original assignment, no help

will arrive until morning. Nevertheless, the government will become involved and the operatives will lose their bonus.

About a half kilometer before the turn to the shack the operatives will pass Echeverria's hidden truck. A Perception roll at -10 will spot it, and a quick check of the tires will confirm that they are bald. A character examining Perez' body may make a Police Science/Forensics roll at -15 to determine a rough time if death. A Tracking roll at +10 will spot the kidnappers' and Hastings team's trail into the mountains. If the operatives search the immediate area they will discover the Hastings team's jeep hidden fifty meters up the road from the truck.

Past the truck is the road leading to the shack. It is overgrown and difficult to locate, requiring a Perception roll to spot from a moving vehicle. There are obvious indications in the undergrowth that a number of vehicles have used the road recently. Mercales' jeep, and possibly the FARN truck (depending on the operatives' timing), are parked on the road a few hundred meters short of the shack.

If the cell arrives at the shack before FARN they will be observed by the Hastings team, deployed in a semicircle on the high ground to the north and west of the clearing. The team's instructions are to watch and report; they will not initiate any action against the operatives. Pay attention to what the players discuss among themselves, making Perception rolls for the Hastings team to what is said. Anything of interest will be relayed to Williams. The Hastings personnel are well hidden—allow each operative a single Perception roll at -30 to spot anything out of the ordinary. If the operatives spend a lot of time here the FARN patrol may arrive while they are still examining the site.

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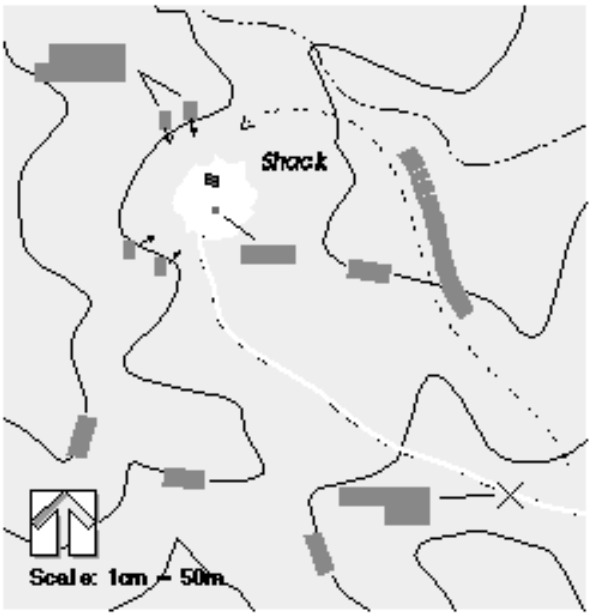
Echeverria's Pickup Truck and the Shack

Echeverria and the villagers left their truck about a kilometer and a half short of Merced. The truck is hidden about 10 meters off the road and hastily covered with branches. The group's hasty escape left the foliage around the truck well-trampled. The truck itself is rusty and held together with bailing wire. A bullet hole has shattered the rear window and the passenger side interior is splattered with blood. Three .45in ACP casings lie on the floor of the cab. In the bed is a chainsaw and the tarp-shrouded body of Perez, killed in the fight with Ramirez. He was obviously shot in the head.

A kilometer closer to Merced is the road leading to the shack. It is rutted and overgrown, passable only to a four wheel drive vehicle. The junction where this road leaves the main road is choked with underbrush and hard to spot unless specifically looked for. A kilometer up the road, Mercales' jeep is pulled off into the bushes. Its tires are shot out and the radio is lying in pieces on the hood. A few hundred meters beyond, the road opens into a small clearing.

The shack sits in the center of an overgrown clearing approximately forty meters in diameter. The weeds around the shack are trampled flat and the tracks of at least two vehicles are present. To the west of the clearing the ground slopes up sharply. The shack itself is a ramshackle affair that has seen better days; the door hangs open on a single hinge and the entire structure creaks ominously if leaned against. The only windows are on the front but many boards are missing from the other walls. The shack will provide light cover against hostile fire, but may collapse if subjected to much abuse. If the operatives should be involved in combat near the shack, check for collapse at the end of each round, giving it a 10% chance each round it is struck by fire, increasing the odds to 50% if it is within the burst radius of an explosive grenade. If the shack does collapse any characters inside will suffer damage as if they had fallen 5 meters.



11 The various situations that could arise if the operatives encounter the FARN patrol at the shack are too numerous to detail here. Use common sense and the players' actions to determine the outcome. If the cell is in the area at around 21:00, position the insurgents ahead of them advancing toward the shack. The rebels' flatbed truck will be parked on the road forty meters south of Mercales' jeep. Unless the operatives make contact, the FARN patrol will advance to the clearing and begin searching the area. Once there, one of their more trigger-happy members will spot a Hastings agent and open fire; provoking a general firefight. A number of large caliber rifles, as well as an M-203, will be used in the fighting around the shack. If the BlackEagle cell is not in the vicinity of the shack, but is anywhere other than Tilaran, they may hear the battle. An unmodified Perception roll will hear the shots and give a general direction. If the operatives are in or around Merced when this occurs, and hurry toward the fighting, have them arrive just as the firefight ends. They will see the insurgents stripping the dead of equipment as Sanchez interrogates the captured Hastings agent.

If the cell arrives after the FARN patrol leaves, the clearing will look quite different from how it is described in the sidebar. The shack has collapsed. Shell casings litter the ground. At the east edge of the clearing lie four bodies, the FARN dead. Dressed in an assortment of military and civilian clothing, they are stripped of equipment and laid out in a neat row. The bodies of three Hastings operatives lie in a heap at the north edge of the clearing. They wear camouflage fatigues with no insignia, and have also been stripped of their equipment (one body's boots are missing). Obvious drag marks lead back to their original positions. The body of the fourth Hastings fighter lies near the remains of the shack. He was clearly wounded in the ankle, then shot in the head execution-style.

12 Continuing down the main road takes the operatives to the tiny village of Merced, a settlement of twenty or so buildings and a population of around a hundred. Outsiders will be met with suspicion. Questions about Echeverria or the problems with Unified will change that suspicion to hostility, and any threatening display of weaponry will turn Merced into a ghost town. If the operatives can convince them that they are investigating the dumping (require a Diplomacy/Lying roll at -20), the villagers will be willing to talk. They know about the dumpsite, and they know that it is responsible for their illnesses and deaths among their crops, livestock, and themselves, and they have the support of Mercales and the doctor in Tilaran. A successful Medicine roll confirms that the villagers' symptoms are probably pharmacological in nature.

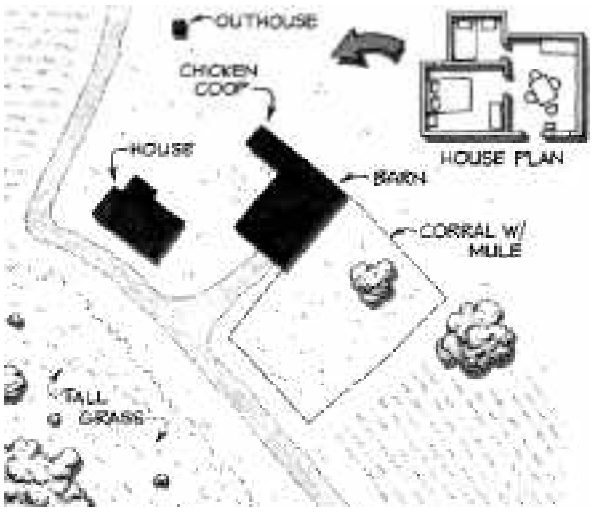
13 A second Diplomacy/Prying roll at -30 will be needed to get any information about Echeverria and his friends. If successful, it's quickly clear that Echeverria and his group are local heroes. The villagers are proud that some of their number have stood up to the wealthy and powerful gringos. No one in the village is aware that anything is amiss at the Echeverria farm, although some of the villagers did see a jeep with two men pass through the village earlier.

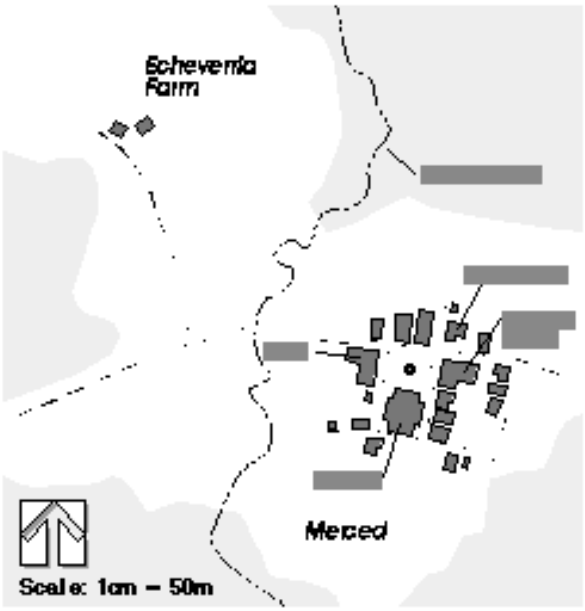
14 Echeverria's family lives a few hundred meters outside of the village proper. His family consists of his parents, Raul and Mercedes, and two younger sisters, Maria, 8, and Consuela, 5.

When the operatives arrive Cordoba is already there. A successful Perception roll will spot the rear end of their muddy jeep through the open barn door. Cordoba's mercenary has the children in the back room of the house, guarding them there while Cordoba deals with the adults.

Merced

Merced is a small village of approximately 100 inhabitants, laid out in the grid fashion typical of Spanish colonial towns. At the center is a small plaza. The dirt road from Tilaran runs through the center of town and along the north edge of the plaza. Around the plaza are clustered a number of important buildings: the Mayor's home, the general store, and the Roman Catholic church. The general store also serves as a bar after sunset. There is no electrical service to the village, and only the mayor and the bar have electrical generators. The remainder of the populace rely on candles and gas lamps after dark.





The Echeverria Farm

The Echeverrias live in a small three-room house at the edge of their fields. Prosperous by local standards, the farm buildings are surrounded by dust and weeds, and look worn though well-maintained. To the northeast of the house is a barn and a corral where a mule stands, quietly chewing straw. Occasional cackles are audible from the chicken coop behind the house. The glow of an oil lamp is visible through the windows of the house, and small wisps of smoke curl from a stovepipe on the roof.

Echeverria's parents have convinced Cordoba that they know nothing, and so far nobody has been hurt.

If the operatives were seen by the Hastings team at the shack, Cordoba will be on guard. If the operatives try the direct approach and knock on the door, he'll have Raul answer it. Afraid for the safety of his children, Raul will tell the operatives to leave. He will be visibly tense, however, and will keep glancing back inside.

If the ops attempt to sneak up to the house, they shouldn't have too much trouble. Even if he's on alert, Cordoba can't keep an eye out in every direction. The only pitfall is the chicken coop—if the operatives get within ten meters, require a Hiding/Creeping rolls at -30. Failure means they rile the poultry, alerting Cordoba with the noise.

Cordoba has no interest in fighting fairly. Unless neutralized quickly, he will use the hostages, including the children, as shields. Given time, he will also radio a warning to Williams.

If the operatives capture Cordoba and/or his mercenary, they can be important sources of information. Neither feels much loyalty toward Williams, and both will try to barter knowledge for release. They can provide information on William's identity, Hasting's involvement, Echeverria's rough location, and specifics on the Hastings team's capa

15

bilities, equipment, and more importantly their plan and the location of the plantation. The operatives can also contact Williams using the mercenaries' radios.

16 If the cell rescues Echeverria's family and convinces them that they mean Pablo no harm, his parents will mention the cave. They don't know its exact location, but can give rough directions and prominent terrain features.

If the operatives are to prevent the villagers' deaths, they must learn of the cave and get there before Echeverria surrenders. The timeline lists his surrender at twenty minutes after midnight, but be flexible; if the operatives are running a little behind allow them to reach the cave in time to save the villagers. Once the operatives learn of the cave they may try to make up time by having the Unified helicopter fly them to the area. The terrain is very rough, so the group will have to land hundreds of meters away or rappel from the chopper, requiring a Climbing roll (Unified has the necessary equipment). Either way, arriving by helicopter will attract attention; make a few Perception rolls for each group in the vicinity of the cave to determine if they have been alerted to the operatives' presence.

17 There are two ways for the operatives to find out about the cave: by following the FARN insurgents from the shack, or by questioning Cordoba or Echeverria's parents. If the latter, they will know only the cave's general area, and they'll have to search for the entrance. Have each operative make a Perception roll at -20 for every ten minutes spent searching. Success spots the cave entrance. If the Hastings team is already there, change the modifier to +15, as the negotiations will be audible. If the FARN insurgents are in the area at this time, the cell may encounter them as they search.

Should the BlackEagle cell beat Williams to the cave, they may try to negotiate with the villagers or simply assault the position. None of the villagers speak English. Echeverria will be extremely reluctant to surrender his hostage, especially if the operatives say they are working for Unified. He believes that as soon as he releases Materos they will all be killed. Keep track of how long the operatives spend around the cave—the Hastings team arrives just before midnight.

The other way to reach the cave is by following the FARN insurgents to the site. If this is the case, the Hastings team will already be deployed in the woods below the cave and in the process of negotiating. The insurgents will spread out around the Hastings personnel, hoping to ambush them as they leave. The operatives will be approaching the FARN ambush from behind. How events unfold from this point depends entirely on the operatives actions.

18 If the Hastings team gets Materos from the villagers, they will kill the villagers and head immediately for their extraction point, three kilometers west of the shack. Unless the operatives change things, they will run right into the FARN ambush. Two of Williams' men will be killed right off. Williams will flee with Materos, leaving her two remaining team members to cover her escape. She will avoid contact with the BlackEagle cell, negotiating with them at arm's length if she cannot evade them. She will offer Materos in exchange for a promise of safe conduct. If the operatives agree, she will arrange an exchange site and send Cordoba

Chasing New Leads

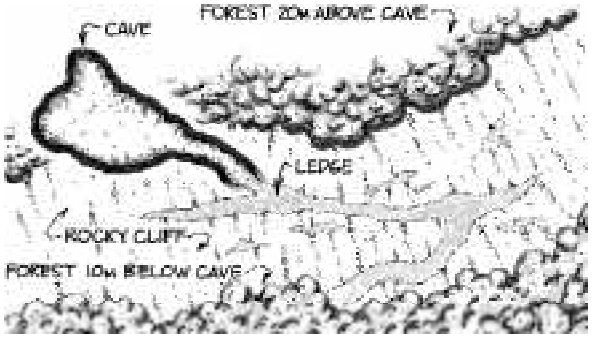
After questioning Cordoba or his mercenary, the operatives may have a number of new leads to check out, if they have computer network access. Cordoba's name is unfamiliar to the operatives, but it does appear in the BlackEagle computers databases. His file identifies him as a major Central American mercenary broker. He has been arrested on a wide variety of weapons violations in a number of countries, and is wanted for murder in Honduras, but has never been convicted.

Williams is also in the files. She has a reputation as a hard core, success-at-all-costs type among mercenaries—the operatives may even have heard of her (GM's discretion). In any event, her file connects her with a number of high-profile, high-body count jobs. Hastings Chemical is rumored to have been involved in some of them.

The Cave

The villager's cave is not very large, but it is easily defensible. It's set in a cliff about thirty meters high, with the cave entrance roughly two-thirds of the way up. The cliff face is steep but rough and dotted with vegetation—it can be climbed with a Climb roll at -30. The only easy approach to the cave is a narrow ledge ending a few meters past the entrance, just wide enough for one person to ease up at a time. After four meters the narrow cave entrance widens into a chamber about five meters across. Anyone entering the cave will be silhouetted against the sky and an easy target for the defenders (give the defenders the +20 "Target silhouetted" modifier).

The planned extraction point for the Hastings team is a small clearing about three kilometers west of the shack. It is tight and thick with undergrowth, but the helicopters can settle low enough for passengers to climb aboard. Two helicopters—unmarked UH-1s equipped with door guns—are standing by at Hastings' banana plantation and can be on site in less than ten minutes.



and/or any remaining men there to ambush the cell, while she takes Materos to her extraction point.

If the operatives recover Materos they will have to travel a half kilometer before the terrain is open enough for the Unified helicopter to pick them up. The chopper will have to hover and lower ropes to the operatives; it could take some time to get everyone safely aboard. Due to his fear of flying, Materos will resist any attempts to get him into the helicopter, slowing the entire process. During this time they may be spotted and attacked by any remaining Hastings or FARN personnel. If fighting should occur during a helicopter extraction the pilot has orders to leave as soon as Materos is aboard.

If Williams makes it to the plantation with Materos, the adventure is probably over. If, however, the operatives know about the plantation through their questioning of Cordoba or a computer data trail, they may be able to pursue Williams further. She will be feeling justifiably paranoid after the night's events. Rather than question Materos in the main building of the plantation, Williams will have the interrogation team (consisting of four fresh security personnel, a doctor, and an interrogator) debrief him in one of the smaller outbuildings. As a decoy, she will position a few of her men in the main building, leaving it well lit. She and whatever personnel she has left will take up positions around the outbuilding. Once the interrogation is concluded they will board the choppers with Materos and leave. While over the jungle they will kill Materos and throw him from the chopper.

If the operatives know about the plantation Keenan will send them there with orders to eliminate everyone present—including Materos, if it seems that Hastings might get away with him. This is well beyond the scope of the original contract, and the operatives may wish to renegotiate at this point.

The assignment effectively ends when Materos' is safely returned to Plant 56 or is killed. The operatives will be paid in either case and provided transportation back to San Jose. If Mercales was prevented from calling San Jose and the villagers were not slaughtered, the operatives will receive their bonus.

The Players

The major NPCs appearing in this assignment are detailed below, in their probable order of appearance. Use the NPC stereotypes, on pages 156 and 157, for stats on the lesser characters. Use the "Cheap Thugs" stereotype for the villagers and FARN insurgents—the latter carry AKMs, while the former are armed with an assortment of Mossbegs, AKMs, and M16s. Use the "High-End Grunts" stats, armed with HK MP5SD6s, for the Hastings personnel.

Douglas Keenan

A good-looking middle-aged man, Keenan has brown eyes and brown hair streaked with gray. The demands of his job keep him behind a desk and his formerly athletic build is slowly sagging. He has been with Unified for almost ten years and is responsible for the security of all of the company's Costa Rican operations. As a professional, Keenan would like to be more frank with the BlackEagle cell. He has strict orders, however, to keep the activities Plant 56 under wraps.

Alonzo Mercales

The Rural Guardsman from Tilaran, Mercales is a rarity in his field—a dedicated professional. Fit and trim of build, he has hazel eyes, thinning black hair, and a large but meticulously-groomed mustache. During the border conflicts with Nicaragua in the 1980s he received advanced training in the U.S. Concerned about the villagers, outraged at Unified, and disappointed in his own government, Mercales is committed to resolving the abduction as peaceably and fairly as possible.

Alonzo Mercales

31 year old Hispanic man. 176cm, 82kg.
Black hair, brown eyes, tan skin.

Int	56	**Sen**	62	Perception	48
Agl	43	**Cor**	50	Base Speed	12
Con	52	**Str**	49	Dam. Rating	3
Per	44	**App**	40	Mass Factor	0.8
Bra	67	**Wil**	48		

Equipment Carried:

Browning High-Power (13 rnds ball) w/ 1 extra mag, basic first aid kit, large knife.

weapon	speed	att/turn	roll	DF/DD	dam. type
Punch	12	1	**80**	1.0	impact
Browning Hi-Power	12	4	**94**	17	hyd shk
Knife (swing)	12	1	**98**	1.8	cut
Knife (thrust)	10	1	**93**	2.4	puncture

Relevant Skills:

Aim	60	**65**
Smallarm	15	**80**
Anglo Language Group	30	**35**
English	15	**40**
Armed Hand-to-Hand	60	**65**
Swing	30	**95**
Thrust	25	**90**
Hiding	50	**57**
Concealment	25	**82**
Medicine	30	**36**
Emergency Medicine	15	**51**
Perception	40	
Tracking	50	**57**
Unarmed Hand to Hand	50	**55**
Punch	25	**80**

Enrico Cordoba

A 38 year old man of average looks and build, Cordoba has brown eyes and black hair, graying at the temples. He began his career as a hired gun but has since become one of the most respected mercenary brokers in Latin America.

Enrico Cordoba

38 year old Hispanic man. 184cm, 80kg.
Black hair, brown eyes, tan skin.

Int	76	**Sen**	50	Perception	35
Agl	45	**Cor**	44	Base Speed	14
Con	50	**Str**	42	Dam. Rating	2
Per	70	**App**	74	Mass Factor	1.0
Bra	81	**Wil**	70		

Equipment Carried:
LBE, 1 frag. grenade, M1911 (8 rnds ball) w/ 1 extra mag, Uzi 9mm (20 rnds ball) w/ 3 extra mags, 10km mil-spec transceiver.

weapon	speed	att/turn	roll	DF/DD	dam. type
Punch	14	1	**68**	1.0	impact
Colt M1911A1	13	4	**90**	19	hyd shk
IMI Uzi (auto)	6	10	**87**	17	hyd shk

Relevant Skills:

Acting	30	**35**
Con	15	**50**
Aim	50	**55**
Autofire	20	**75**
Smallarm	10	**65**
Anglo Language Group	45	**52**
English	20	**72**
Hiding	30	**35**
Concealment	10	**45**
Perception	26	
Unarmed Hand to Hand	44	**50**
Block	22	**72**
Punch	20	**70**

Cordoba tends to keep his hands off the jobs he brokers, but in this case he decided to make an exception. He resents the fact that Hastings sent their own team down for the final phase of the operation—he could've handled it more efficiently with his own men, but Williams didn't trust "the locals" to get the job done. Cordoba doesn't like Williams, a relationship made worse by the fact that he's taking orders from a woman.

Emilio Sanchez
The leader of the FARN group, Sanchez is a middle-aged man with brown eyes, a gray mustache, and dark hair. He is of average height and about 15 kilograms overweight. A revolutionary ne'er-do-well, Sanchez sees the Materos abduction as an opportunity to become a major player in the FARN organization. As such, he's willing to gamble the lives of his men in an all-out effort.

Alexis Williams
A professional mercenary in Hastings' near-permanent employ, Williams is a thirty-two year old woman with brown eyes and short blonde hair. A

Alexis Williams

32 year old Caucasian woman. 182cm, 75kg.
Blonde hair, brown eyes, tan skin.

Int	46	**Sen**	66	Perception	60
Agl	56	**Cor**	52	Base Speed	17
Con	65	**Str**	55	Dam. Rating	3
Per	38	**App**	42	Mass Factor	0.9
Bra	48	**Wil**	40		

Equipment Carried:
Tactical vest, 2 frag. grenades, HK MP5SD6 (30 rnds glaser) w/ 2 extra mags glaser and one AP, Beretta 92F (15 rnds ball) w/ 1 extra mag, 10km mil-spec transceiver, night-vision goggles, large knife, basic first aid kit.

weapon	speed	att/turn	roll	DF/DD	dam. type
Punch	17	1	**45**	1.0	impact
Beretta 92F	17	4	**100**	17	hyd shk
HK MP5SD6	8	4	**109**	22	hyd shk
HK MP5SD6(auto)	8	13	**104**	22	hyd shk

Relevant Skills:

Aim	55	**61**
Autofire	20	**81**
Smallarm	25	**86**
Climb	40	**45**
Hiding	50	**58**
Concealment	25	**83**
Creeping	20	**78**
Medicine	40	**45**
Emergency Medicine	20	**65**
Military Science	45	**50**
Tactics	20	**70**
Perception	51	
Romance Language Group	35	**40**
Spanish	17	**57**
Tracking	45	**50**
Unarmed Hand to Hand	40	**45**

Williams doesn't like Cordoba. She views "indigenous personnel" as a necessary evil in her field, an evil that she could do without. When the operation begins to unravel she will immediately hold Cordoba responsible. If she has to leave him to take the flak while she gets away, so be it.

Williams is well aware of BlackEagle's reputation, and she'll try to avoid direct conflict if possible. She is determined to successfully complete this job, however, and she won't give in even if she has to carry Metaros to the plantation herself.

Pablo Echeverria

A bright young man of 18, Echeverria is tall, thin, and not very coordinated. Thanks to Costa Rica's enlightened educational policies, he plans to attend college in San Jose in the fall. Angered by his government's callous disregard of the villagers' safety, he organized his friends to take action against Unified. He realized that their petty vandalism would not change things, but hoped to attract attention to Unified's operation. With little to show for his efforts, he was easily duped by Cordoba.

Pablo Echeverria

18 year old Hispanic man. 189cm, 75kg.
Black hair, black eyes, dark tan skin.

Int	68	**Sen**	46	Perception	45
Agl	39	**Cor**	28	Base Speed	18
Con	44	**Str**	54	Dam. Rating	3
Per	40	**App**	42	Mass Factor	1.0
Bra	61	**Wil**	60		

Equipment Carried:

AKM (30 rnds ball) w/ 1 extra mag, M1911 (8 rnds ball) w/ 1 extra mag, hunting knife.

weapon	speed	att/turn	roll	DF/DD	dam. type
Punch	18	1	**35**	1.0	impact
Colt M1911A1	17	4	**65**	19	hyd shk
RSA AKM	9	4	**83**	19	hyd shk

Relevant Skills:

Climb	60	**65**
Aim	36	**40**
Longarm	20	**60**
Smallarm	10	**50**
Hiding	50	**55**
Concealment	24	**79**
Perception	50	
Tracking	50	**55**
Unarmed Hand to Hand	30	**35**
Block	22	**72**
Punch	20	**70**

Edward Materos

A Greek immigrant to the United States, Materos graduated with honors in chemistry from M.I.T. and is currently coordinator of Unified Chemicals' Project Thanatos. The theoretical challenges presented by the nerve agent's specifications excite him; what the finished product is used for is not his concern. He loves his work and has turned a blind eye to the illegal dumping at the facility. He hates to fly, and is so terrified of helicopters that he will resist any attempt to get him in one.

UC INt.56 CR
4/12/99 18:51:38

To: Douglass Keenan <VPSec.UC INt.47 CR
From: Michael Crass <mcrass.UC INt.56 CR
Re: Security report

At approximately 18:25 this evening a radio distress call was received from Car 10, Mr. Materos' vehicle. Four security personnel were immediately dispatched. The team found the vehicle approximately three-quarters of a mile from the compound on the company road. There was no resistance at the scene. Car 10 was found partially off the road. It had apparently been stopped by a tree across the road, but the tree had been partially removed. The driver of the vehicle was unconscious and Mr. Materos was not found. The driver was rushed to the plant and flown to San Jose for treatment.

Examination of the scene yielded little physical evidence. The tree on the road was apparently cut down with a chainsaw. Examination of tracks left by the perpetrators' vehicle show that the tires are almost completely lacking tread. Three .45 ACP casings were recovered from the scene. One .45 caliber slug was retrieved from the interior panel of the front passenger side door. Two additional slugs were later retrieved from the driver's ballistic vest. Mr. Materos' briefcase was still in the car and a number of documents were found on the back seat. A handwritten note was found on the hood of the car.

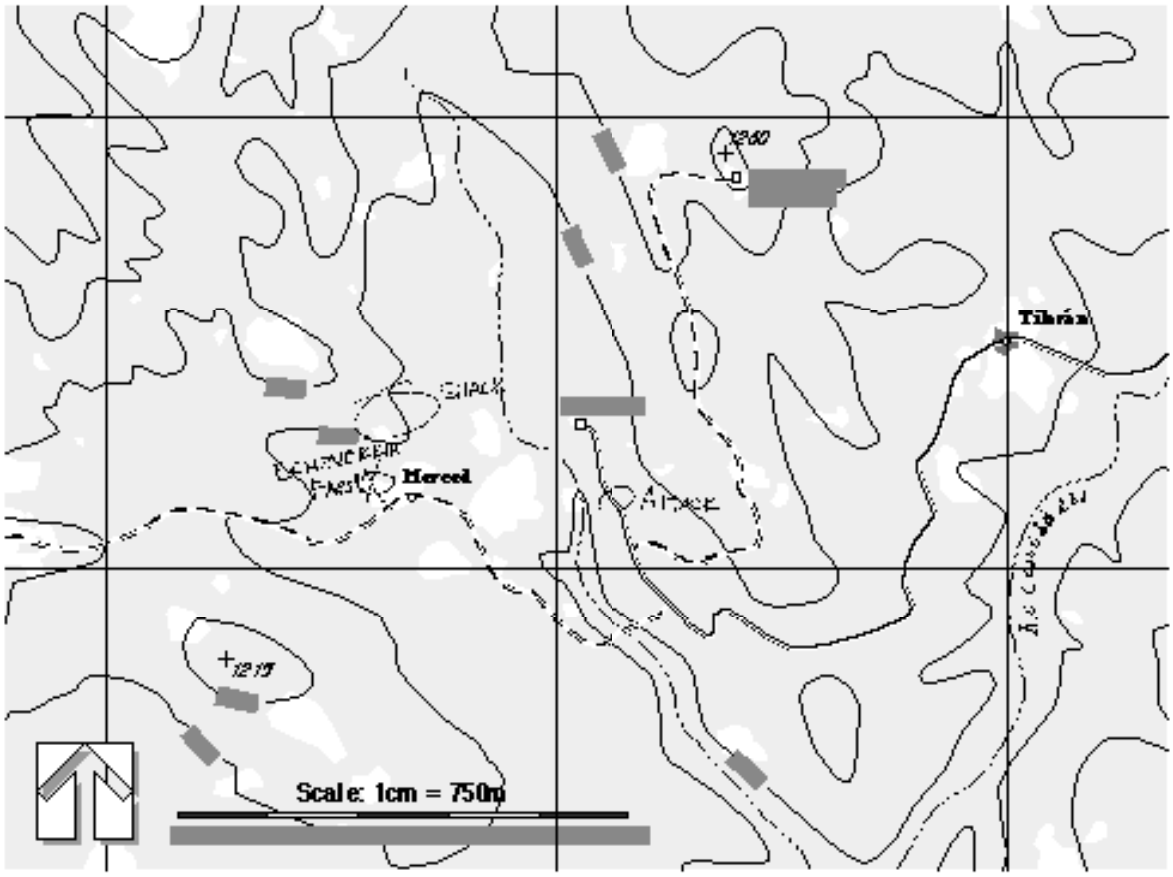
The driver regained consciousness while in transit to San Jose and was able to give a report. He estimates that five to six individuals were involved in the ambush. They were armed with an assortment of automatic rifles, shotguns, and pistols. All the attackers wore masks and the majority wore civilian clothing. The individual who shot the driver was dressed in ragged fatigues.

At the roadblock the car was blocked from behind by a black Ford pickup truck of undetermined model.

The primary suspect at the moment is Pablo Echeverria. Echeverria is 18 years of age, 6'-0" tall, and weighs 165lbs. He has black hair and brown eyes. He was employed by Unified as a laborer during the construction of Plant 56. During this period he organized a sit-down strike. His employment was terminated after the plant was finished. He was arrested in connection with the vandalism occurring at the plant, held for four days, and released a month ago. It has been confirmed through local authorities that Echeverria's parents own a black 1972 Ford truck.

The local Rural Guardsman has been contacted to assist in locating the suspect. He has been asked to cooperate in resolving the matter with no bloodshed and no further government involvement. It is unclear at this time whether he will comply fully. He has reported that the suspect and some friends are hunting and may be staying in a shack within five miles of Merced. Additional reports are pending.

The locations of the ambush site, Echeverria's home, and the approximate location of the shack are marked on the attached map.



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APPENDIX : EQUIPMENT

BlackEagle operatives rely on the best and most modern resources available—and that means good equipment. This appendix is a very basic list of items that characters are likely to need or want. Included is an overview of the availability and legality of the equipment, its size, use, features and cost. At the end of the Appendix are the Weapons, Armor, and Vehicles Tables, covering game statistics on those items that require them. Each individual section has a price and availability table, listing the prices in 1999 U.S. dollars for items bought on the street (legally, if possible) and through BlackEagle's L&P Branch.

This equipment list is very rudimentary. There are uncountable varieties of useful equipment available, especially to resourceful characters. For more information, check out store and mail-order catalogs, books and magazines on cars, guns, and other related topics, and even supplements for other games (but watch out—all game systems have their inaccuracies). For most goods, prices in 1999 are about three times those of today.

This section describes just a small portion of the equipment available to a resourceful character. All of it is available through L&P Branch, usually at a significant discount. In fact, in the tables listing prices, each item has two figures. The first number, printed in small text, is the 1999 legal street price. The larger number is the cost if purchased through L&P.

Some items are difficult to find or legally restricted. In both cases, a letter code follows the item name on the price table. An "R" code means the item is restricted in some areas, but is probably not too hard for a determined buyer to find. An "L" means that a legal purchaser must have some sort of license, and that sales are more carefully restricted. "X" codes mean that the item is heavily restricted, virtually unavailable legally. Of course, restrictions vary from country to country and region to region.

In addition to legal restrictions, some items are just plain rare. A "U" code means that an item is uncommon, and may not be available in many locations. A "V" means that it is very rare, available through a limited number of suppliers worldwide.

Weaponry

Some of the most important (and favored) items carried by BlackEagle operatives are their weapons. Listed below are a handful of the thousands of firearms and other personal weapons available. Game specifications on these weapons and are listed on the Weapons Tables at the end of this appendix.

There are many factors to consider when outfitting characters with weapons. First and foremost is that large firearms and hand-to-hand weapons are not only difficult to conceal, but heavy. Although *Millennium's End* game rules do not address the discomfort and minor impairment of carrying a large weapon, good roleplaying should. Furthermore, unless characters wish to be seen with a weapon, concealment is a real problem. Miami is a hot town most of the year (literally as well as figuratively), and lightweight clothes compound the problems of concealment. Even in the rough and desperate world of *Millennium's End*, firearms are frowned upon in most public situations, and the beleaguered police are just as likely to overreact to the presence of a weapon as they are to let it go. This issue isn't restricted to rifles or machine guns—unless under heavy or loose clothing, concealing even a medium sized pistol or large knife is a problem.

Firearms

Firearm availability varies according to location. In the U.S., fully automatic weapons are legally available only to properly licensed persons—although it's not too hard to get around such restrictions in 1999, especially in Miami. Likewise, the background checks and waiting peri-

ods required in most states are also often "waived" by ethically-questionable dealers. In Japan and many states of the E.C., unlicensed firearm ownership is outright banned. Licensing is usually available for Black Eagle operatives, however, and black- and grey-markets thrive in most urban areas.

Suppressors are devices for reducing or eliminating the muzzle blast of a firearm. They do nothing to eliminate the supersonic crack of the flying bullet or mechanical noise of the weapon's action. The prices listed include the necessary modification to the weapon.

Accuracy International Covert. This very accurate British bolt-action sniping rifle is designed for covert use. It breaks down easily for transportation and concealment, and features a built-in silencer and a folding bipod. It fires 7.62mm rounds, but requires subsonic ammunition.

Barrett M82. This monster sniping rifle fires the .50-caliber machinegun round. It is simple and rugged, and features a folding bipod and sights that fold down to accommodate a scope. It weighs a ton, however, and has a powerful recoil. It's made in the U.S. and is in service with some U.S. special forces units.

Beretta 92F. This medium-sized pistol is a 9mm autoloader. Made in Italy and the U.S., it is the current service pistol for the U.S. Army, and is a very popular police weapon.

Beretta M3P. Designed specifically for police and security work, this Italian shotgun operates by pump or semi-automatic action. It features a box magazine and a folding stock.

Browning High-Power Mark 3. A 9mm autoloader, this Belgian pistol has been around in one form or another since before the Second World War. It is a very popular police and military pistol, especially in the Third World.

Colt Python. This large and heavy revolver was introduced in the U.S. in the 1950s. Although expensive, it is well-regarded, and remains fairly popular.

Colt M16A2, M16 Commando. Dating back to the early Vietnam era, the M16 has been the U.S. Army's assault rifle for the last third of the twentieth century. It is popular worldwide, being lightweight and very easy to use. It fires the 5.56mm round. The Commando is a radically shortened version, with a cut-down barrel and collapsible stock.

Colt M1911A1. A medium-sized .45-caliber autoloader, this weapon was the U.S. Army's service pistol for most of the twentieth century. It is still very popular, and knock-off models are produced and sold all over the world.

Colt 9mm. Introduced in the late eighties, this American 9mm submachinegun is basically a converted M16. Although larger and heavier than many submachineguns, the 9mm is fairly popular, and is in service with the U.S. DEA and other agencies.

Daewoo USAS-12. This unique Korean-made weapon is a fully-automatic 12-guage shotgun designed much like an assault rifle. It is large and heavy, but fairly easy to use.

FN FAL. A large, heavy weapon, the Belgian 7.62mm FAL is one of the most popular assault rifles ever produced. It has seen service with more than eighty countries worldwide.

FN M2HB. Dating back to the 1930s, this heavy weapon is the standard .50-caliber machinegun found throughout the western world. It is currently made in Belgium, but has been made in the U.S. and elsewhere. It cannot be carried by a single person, but must vehicle-mounted or broken up to be carried by three people.

FN MAG. Probably the most common medium machinegun in the world, the FN MAG is a 7.62mm weapon made in Belgium. It has a built-in bipod.

FN Minimi (M249 SAW). In service with a number of major military forces, including the U.S. Army, the Minimi is a Belgian light machinegun firing the 5.56mm round. It features a built-in bipod and a unique feed system that takes belts or standard M16 magazines.

FN P90. A unique weapon introduced in the early 1990s, this Belgian submachinegun fires a special 5.7mm round. Although larger and heavier than many other submachineguns, the P90 is accurate and easy to use. It features a bullpup design, a clear, top-mounted magazine that lets the user check his or her ammo reserve at a glance, and a built-in optical sight.

Franchi SPAS-12. This mean-looking Italian shotgun was one of the first designed specifically for police and military use. It operates by pump or semi-automatic action. It features a fold-over stock with a special loop, which, when folded out, hooks under the user's elbow to support the weapon for one-handed firing.

Glock Models 19, 20, and 23. The Glock pistols, made in Austria and introduced in the early eighties, are made largely of plastic. Contrary to some stories, however, these autoloaders can't pass through metal detectors, and were never intended to do so. They

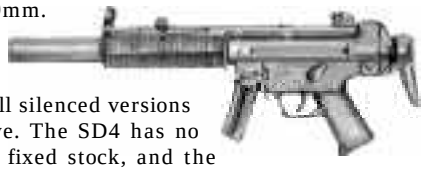
are durable and lightweight, however, and all are frequently used by police. The model 19 and 23 are medium-sized pistols, firing the 9mm and .40-caliber rounds, respectively. The slightly larger model 20 fires the 10mm round.

Heckler and Koch G3A3, G3A4. Introduced in the early 1960s, this German assault rifle is reliable and rugged, and has seen service in nearly every corner of the world. The G3A4 has a folding stock, and both versions fire the 7.62mm round.

Heckler & Koch G11. This unique German assault rifle was introduced in the early nineties. It fires a 4.7mm caseless round, and has a unique three-round burst function that fires all three rounds before the user feels any recoil, thus greatly increasing accuracy. The compact caseless round allows the G11 a larger magazine capacity than most assault rifles.

Heckler & Koch MP5A4, A5. A very popular weapon with security forces and movie makers, the MP5 is a German submachinegun available in 9mm, 10mm, and .40-caliber S&W models. The A5 version has a collapsible stock.

Heckler & Koch MP5K. This weapon is a stockless version of the MP5, above, cut down to its smallest possible dimensions. It has a forward handgrip to aid in stability, and is only available in 9mm.



Heckler & Koch MP5SD4, SD5, SD6. These are all silenced versions of the MP5, above. The SD4 has no stock, the SD5 a fixed stock, and the SD6 a collapsible stock. All fire the 9mm round and have efficient but non-removable silencers.

IMI Desert Eagle. Probably the largest autoloading pistol ever made, the Desert Eagle is a real handful. Made in Israel and the U.S., the weapon is made in .357-caliber Magnum, .44-caliber Magnum, and .50-caliber Action Express models. It is accurate, but requires large hands and strong arms.

IMI Galil ARM. This Israeli assault rifle fires the 5.56mm round. It has a folding stock and a built-in folding bipod. It is in service with the Israeli and South African armies, among others.

IMI Uzi, Mini-Uzi. The Uzi was a unique and revolutionary submachinegun when it was introduced in the 1950s, and it has remained popular ever since. Made in Israel, Belgium, and several other countries, the Uzi is in service with over twenty nations. It has a folding stock and is available in 9mm and .45-caliber versions. The Mini-Uzi is a smaller cousin.

KAC 9mm Suppressed. This weapon, produced by an American company, is simply a Colt 9mm (above) submachinegun with a built-in, non-removable silencer.

MAC Ingram M10. Introduced in the 1970s, this small, lightweight American submachinegun is available in 9mm or .45-caliber versions. It has been in and out of production since it was introduced, but is in service with several nations.

Mossberg 500 ATP6. A very common weapon in the United States, this pump-action shotgun is often used by police as well as civilians. It is inexpensive and rugged, and is available with or without a stock.

Rheinmettal MG42/59. A spinoff of a German World War Two design, this machinegun fires the 7.62mm round. A fairly common weapon, it is made in Germany and Italy, and is in use there and in a half-dozen other countries around the world. It features a folding bipod.

RSA AKM. This Russian assault rifle, a modernized version of the AK-47, fires the 7.62 Russian round. It is a standard in the Third World, and knock-off versions have been produced in dozens of nations. It is available with a fixed or folding stock.

RSA Druganov SVD. Based loosely on the AK assault rifle design, this Russian sniping rifle is very accurate. It fires a special 7.62mm round, and features a 4x scope with weak but helpful night-vision capability.

RSAF L85A1. Sometimes referred to as the SA-80, this assault rifle has been the standard of the British Army since the mid-eighties. It is a bullpup weapon, with a built-in 4x optical sight. It fires the 5.56mm round.

Ruger Mini-14. This small American rifle fires the 5.56mm round. It is very common in the U.S. and worldwide, for civilian and police work.

Saco M60. This American machinegun was introduced during the Vietnam war, and is still in service with the U.S. and other armies. It can be temperamental if not well-maintained, but is otherwise reliable and rugged. It fires the 7.62mm round.

SIG-Sauer P225, P226. The SIG-Sauer pistols, produced jointly between a Swiss and a German company, are 9mm autoloaders. Both are medium-sized, although the 225 is on the small side. They are in common use with police agencies around the world, including the U.S. Secret Service.

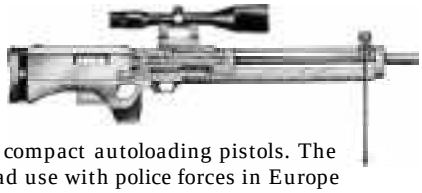
SITES Spectre. Introduced in the mid-eighties, this Italian submachinegun fires the 9mm round. It has a folding stock and a unique magazine with a fifty-round capacity.

Smith and Wesson Model 10 M&P. An older design, this American revolver is one of the most common in the world. It fires the .38-caliber Special round.

Smith and Wesson Model 1006, 1076. Introduced in the late 1980s, these pistols are both medium-sized autoloaders firing the 10mm round. The 1076 is the smaller of the two, and is in service with the F.B.I.

Steyr AUG. This unique Austrian assault rifle fires the 5.56mm round. Despite its futuristic look, the AUG has been in service with the Austrian Army since the late 1970s. It is a bullpup weapon that features a built-in 1.4x optical sight and a clear plastic magazine that lets the user check his or her ammo at a glance.

Walther PP, PPK. Dating back to the 1930s, the German PP and its smaller sister the PPK are both compact autoloading pistols. The PP is in widespread use with police forces in Europe and around the world.



Walther WA-2000. An unusual design, this German sniping rifle was introduced in the early 80s. It is a bullpup weapon firing the 7.62mm round. It features a fully-adjustable bipod and easily mounts most optical or electro-optical sights.

Winchester 1300 Defender. A pump-action shotgun made in the U.S., this weapon is fairly common amongst civilians and police organizations. A special "Marine" version is also available, made mostly out of stainless steel to resist corrosion.

Heavy Weapons

BlackEagle operatives rely on firearms as their primary weapons, but occasional heavier weapons are required. This section covers a handful of grenade launchers and man-portable disposable rockets.

All three of the grenade launchers covered here fire 40mm grenades, of which many types are made. The Halfa 35L is a disposable German weapon, containing a single 40mm high-explosive round. Once fired, its plastic launcher is useless, and may be discarded. The M79 and M203 are both American, and are reusable. The former is a simple weapon that breaks open at the breech, allowing a single round to be inserted. It looks like a fat, stubby break-open shotgun. The M203, on the other hand, looks more modern. It attaches under the barrel of an M16A2 assault rifle (it cannot be safely or accurately used on its own), with the breach sliding open to admit a round.

Two of the tree rockets listed here are anti-tank weapons, although they can be used against buildings, bunkers, and other ground targets. The LAW and AT-4 are both U.S. Army weapons, and are fairly small, lightweight, and easy to use. The considerably more sophisticated Stinger is a radar-guided anti-aircraft weapon. It is highly effective against low-flying aircraft, although it can be defeated by chaff and other countermeasures.

Ammunition

Ammunition is, for the most part, fairly self-explanatory. The prices listed are by caliber and type of round. Ball ammunition is the standard bullet. Hollowpoint and Glaser rounds are deadlier, but not very effective against armor. Armor-piercing rounds, on the other hand, are better at penetrating armor, but not as deadly as conventional bullets. AET rounds bridge the gap, providing high lethality with standard armor penetration. All of these effects are covered in Chapter Three. In general, the sale of special ammunition is not restricted in the U.S.

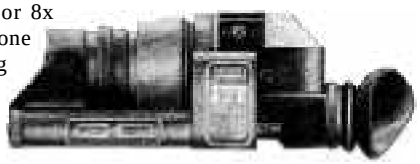
Hand-to-Hand and Thrown Weapons

Hand-to-hand weapons are rarely restricted, although it may be difficult to come by quality exotic weapons.

Sighting Devices

Most firearms come fitted with simple iron sights (although some sniping rifles, intended for use with scopes, do not). Sometimes, however, operatives want the accuracy and extended use of the many other types of sights available. A handful are covered here. Most do not attach instantly to a weapon, but require some simple mounting modifications and calibration to ensure accuracy.

Day/Night Scope. A top-of-the-line item, this expensive electro-optical sight acts like a high-end night-vision scope in darkness, but can also be used in daylight like a normal optical sight. It weighs a little over half a kilo, and is available with 4x or 8x magnification, or none at all. It is too big for handguns, but can be fitted to any longarm.



Illuminator. Illuminators are essentially flashlights mounted to weapons. They are not actually sights in themselves, but they do aid in target acquisition, and they provide light without tying up an extra hand for a flashlight. Illuminators are available in visible and IR light—the latter provides extra illumination for users with night-vision goggles, while remaining invisible to the naked eye. Obviously, both types of illuminators are only useful in darkness.

Illuminator/Laser Sight. This device simply combines a flashlight illuminator (covered just above) with a short-range laser sight (below) in a single compact unit. Either or both can be IR devices.

Laser Sight. Laser sights project tiny beams of harmless light, focusing in a small bright dot on the target. They are available in visible or IR light—the former can only be seen through night-vision goggles or scopes. While the dot is quite bright, the laser's beam is invisible except in heavy fog—although it be noticed if intercepted by foliage or other intervening material. Most laser sights have a range of one-hundred meters in indoor lighting, about twice that in darkness and just fifty meters in bright daylight. Long-range lasers can extend up to 1000 meters at night, but are restricted to about 200 meters during the day.

Night-Vision Scope. This device enhances ambient light and allows the user to see some near-IR light, like that projected by IR laser sights, illuminators, and VCR remote controls. Through this device, a moonless night looks like an bright day. It does not, however, let the user "see heat," as the thermal-imaging systems of some high-end military devices do. It runs on standard AA batteries, which last about thirty hours, and has 3x magnification.

Optical Sights. Optical sights, or scopes, come in a wide variety of magnifications. They limit the user's field of view, but are easier to aim than iron sights, especially at long ranges.

Equipment List: Weapons

Pistols	
Beretta 92F	1250/875
Browning Hi-power Mk3	1040/730
Colt M1911A1	1000/700
Colt Python	1560/1090
Glock 19, 23	1160/810
Glock 20	1280/895
IMI Desert Eagle (.357, .44, .50in AE)	2000/1400
S&W 1006	1500/1050
S&W 1076	1500/1050
S&W Model 10 M&P	700/490
SIG-Sauer P225	1560/1090
SIG-Sauer P226	1660/1160
Walther PP	1800/1260
Walther PPK	1200/840
Submachineguns	
Colt 9mm L	1600/1120
FN P90 L	5000/3500
HK MP5A4 , A5 (9mm, 10mm, or .40in) L, V	4000/2800
HK MP5K L	4800/3360
HK MP5SD4, SD5, SD6 L, U	7600/5320
IMI Mini-Uzi (9mm or .45ACP) L	2320/1625
IMI Uzi (9mm or .45in ACP) L	2560/1790
KAC 9mm Suppressed L, U	2800/1960
MAC Ingram M10 (9mm or .45in ACP) L	1000/700
SITES M-4 Spectre L	3560/2490
Assault Rifles	
Colt M16A2 L	1880/1315
Colt M16 Commando L	1600/1120
FN FAL L	2500/1750
IMI Galil ARM L	2250/1800
HK G3A3, A4 L	2400/1680
HK G11 L	8800/6160
RSA AKM L	1000/700
RSAF L85A1 L	3300/2310
Steyr AUG L	2900/2030

Equipment List: Weapons (cont.)

Rifles	
Al Covert U	6200/4340
Barrett M82A1 U	5600/3920
RSA Druganov SVD V	3200/2560
Ruger Mini-14	980/685
Walther WA-2000 V	6400/4480
Shotguns	
Beretta M3P	1400/980
Daewoo USAS-12 L, U	1500/1200
Franchi SPAS-12	1300/910
Mossberg 500 ATP6	1000/700
Winchester 1300 Defender	520/365
Winchester 1300 Marine	880/615
Machineguns	
FN M2HB L	11,000/7700
FN Mag L	4000/2800
FN Minimi L	6200/4340
Rheinmettal MG42/59 L	6000/4200
Saco M60 L	5900/4130
Grenade Launchers	
Halfa 35L L, U	280/195
M79 L, U	480/335
M203 L, U	640/450
Rockets	
AT-4 L, U	2500/1750
LAW L, U	1600/1120
Stinger X, V	90,000/72,000
Sighting Devices	
Day/night scope U	7300/5110
Illuminator	400/280
Illuminator/laser sight U	550/385
IR illuminator U	450/315
IR illuminator/laser sight U	600/420
IR laser sight U	400/280
Laser sight	350/245
Long-range laser sight	500/350
Night-vision scope	4000/2800
Optical sight (3x)	600/420
Optical sight (10x)	1600/1120
Optical sight (4x - 10x zoom)	2000/1400
Suppressors	
.22in Long Rifle L, U	170/120
.380in Auto L, U	220/155
9mm Parabellum L, U	350/245
9mm Parabellum SMG L, U	700/490
10mm L, U	440/310
.45in ACP L, U	400/280
.45in ACP SMG L, U	840/590
Hand-to-Hand and Thrown Weapons	
Brass Knuckles R	30/20
Butterfly knife (10cm) R	50/35
Hunting knife (20cm)	40/30
Katana	240/170
Nunchaku	40/30
Pocketknife (10cm)	20/14
Shuriken	16/11
Switchblade (10cm) R	40/30
Throwing knife (10cm)	50/35
Tonfa	60/40

Ammunition

Prices for boxes of fifty, except for 12-guage and 40mm, in boxes of 12

	AET R, U	Armor Piercing R	Ball	Glaser	Hollowpoint	Tracer	Birdshot	OO Buckshot
.380in Auto	—	—	36/22	90/55	40/24	—	—	—
9mm Parabellum	90/55	55/35	58/35	100/60	55/35	80/50	—	—
.38in Special	—	50/35	40/28	120/75	45/30	—	—	—
10mm	100/60	70/45	52/30	140/85	60/36	—	—	—
5.7mm FN	—	100/90	80/70	—	—	110/95	—	—
.357in Magnum	—	68/48	52/36	130/90	60/42	—	—	—
.40in S&W	100/60	60/35	50/30	120/70	55/30	—	—	—
.45in ACP	90/55	50/30	40/25	110/65	48/30	—	—	—
.44in Magnum	—	65/50	50/35	140/90	55/40	—	—	—
.50in Action Express	—	—	60/42	150/105	70/50	—	—	—
5.56mm	130/80	110/65	70/45	160/95	90/55	120/75	—	—
7.62x39mm Russian	—	130/90	90/65	—	—	150/105	—	—
4.7mm HK Caseless	—	220/200	160/145	—	—	—	—	—
7.62mm, 7.62 subsonic	160/95	120/75	80/50	190/115	110/65	150/90	—	—
7.62x54mm Russian	—	140/125	110/100	—	—	—	—	—
.50in	—	480/335	290/205	—	—	480/335	—	—
12 ga	—	—	20/16	—	—	—	14/10	16/12
40mm	—	—	—	—	—	—	—	145/130

Explosives and Detonators

The descriptions below give a brief overview of the characteristics and uses of several types of explosives and detonators. Most explosives require special licenses to purchase and use—in the United States, the same license that allows a character to own an automatic weapon also covers grenades and similar devices. In many rural states, dynamite and blasting caps can be purchased at hardware stores. Most other countries in the developed world are much more restrictive, but in all cases explosives can be had on the black market.

Booby Trap Kit. This small package consists of a spring-loaded electric detonator (described below), attached to a hair-trigger pin. It's used by attaching the detonator to a blasting cap or explosive (not included with the kit) and tying the pin to a tripwire or pull-cord. If the pin is pulled, the explosive is detonated.

Breaching Charge. This special-purpose explosive comes in long, flexible segments about two centimeters across and a meter long. Taped up against a wall or door in the outline of an opening, it will blow open a neat hole with little surrounding damage. It requires a blasting cap and detonator to set it off.

C-4 and Dynamite. These are two of the most common bulk explosives available. Dynamite has many civilian uses, while C-4, a plastic explosive, is found mainly in the hands of military demolitions teams. Both are generally quite stable, although old or improperly-stored dynamite can be dangerous. C-4 must be detonated by a blasting cap, another explosive, or a powerful electric charge—it is impervious to heat, flames, sparks, or bullets. Dynamite, on the other hand, requires a blasting cap or fuse for reliable detonation, but can be set off by fires.

Claymore Mine. This weapon is an anti-personnel explosive that uses a shaped-charge to send hundreds os pieces of shrapnel in a fan-shaped arc, with devastating effect. The user aims it while setting it up, and any target more than forty-five degrees from the direction of aim takes only one-quarter damage. Claymores come with disposable detonators, but can be used with any blasting cap and detonator.

Det-Cord. This unique explosive material looks like thin nylon rope, but it contains a C-4 derivative. It is used to chain multiple explosives, so that only a single blasting cap will set off all simultaneously. Det-cord can also be wrapped around small pipes, trees, or similar objects to create a cutting charge, although it is not very powerful. It can only be set off by a blasting cap or another explosive.

Electric Detonator. This is simply a wired device that generates a small electric charge—enough to set off a blasting cap. Typically, the user cranks a handle or depresses a plunger to create the current, which is then carried by wire to the explosive. Since the detonator is with the user, it is (usually) not destroyed, and can be reused indefinitely.

Grenades. Grenades are self-contained explosive or pyrotechnic devices, complete with detonator and blasting cap built in. They go off a few seconds—typically four to six, but it can vary—after the spoon is released. Most have two or three pins holding the spoon in place.

Fragmentation and smoke grenades are self-explanatory. Flash-bang grenades are non-lethal devices that use a bright flash and loud report to disable victims within range. CS grenades create teargas, a non-lethal chemical that disables those within it through blindness, respiratory distress, and great discomfort. Thermite grenades are incendiary devices that burn very hot. They can destroy equipment and start fires, but are not dangerous to anyone more than a couple meters away.

Radio Detonator. This is a battery-powered electronic device that generates a small electric charge—enough to set off a blasting cap—when it receives a radio signal. It can be used with its own transmitter, or with a programmable transceiver (any of the 25 km civilian radios described below will work). If the detonator is attached to the explosive, as opposed to a remote connection by wire, it will not be usable again. It can, however, be recovered and identified by an investigator with appropriate forensics skills.

Timed Detonator. Like the radio detonator above, this device generates an electric charge to set off a blasting cap. It operates on a small electronic timer. If attached to the explosive, it cannot be used again, although it can be recovered and identified.

Armor

Listed here are a few types of modern body armors available. In general, Class I armors are designed to defeat light handgun rounds, or to take some of the lethality out of the more powerful handguns. Class II and II+ armors are designed to defeat powerful handguns. Class III and IV protect against rifle rounds. Rules on armor protection are covered in Chapter Three.

Even light, flexible body armor is encumbering, uncomfortable, and fatiguing to wear. All Class III and IV, and most Class II armors have Kevlar, steel, or ceramic plates which make the armors stiff and even more difficult to wear. These disadvantages are quantified as a Speed Modifier listed on the Armor Table, but should also be accounted for in roleplaying.

Concealable Armor. Armor can be concealed in two ways—by making it thin and tight enough to fit under unnoticeably under normal clothing, or by disguising it as part of a garment or other device. The ballistic garments listed here are all of the latter design. They look like normal clothing, but are made of or lined with flexible bulletproof material. The undercover vests are slightly tougher, fitting under normal clothes. The clipboard and briefcase liner are simply last-ditch shields.

Tactical Armor. These bulky armors are not concealable, but are designed for wear over normal clothing. The riot jacket and helmet provide protection from thrown objects and hand-to-hand attacks. The Kevlar helmet provides some ballistic protection—it's the standard helmet used by the U.S. army. A SWAT helmet is similar, but smaller and tighter-fitting. It also accommodates a radio headset. The ballistic mask and leggings are primarily for bomb-squad use—the mask limits visibility severely. Tactical and assault vests are large, heavy armor vests providing the maximum protection from firearms.

Equipment List: Armor

Concealable Armor	
Ballistic clipboard	200/130
Ballistic briefcase liner	250/160
Ballistic raincoat	1375/895
Ballistic jacket	2000/1300
Ballistic suitvest	1000/650
Cl II Ballistic undercover vest	1375/895
Cl II+ Ballistic undercover vest	1750/1135
Tactical Armor	
Ballistic leggings	500/325
Ballistic mask	250/160
Ballistic shield	1125/790
Cl III Tactical vest R	4500/2925
Cl IV Assault vest R	8000/5200
Kevlar helmet	350/230
Riot helmet	150/100
Riot jacket	450/295
Riot shield	200/130
SWAT helmet	565/365

Equipment List: Explosives

Blasting cap R	12/10	Radio detonator		135/115
Booby trap kit	15/13	Timed detonator		135/115
Breaching charge L	960/815	Grenades	Colored smoke R	45/40
C-4 (kilo) L	1200/1020		CS (teargas) R	75/65
Claymore mine L	600/510		Flash-bang L	90/75
Det-cord (5 meters) L	450/385		Fragmentation L	120/100
Dynamite (stick) R	30/25		Smoke R	35/30
Electric detonator	120/100		Thermite L	180/155

Tactical Communications

The ability to move and act as a coordinated group is critical to any BlackEagle cell, and coordination means communication. The options available—radio or telephone, voice or data, direct or satellite, encrypted or open—seem endless, but are not really so confusing if you know what you'll be needing.

Almost all of the equipment covered here is available in civilian and military spec models. In general, the military models are tougher and more rugged than equivalent civilian devices. Conversely, they are also bulkier, heavier, more expensive and harder to acquire. They also generally have a narrower range of features. For carrying out in the field, through swamps, jungles, deserts and arctic tundra, nothing beats mil-spec electronics. Most civilian models are pretty tough, however, and will do the job under less demanding circumstances. Military and civilian commo electronics transmit in different frequency ranges, and are not compatible.

Radios

Several radio transceivers are listed here. Most are hand-held devices weighing less than a half-kilo. The ranges listed are optimal—buildings, rough terrain, or interference sources can easily reduce their actual operating ranges by half or more. Most transceivers can accept VOX headsets, which have voice-activated microphones that leave the user's hands free. Almost all are programmable—allowing the user to pre-set a number of frequencies into specific channels. Some can be set up as pagers or scanners, programmed to listen to specific frequencies. As with most electronics, the programming is not easy, and it requires an intelligent user some time to change.

10km Hand Transceiver. This civilian model is not as rugged as its military equivalent, but offers ten programmable channels from a choice of thousands. It weighs about a third of a kilo, with a battery life of about five hours. It cannot be used with a VOX headset.

25km Hand Transceiver. This civilian radio offers good range with a number of excellent features. Up to twenty frequencies can be programmed in, and the radio can act as a scanner, constantly listening to wide range of frequencies. Cell members can also assign their units special codes, which causes the radios to ignore any traffic that is not prefaced with a similar code. When that feature is in effect, the radio will mute out any unwanted cross-talk even when other parties are on the same frequency (the other parties will be able to hear them, though). Finally, this radio can act as a pager, sending an in audible signal which is picked up by the target radio (identified by its code) and communicated as a simple beep or two-digit code on the radio's LCD display. All of this comes in a compact package weighing about a third of a kilo, with a battery life of about seven hours. It can be used with a VOX headset.

25km Encrypted Hand Transceiver. This top-of-the-line civilian radio offers all the features of the unit above, with some important additional features. The pre-programmed channel list is expanded to forty frequencies, and the unit has three power levels, which can save battery power when long range isn't necessary. Most importantly, this radio includes a programmable encryption device, which renders all transmissions incomprehensible to anyone who might be listening.

25km Data Transceiver. This small device, about the size and weight of a deck of cards, plugs into any laptop or palmtop computer to transmit data. It has no exterior controls, but its frequency can be changed through the computer. If the computer has a microphone (or a jack for a headset), this radio can also transmit voice. Battery life is a mere hour.

50km Data Transceiver. Like its smaller cousin above, this radio plugs into any laptop or palmtop computer to transmit data. It's about the size of a paperback book and weighs almost a kilo. It has fourteen programmable channels, a jack for a VOX headset, and a scanner feature that lets it listen to all frequencies within a programmed range.

10km Mil-Spec Hand Transceiver. This military radio is compact but heavy, weighing almost a kilo. It has five channels, which can be programmed from 3000 possible choices. It is water-resistant (withstanding immersion up to ten meters), and has a battery life of about ten hours with active use. It can be used with a VOX headset.

25km Mil-Spec Hand Transceiver. Only slightly larger and heavier than the radio just above, this device has the same features and an increased range. It also includes an identifying transponder, which can be picked up by a direction-finding transceiver on an aircraft up to 150 kilometers away. The programmable transponder can be given a unique code, which will allow the aircraft to identify it and locate it to within a hundred meters or so.

Satellite Communications

When operatives are far away from the amenities of civilization, they often have to rely on satellite communications links to reach the civilized world. Satellite commo links come in two standards: "normal" radio frequency (RF) links and portable satellite telephones. Both standards allow the transmission of voice and data. Both also require access to a satellite communications network—the user cannot just point the thing at a random orbiting craft and expect the signal to go through. With satellite telephone that's easy—an account is usually supplied when the unit is bought, and the transmission cost is simply billed to the user. RF satellite links require that the user own or have access to some sort of established network—a considerably more complex and expensive affair.

Mil-Spec Satellite RF Terminal. This device is a portable radio transceiver that can communicate with a satellite net or with other like terminals in a line-of-sight. A box about ten by fifteen by twenty centimeters, the unit weighs almost four kilograms and is accompanied by a collapsible antenna that, when extended, looks like a miniature rooftop TV antenna. It can be plugged directly into a laptop or palmtop computer for data transmission, and has a jack for a handset or VOX headset for voice. It can transceive in a wide range of satellite-compatible frequencies. BlackEagle cells rarely use RF satellite links (relying instead on satellite telephone for those backwater operations), but sometimes the client—the military, a large mercenary organization, or a multinational corporation—will want the operatives to use their satellite network.

Portable Satellite Telephone. Looking much like a bulky cellular phone, this device is much easier to use than similar RF units. The user simply punches in the telephone number he or she wants, and the satellite network connects itself to the appropriate local telephone service. There is no external antenna to set up. Calls can be received in the same way (the satellite network has its own "country" code). The phone features all the niceties found on a good cellular telephone.

Portable Satellite Telephone Modem. This device operates over the same network as the satellite telephone listed above. It is available as an external device which connects to a portable computer via a standard cable, or as an internal electronic device, requiring only a small external antenna. In all remaining aspects it functions exactly like a normal modem.

Telephones and GenNet Links

Little needs to be said about telephones—they operate pretty much the same in the 1999 world of *Millennium's End* as they do in the real world. Cellular phones are more common, and coverage is available in all but the most rural regions of the developed world, and in many Third World urban areas as well. Features such as call-forwarding and caller-ID are standard in many areas as well, and most telephones have LCD displays that announce a call's source before it is answered. Many cellular phones have headset jacks that will take a standard radio VOX headset, and a smart B/E operative always buys a model with a ringer switch, to avoid unexpected calls during tense tactical moments.

In the United States, the GenNet operates very much like normal telephone service, both conventional and cellular. Most modern computers need no special equipment to connect with the GenNet—the necessary modem or cellular link is built in. While the GenNet is primarily a data service, any computer with a microphone can send a voice transmission through the GenNet real-time and connect to the phone system to make a telephone call. Use of the GenNet is explained more thoroughly in Chapters Two and Four.

Equipment List: Tactical Communications

Radios	
CB Radio	115/75
10km Hand transceiver	300/195
10km Mil-spec hand transceiver	875/570
25km Hand transceiver	800/520
25km Mil-spec hand transceiver	1125/730
25km Encrypted hand transceiver U	1050/685
25km Data transceiver	650/425
50km Data transceiver	1000/650
VOX Headset	50/35

Satellite Commo	
Mil-spec RF terminal U	6000/3900
Portable satellite telephone U	2800/1820
Portable satellite modem U	3200/2080
Satellite telephone account U	200/130
Telephones and GenNet Links	
Cellular phone	300/195
Cellular phone service	75/50
Cellular GenNet modem	925/600

Equipment List: Surveillance and Covert Entry

Forced Entry Gear	
Car opening kit R	100/65
Lock release gun R	125/80
Lockpick set R	300/195
Surveillance Devices	
35mm camera	1050/685
35mm zoom lens	630/410
Concealable camera U	700/455
Concealable lens U	770/500
Concealable microphone U	1050/685
Concealable tape recorder U	980/635
Concealable video camera U	2800/1820

Explosives detector U	8400/5460
Hand-held metal detector	700/455
Homing beeper U	105/70
Homing beeper receiver U	490/320
Laser microphone U	4200/2730
Night-vision goggles	7000/4550
Night-vision imager	5000/3250
Parabolic microphone	1190/775
Telephone line tap U, R	700/455
Telephone receiver tap U	210/135
Transistor detector U	6300/4095
Video camcorder	1500/975

Surveillance and Covert Entry Equipment

In the United States and most areas of the world, there are laws against breaking and entering, and against spying, at least by some methods. Additionally, much of the gear necessary for these endeavors is restricted or even unavailable legally. Lockpicking tools, for example, are difficult for anyone not licensed as a locksmith to purchase. Surveillance equipment, too, is often restricted—and even where it isn't, it's generally hard to find.

Forced Entry Gear

These few items are devices for defeating locks and security. Most are easy to use in the hands of a skilled character, but none work all of the time.

A car opening kit is a set of odd-shaped flat metal bars, which, slipped into a car door through the window seam, let the user fish for and actuate the door lock. A lockpick set includes a dozen or so lock picks and tension bars. A well-equipped character may want several sets, with picks in a broad range of shapes and sizes. A lock release gun is a small pistol-like device, extremely efficient at opening low- and medium-quality mechanical key locks. It is quick and easy to use, but substantially noisier than a regular key or careful use of conventional picks.

Surveillance Devices

There are thousands of high- and low-tech surveillance devices available these days. The items listed here cover just a of them, but provide a good overview of the most useful technology.

35mm Camera. This is a compact, high-quality camera with a number of easy-to-use features. It is auto-focusing, winding and loading, and features a changeable lens, built-in flash and automatic exposure adjustment. All automatic features can also be adjusted manually.

Concealable Camera. This tiny camera is about the size of a match box. It has a fixed focus, meaning that it can only photograph objects from a specific distance (specified when the camera is purchased). It requires special film, which comes in twenty-four exposure rolls.

Concealable Lens. This device has a tiny lens—about a half-centimeter across—on the end of a flexible twenty-five centimeter long wand. The other end adapts to a 35mm camera or video camcorder. The lens can be poked around corners, under doors, or through holes, or it can be hidden in a vent, emergency sprinkler, or similar innocuous architectural feature.

Concealable Microphone. This tiny device is about the size of two stacked dimes. It picks up sounds from three or four meters around and transmits them by radio with a range of up to two hundred meters. The signal can be picked up by a good programmable radio (any of the 25km civilian radios above will work) set to the right frequency.

Concealable Tape Recorder. About the size of a pack of cigarettes, this tiny audio recorder can use standard microcasettes (the type found in most analog telephone answering machines) or special four-hour cassettes (which reduce the already poor sound quality). It will pick up voices and other sounds from three or four meters around.

Concealable Video Camera. About six centimeters long and half that in diameter, this tiny camera can be used with or without a concealable lens (above). It's powered by standard batteries in an external battery pack, and must be wired to a separate monitor or recording unit.

Explosives Detector. About the size of a large megaphone, this device sniffs out nitrogen compounds—the basis for all common explosives. It is not as reliable as a trained dog, but will detect any sizable quantity of explosive material (a grenade, stick of dynamite, or quarter-kilo of C-4) within one meter, even if it is within a closed container.

Hand-Held Metal Detector. The size of a large hand radio, this device detects metal objects at short ranges. Sensitive enough to pick up small pistols at thirty centimeters, pocketknives at half that, and razors, pins, and lockpicks at five centimeters, it will probably miss a paperclip, small bug, or similar electronic device.

Homing Beeper. This small object—about the size of three stacked quarters—is a radio beacon that can be dropped in a pocket or taped under a car bumper. It emits a radio signal with a range of up to ten kilometers. While the signal can be picked up by any good programmable radio (such as the 25km civilian radios described above), it's only really useful with its own receiver, which will indicate direction and

approximate range. Two receivers can be used to triangulate the signal, for a very accurate location of the beeper.

Laser Microphone. This device bounces an invisible light beam off a window, using the return signal to convert the window's vibrations into the sounds within the room. It is only useful in eavesdropping on indoor conversations from without, and is defeated by vacuum-sealed double-paned glass.

Night-Vision Goggles. Weighing about three-quarters of a kilo, this unit may be hand-held or fitted to a lightweight face mask. It enhances ambient light, turning a moonless night into a cloudy day. It picks up some near-IR spectra (although it doesn't allow the user to see heat per se), and is equipped with a tiny IR diode that helps when reading or looking at fine detail close-up. Unfortunately, it's useless for ranges beyond a meter or two, so some other IR light source, like an IR illuminator or chemical lightstick, is handy for really dark situations.

Night-Vision Imager. This unique electro-optical device weighs about three-quarters of a kilo. It mounts easily on top of most cameras, video camcorders, and optical scopes, directing its image into the device's existing lens. It provides highly sensitive, long range night-vision capability, as good or better than most night-vision goggles or weapons sights.

Parabolic Microphone. Looking like a hand-held transparent satellite dish twenty centimeters across, this device focuses in on sound sources. It can let the user listen in on a conversation up to 500 meters away, although background or intervening noise can cut this range in half.

Telephone Taps. Phone taps come in two forms—receiver taps and line taps. Receiver taps can be quickly and easily installed in most telephone handsets. Line taps, which are more reliable and much less easily detected, must be installed by a skilled character in a junction box or somewhere along the phone line. Either type can be set to transmit conversations by radio (any of the 25km civilian radios listed above can be programmed to pick up the signal).

Transistor Detector. This device, about the size of a hand-held radio, detects bugs and taps that contain radio transmitters, whether or not the transmitters are functioning at the time. It works at close range—a meter or so. It will not pick up wired microphones, cameras, or other devices that don't contain transmitters.

Video Camcorder. A normal commercially-available video camera, this device is about twenty centimeters long. It records on standard tape, and features auto-focus and a 4x zoom lens. Tapes can be replayed through the viewfinder, or output to a connected monitor.

Equipment List: Accessories

Hardware and Tools	
Axe	60/36
Bolt cutter	180/110
Crazy glue	6/4
Crowbar	30/18
Electrical multi-meter	105/65
Glass cutter	30/18
Machete	75/45
Shovel	45/25
Basic tool kit (100 pieces)	750/450
Survival and Paramilitary Gear	
Camouflage compact	18/11
Chemical lightstick	18/11
Climbing and rappelling gear—	
chock set	140/90
climbing/rappelling line	630/410
locking carabiner	42/25
rappelling ascender	265/170
rappelling descender	70/45
rappelling seat	140/90
Flashlights—	
penlight	25/16
2-cell standard	55/35
8-cell standard	70/45
First aid kits—	
basic	55/35
field medic	420/275
EMT U	1400/910
Flare gun	210/135
Frame backpack	420/275
Gas mask	525/340
Gas mask filter	175/115
GPS receiver	4500/2925
Handcuffs	140/90
Inflatable assault boat	8400/5460
Insect repellant	10/7
LBE	125/80
LBE pouch	42/25
LBE buttpack	70/45
Mace	90/55
Parachute (sport)	4200/2730
SCUBA diving gear—	
air tank and regulator	595/390
bouyancy vest	280/180
mask, fins, and snorkel	160/100
weight belt	70/45
wetsuit	700/455
Sleeping bag	350/230
Space blanket	30/18
Tactical vest	385/250
Tents—	
2-man pup	965/625
4-man dome	1400/910
Whistle	4/2

Accessories

With few exceptions, the accessory items listed here are available at most hardware, department, or military surplus stores, and require little explanation. A few of the items, such as gas masks and paramedic first-aid kits may only be available through speciality outlets, but none are restricted or too hard to find.

Survival and Paramilitary Gear

Most of the stuff on this list is self-explanatory. Those specialty items worth discussing are covered below.

Camouflage Compact. This small plastic item looks like an olive-drab make-up compact. Inside are three or four pats of grease-paint, in camouflage colors. It's good for about ten applications to the face and hands.

Chemical Lightstick. This item is a plastic tube, twelve centimeters long. When activated (by bending), it glows with a chemical light that lasts about six hours. Lightsticks come in a wide range of colors, in standard, long-lasting (twelve-hour), and high-intensity varieties. A version that emits IR light only is also available.

Climbing and Rappelling Gear. Mountaineering and rappelling both require specialized equipment. In the case of climbing, specialized gear is used to secure safety lines, and a ballsy character can go without. Rappelling, however, always some requires equipment, if only a rope. Other rappelling gear makes the activity safer and more comfortable.

A set of climbing chocks includes a half-dozen irregularly-shaped metal chocks which may be wedged into rock crevices to secure a safety-line. A prolific climber may want several sets for a wide assortment of sizes. Locking carabiners are also climbing devices: rings through which safety-lines or rappel ropes may be passed, or which may be used to secure equipment to backpacks or harnesses. A rappelling descender is a specially-shaped cabiner, easier to use than a conventional one. An ascender is a device that locks onto the rope, allowing the user to dangle hands-free, or climb slowly and laboriously. A rappelling seat is a web harness that attaches the rappeller to his or her line.

First Aid Kits. First-aid kits come in a wide variety of sizes and utilities. All of the listed kits have plenty of supplies for dealing with nuisance wounds—scrapes, cuts, and bug bites that are unlikely to have any significant effect except in the harshest of environments. The basic kit also includes large bandages and other supplies for a couple of major injuries, but no medications beyond basic antibiotics and aspirin. The field medic's kit adds slings, braces, syringes, basic diagnostic, surgical and resuscitation gear, and medications for countering shock, toxins, and pain. An EMT's kit adds a full range of surgical and specialized gear, as well as a broad range of medications.

Gas Mask. This item is pretty self-explanatory. Gas masks use disposable filters, which must be changed after eight or ten hours of use, or any time they get wet.

GPS Receiver. A GPS (Global Positioning System) receiver is a hand-held device about the size of a paper-back book. It uses satellite signals to pinpoint the user's location, as well as speed and heading when on the move. It's accurate to within twenty-five meters and a few degrees of bearing. While not foolproof, it does make dead-reckoning navigation somewhat easier.

Inflatable Assault Boat. This inflatable craft is made of rugged reinforced rubber. It carries four people, and can be paddled or fitted with a small outboard motor. Weighing over ten kilos and folding into a square almost a meter on a side, carrying this boat across country is possible but not easy. It inflates in about ten minutes using the included foot pump, or about thirty seconds with a compressed-air cartridge.

SCUBA Diving Gear. A buoyancy vest, or buoyancy compensator, is a device used along with a weight belt to keep a diver's buoyancy neutral in the water. It also acts as a safety measure which can carry a disabled diver to the surface. The air tank and regulator allow the diver to breath, and the fins, mask, and wetsuit give him mobility, visibility, and comfort. Of all the scuba gear listed, only the wetsuit is optional.

Tactical Vests and LBEs. An LBE (Load Bearing Equipment) is a set of backpack-like straps connected to a wide belt, to which ammunition pouches, first-aid kits, canteens, holsters, grenades, storage pouches and miscellaneous equipment can be fixed for convenient access in a tactical situation. A tactical vest is a lightweight mesh overvest that serves the same purpose. It's slightly more comfortable and has fewer protrusions than an LBE. Both come in black, woodland, or desert colors.

Tools and Miscellaneous Hardware

An assortment of tools and other useful devices is listed. All are easy to come by, and most are self-explanatory.

Computers

Listed here is just a sample of the computer and communication equipment available. Unlike the other equipment categories covered in this appendix, some of the computer equipment below is fictitious, based on the expanded technology of 1999 and the GenNet. While there are many operating systems in existence, most communicate with one another seamlessly, especially over the GenNet, so operating systems are generally not a consideration in game terms.

Desktop Computers

Desktop computers have, of course, grown exponentially in terms of performance and shear range of capabilities. With a GenNet connection—standard on nearly all machines sold in the United States—a user can access databases, make plane reservations, watch television, or make telephone calls through his or her computer. None of this is free of course—that's what the GenNet account fees cover.

Desktop PC. This is the least expensive—and least powerful—type of desktop computer available. A powerhouse by the standards of a decade earlier, it is certainly sufficient for average administrative tasks, but a serious hacker will find it restricting. It features a monitor and medium-capacity hard drive, and a built in GenNet connection.

Desktop Workstation. This computer is high-end by home use standards, but is a favorite among professional users and hackers. The price listed includes a large color monitor, one gigabyte of drive space, a GenNet adapter, and magnetic and CD read/write drives. The system is multi-tasking, allowing the user to keep several applications running at once, while watching TV, listening to music, or talking on the telephone through the computer and its GenNet connection.

Laserprinters. The standard output device of the nineties, laserprinters are available in color or black-only.

Scanner/Fax. This input device is used to scan documents into digital form for storage, manipulation, and transmission. It has built in character-recognition software that allows it to save scanned material as text which the user can then edit, or as a digital "photograph" of the scanned page. It can also fax the document directly through the computer's GenNet connection, to any other computer or conventional fax machine on the GenNet or phone system.

Portable Computers

Advances in technology have allowed portable computers to go in two directions, making basic systems incredibly small and light, and average-sized system very powerful.

Dumb Terminal. This machine is a lightweight, inexpensive palmtop for travellers. Connected to a GenNet or phone jack, it accesses the user's home or office computer via the network. It has no processing power of its own, so when not connected it is little more than the electronic datebook it resembles.

Laptop Workstation. The size of the typical laptop PC of a decade earlier, the modern laptop WS is much more powerful. It offers nearly all the features of the desktop workstation, above, minus the CD drive and oversized monitor. It includes a cellular GenNet link, so the user on the go is always connected.

PAC Card. The cheapest alternative for travellers, a Personal Address Card is an optical card that carries GenNet addressing information. With it, a user at a public terminal (common in airports, libraries, and major hotels around the U.S.) can temporarily redirect information headed for his or her normal account location (the office, for example), to the terminal at which he or she is working. It's kind of like a long-distance calling card, except that it redirects incoming as well as outgoing data.

Palmtop PC. This little device is not much bigger than a paperback book, but it offers all the features of its desktop sister, above. In addition, it has an internal cellular GenNet link. The palmtop has no keyboard, relying instead on a pen-based system in which the user writes on the LCD screen, and the computer interprets his or her handwriting.

Portable Laserprinter. About the size and weight of a metropolitan phone book, this device operates like a standard desktop laserprinter. It has no power source of its own, but can be plugged in to any wall socket or a vehicle's cigarette lighter.

Equipment List: Computers

Desktop Computers	
Desktop PC	2800/1540
Desktop workstation	7200/3960
Laserprinter	2200/1210
Scanner/fax	2400/1320
Portable Computers	
Dumb terminal	240/130
Laptop workstation	5600/3080
PAC card	80/45
Palmtop PC	2400/1320
Portable laserprinter	2500/1375

Vehicles

The vehicles listed here are all described, for game purposes, on the Vehicle Table at the end of this appendix. The civilian vehicles are all pretty straightforward, and require no explanation.

On the other hand, military vehicles may be unfamiliar to many players. The 2-1/2 ton truck (often called a "deuce and a half") is the standard Army six-wheel drive diesel utility truck. The HMMWV (High-Mobility Multi-Wheeled Vehicle), often called the Humvee or Hummer, is the Army's current four-wheel drive utility vehicle It can be outfitted for a variety of tasks, including ambulance, truck, or weapon platform.

Equipment List: Vehicles

Chevrolet Corvette	136,000/122,000	Jeep Wrangler	44,000/39,600
Ferrari Testarosa	582,000/523,800	Lamborghini Diablo	936,000/842,400
Ford Crown Victoria	80,800/72,720	Lamborghini LM002	880,000/792,000
Ford Econoline	64,000/57,600	Lotus Esprit Turbo	260,000/234,000
Ford Escort	39,200/35,280	Nissan 300ZX	110,000/99,000
Ford Taurus	64,000/57,600	Nissan Maxima	88,000/79,200
Honda Accord	56,000/50,400	Nissan Sentra	36,000/32,400
Honda Civic	40,000/36,000	Porsche 911	256,000/230,400
Jeep Cherokee	72,000/64,800	2½-ton truck	160,000/144,000
		HMMWV	260,000/234,000

Projectile Weapons Table

Weapon	Subskill Used	Speed	IA	Fire rate	Hands req'd	Eff. range	Action	Magazine	Ammunition
Pistols									
Beretta 92F	smallarm	1	14	4	1	75	semi	15 box	9mm Para.
Browning High-power Mark 3	smallarm	0	14	4	1	50	semi	13 box	9mm Para.
Colt M1911A1	smallarm	1	15	4	1	50	semi	8 box	.45in ACP
Colt Python .357	smallarm	1	16	3	1	75	rev	6 cyl	.357in Mag.
Glock 19	smallarm	0	15	4	1	60	semi	15 box	9mm Para.
Glock 20	smallarm	0	16	4	1	70	semi	15 box	10mm
Glock 23	smallarm	0	15	4	1	50	semi	13 box	.40in S&W
IMI Desert Eagle .357	smallarm	2	17	4	1	75	semi	10 box	.357in Mag.
IMI Desert Eagle .44	smallarm	2	17	4	1	70	semi	9 box	.44in Mag.
IMI Desert Eagle .50	smallarm	2	19	4	1	75	semi	8 box	.50in AE
S&W 1006	smallarm	0	14	4	1	50	semi	9 box	10mm
S&W 1066, 1076	smallarm	0	13	4	1	60	semi	9 box	10mm
S&W Model 10 M&P	smallarm	1	14	3	1	60	rev	6 cyl	.38in Special
SIG-Sauer P225	smallarm	0	15	4	1	50	semi	8 box	9mm Para.
SIG-Sauer P226	smallarm	0	15	4	1	50	semi	15 box	9mm Para.
Walther PP .380	smallarm	0	14	4	1	50	semi	8 box	.380in Auto
Walther PPK .380	smallarm	0	14	4	1	50	semi	7 box	.380in Auto
Submachineguns									
Colt 9mm	smallarm/auto	6	24	4/15	2	200	auto	20 box	9mm Para.
FN P90	smallarm/auto	6	25	4/15	2	250	auto	50 box	5.7mm
HK MP5A5, MP5A5	smallarm/auto	6	24	4/13	2	175	auto/3[1]	30 box	9mm Para.
HK MP5K	smallarm/auto	4	16	4/15	1	125	auto/3[1]	30 box	9mm Para.
HK MP5SD4, SD5, SD6	smallarm/auto	9	23	4/13	2	120	auto/3[1]	30 box	9mm Para.
IMI Mini-Uzi	smallarm/auto	6	15	4/16	1	120	auto	20 box	9mm Para.
IMI Mini-Uzi .45	smallarm/auto	6	15	4/16	1	90	auto	16 box	.45in ACP
IMI Uzi	smallarm/auto	8	22	4/10	2	150	auto	20 box	9mm Para.
IMI Uzi .45	smallarm/auto	8	22	4/10	2	100	auto	16 box	.45in ACP
KAC Colt 9mm Suppressed	smallarm/auto	9	23	4/15	2	140	auto	20 box	9mm Para.
MAC Ingram M10	smallarm/auto	6	15	4/18	1	120	auto	32 box	9mm Para.
MAC Ingram M10 .45	smallarm/auto	8	15	4/18	1	90	auto	32 box	.45in ACP
SITES M-4 Spectre	smallarm/auto	7	21	4/14	2	150	auto	50 box	9mm Para.
Assault Rifles									
Colt M16A2	longarm/auto	10	26	4	2	350	3-rnd[3]	30 box	5.56mm
Colt M16 Commando	longarm/auto	6	24	4/14	2	320	auto	30 box	5.56mm
FN FAL	longarm/auto	10	27	4/12	2	650	auto	20 box	7.62mm
HK G3A3, G3A4	longarm/auto	10	26	4/9	2	600	auto	20 box	7.62mm
HK G11	longarm/auto	8	28	4/10	2	400	auto/3[1,2]	50 box	4.7mm C
IMI Galil ARM	longarm/auto	9	26	4/11	2	300	auto	35 box	5.56mm
RSA AKM	longarm/auto	9	23	4/10	2	300	auto	30 box	7.62x39mm R
RSAF L85A1	longarm/auto	8	29	4/12	2	350	auto	30 box	5.56mm
Steyr AUG	longarm/auto	8	27	4/11	2	350	auto/3	30 box	5.56mm
Rifles									
AI Covert	longarm	10	30	1	2	200	bolt	10 box	7.62mm[4]
Barrett Model 82A1	longarm	11	32	4	2	1200	semi	11 box	.50in B
RSA Druganov SVD	longarm	10	32	4	2	800	semi	10 box	7.62x54mm R
Ruger Mini-14	longarm	6	26	4	2	550	semi	10 box	5.56mm
Walther WA 2000	longarm	10	33	4	2	850	semi	6 box	7.62mm
Shotguns									
Beretta M3P	longarm	10	21	4	2	100	semi	5 box	12-ga
Daewoo USAS-12	longarm/auto	10	19	4/5	2	100	auto	12 box	12-ga
Franchi SPAS-12	longarm	9	20	4	2	100	semi	7 int	12-ga
Mossberg 500 ATP6	longarm	9	18	1	2	110	pump	6 int	12-ga
Winchester 1300 Defender	longarm	9	16	1	2	100	pump	7 int	12-ga

Projectile Weapons Table (cont.)

Weapon	Subskill Used	Speed	IA	Fire rate	Hands req'd	Eff. range	Action	Magazine	Ammunition
Machineguns									
FN M2HB/QCB	autofire	11	29	8	2	1100	auto	belt	.50in B
FN Minimi	autofire	10	25	15	2	400	auto	belt/30	5.56mm
FN MAG	autofire	10	26	14	2	750	auto	belt	7.62mm
Rheinmetall MG42/59, MG3	autofire	10	26	17	2	750	auto	belt	7.62mm
Saco M60E1, E3	autofire	10	26	9	2	750	auto	belt	7.62mm
Thrown Weapons									
Rock, small	throw	0	0		1				
Rock, medium	throw	1	0		1				
Rock, large	throw	2	0		2				
Shuriken	throw	0	2		1				
Stick	throw	0	0		1				
Throwing Knife	throw	0	2		1				

[1] This weapon allows single shots, three-round bursts, and full-auto fire.
[2] This weapon employs a special buffer that allows all three shots in a burst to be fired with no recoil penalty.
[3] This weapon fires single shots and three-round bursts only.
[4] For truly silent operation, this weapon must use subsonic ammunition.

Ammunition

Caliber	Bullet Type	Delivered damage	Silenced damage
.380in Auto	Ball	16	16
	Glaser	21	21
	Hollowpoint	18	18
9mm Parabellum	AET	21	20
	Armor Piercing	14	14
	Ball/Tracer	17	16
	Glaser	22	21
	Hollowpoint	20	18
.38in Special	Armor Piercing	14	14
	Ball	17	17
	Glaser	22	22
	Hollowpoint	20	20
10mm	AET	22	22
	Armor Piercing	15	15
	Ball	18	18
	Glaser	23	23
	Hollowpoint	21	21
5.7mm FN	Armor Piercing	16	14
	Ball/Tracer	19	14
.357in Magnum	Armor Piercing	16	14
	Ball	18	17
	Glaser	23	22
	Hollowpoint	21	20
.40in S&W	AET	22	22
	Armor Piercing	15	15
	Ball	18	18
	Glaser	23	23
	Hollowpoint	21	21
.45in ACP	AET	24	24
	Armor Piercing	16	16
	Ball	19	19
	Glaser	25	25
	Hollowpoint	22	22
.44in Magnum	Armor Piercing	16	15
	Ball	19	18
	Glaser	25	23
	Hollowpoint	22	21
.50in Action Exp.	Ball	20	19
	Glaser	26	25
	Hollowpoint	23	22
5.56mm	AET	20	17
	Armor Piercing	16	14
	Ball/Tracer	19	14
	Glaser	25	18
	Hollowpoint	22	16
7.62x39mm Russian	Armor Piercing	16	14
	Ball/Tracer	19	16
4.7mm HK Caseless	Armor Piercing	16	14
	Ball	19	14
7.62mm	AET	27	21
	Armor Piercing	19	14
	Ball/Tracer	22	17
	Glaser	27	22
	Hollowpoint	25	20
7.62x54mm Russian	Armor Piercing	19	14
	Ball/Tracer	22	17
.50in Browning	Armor Piercing	26	
	Ball/Tracer	31	
12ga	Birdshot	7	
	Buckshot (00)	18	
	Slug	23	
40mm	Buckshot (00)	27	

Hand-to-Hand Weapons Table

Weapon		Subskill Used	Damage type	Inherent Accuracy	Damage Factor	Speed	Hands Required	Reach
Brass knuckles		swing	impact	2	1.6	0	1	0
Club		swing	impact	10	2.0	4	1	.6
Crowbar		swing	impact	9	2.2	5	1	.6
Nunchaku		swing	impact	11	2.0	3	1	.5
Pistol butt		swing	impact	2	1.8	1	1	.1
Rifle butt	swing	swing	impact	6	1.8	11	2	.6
	jab	thrust	impact	6	1.4	13	2	.6
Rock, small		swing	impact	2	1.2	0	1	0
Staff	swing	swing	impact	13	1.4	6	2	1.5
	jab	thrust	impact	13	1.6	8	2	1.5
Stick		swing	impact	9	1.4	2	1	.4
Tonfa	swing	swing	impact	11	1.6	4	1	.5
	jab	thrust	impact	1	1.6	6	1	.5
Broken bottle	slash	swing	cut	5	1.6	0	1	.1
	stab	thrust	puncture	5	2.2	2	1	
Knife, 10 cm	slash	swing	cut	3	1.4	0	1	.1
	stab	thrust	puncture	3	2.0	2	1	.1
Knife, 20 cm	slash	swing	cut	5	2.0	1	1	.2
	stab	thrust	puncture	5	2.6	3	1	.2
Knife, 30 cm	slash	swing	cut	8	2.4	2	1	.3
	stab	thrust	puncture	8	3.0	4	1	.3
Axe		swing	cut	9	3.4	6	1	.7
Hatchet		swing	cut	5	3	2	1	.2
Ice pick		thrust	puncture	3	2.2	2	1	.1
Katana	slash	swing	cut	13	4.0	6	1	.9
	stab	thrust	puncture	13	3.6	8	1	.9
Machete		swing	cut	8	2.8	2	1	.4

Vehicle Table

Vehicle Make	Vehicle Model		Threshold/Limitation Accleration	Braking	Cornering	Top speed	Range
Chevrolet	Corvette	2-door, 2-pass. 6-spd.	13/17	5/4	3/7	245	440
Ferrari	Testarosa	2-door, 2-pass. 5-spd.	12/16	5/4	2/6	295	575
Ford	Crown Victoria	4-door, 6-pass. auto.	9/10	7/5	2/5	225	725
Ford	Econoline	4-door, 10-pass. van, auto.	7/8	6/4	1/3	160	640
Ford	Escort	4-door, 5-pass. auto.	9/11	4/3	2/5	160	640
Ford	Taurus	4-door, 5-pass. auto.	10/11	5/4	3/6	210	595
Honda	Accord	4-door, 5-pass. auto.	10/11	7/5	3/6	210	715
Honda	Civic	4-door, 5-pass. auto.	10/11	7/5	2/6	160	650
Jeep	Cherokee	5-door, 5-pass. auto.	8/9	5/4	1/5	175	740
Jeep	Wrangler	2-door, 4-pass. 5-spd.	7/10	6/4	1/3	175	725
Lamborghini	Diablo	2-door, 2-pass. 5-spd.	15/20	8/6	3/7	325	265
Lamborghini	LM002	Medium truck, auto.	12/14	3/4	2/5	240	400
Lotus	Esprit Turbo	2-door, 2-Pass. 5-spd.	13/17	6/4	5/6	245	435
Nissan	300ZX	2-door, 2-pass. 5-spd.	13/17	4/3	6/8	250	650
Nissan	Maxima	2-door, 4-pass. 5-spd.	7/10	7/5	1/4	200	885
Nissan	Sentra	4-door, 5-pass. auto.	9/10	7/5	2/5	190	640
Porsche	911	2-door, 4-pass. 5-spd.	13/18	7/5	2/5	260	660
2½-ton truck		Large truck, double-clutch	3/5	8/6	1/1	125	870
HMMWV		Medium truck, auto.	8/9	7/5	2/5	125	420

Armor Table

Armor Type	Speed Modifier	Zones Covered	AV	CN	Armor Type
Cl. I ballistic raincoat	5	3-16, 19	6	6	flex
Cl. II ballistic suitvest	2	3-8	7	7	flex
Cl. II ballistic jacket	4	3-15	7	7	flex
Cl. II ballistic raincoat	6	3-16, 19	7	7	flex
Cl. II undercover ballistic vest	4	3-8, 10	7	7	flex
Cl. II+ undercover ballistic vest w/inserts	6	3, 6, 10	7	7	flex
		4, 5, 7, 8	12	4	rigid
Cl. III tactical vest w/inserts	8	3, 6, 9-11	8	7	flex
		4, 5, 7, 8	14	7	rigid
Cl. IV assault vest w/inserts	9	9, 11	8	8	flex
		3-8, 10	15	6	rigid
Ballistic mask	-	2	11	4	rigid
Ballistic leggings	2	17, 18, 20, 21	7	6	flex
Riot jacket	6	3-8, 12-15	6	6	flex
Riot helmet	-	1	10	3	rigid
Kevlar helmet	-	1	11	4	rigid
Riot shield	-		7	3	rigid
Ballistic clipboard	-		11	4	rigid
Ballistic attache liner	-		11	4	rigid
Ballistic shield	-		12	4	rigid
Heavy denim jacket	-	3-8, 12-15	1	1	flex
Heavy leather jacket	-	3-8, 12-15	2	2	flex
Motorcycle helmet	-	1	6	2	rigid

Armor Material	Total Value	AV/CN flexible	AV/CN rigid
Class I	12	6/6	
Class I+	13	7/6	
Class II	15	8/7	11/4
Class II+	16	8/8	12/4
Class III	18		13/5
Class III+	19		14/5
Class IV	21		15/6
Class IV+	22		15/6
Class V	24		18/6
Cinderblock	14		11/3
Concrete 5 cm	16		12/4
Concrete 10 cm	30		22/8
Concrete 20 cm	50		37/13
Pine 2.5 cm	4		3/1
Pine 5 cm	7		5/2

Armor Material	Total Value	AV/CN flexible	AV/CN rigid
Pine 10 cm	12		9/3
Pine 20 cm	20		15/5
Oak 2.5 cm	6		4/2
Oak 5 cm	10		7/3
Oak 10 cm	18		13/5
Oak 20 cm	32		24/6
Steel 20 ga.	6		4/2
Steel 10 ga.	8		6/2
Steel 0.5 cm	16		12/4
Steel 1 cm	28		21/7
Steel 2 cm	46		34/12
Glass, window	1		1/0
Glass, laminate (auto)	8		6/2
Glass, bulletproof	14		10/4

Explosives Table

Explosive Name	Explosive type	Attack Number	Damage Factor	Range (m)	Damage type
Blasting cap	concussion	1	8	8	concussive
C-4 plastic explosive (.25 kg)	concussion	1	25	25	concussive
Claymore mine	fragmention	16	30	80	puncture
Dynamite (1 stick)	concussion	1	20	20	concussive
Flash-bang grenade	concussion	1	10[1]	10	concussive
Frag. grenade (baseball)	fragmention	8	24	40	puncture
40mm HE grenade	fragmention	5	18	25	puncture

[1] *This explosive adds ten additional columns to stun effect.*

Character Name _____
Player Name _____
GM _____

MILLENNIUM'S END

Modern Roleplaying in the Technothriller Genre

Sex _____ Ht. _____ Wt. _____ Age _____
Birthdate _____ Race _____
Nationality _____
Eye color _____ Hair color _____
Skin color _____ Handed _____
Identifying marks _____

Education _____

Additional notes _____

INTELLIGENCE	
SENSIBILITY	
AGILITY	
COORDINATION	
CONSTITUTION	
STRENGTH	
PERSONALITY	
APPEARANCE	
BRAVADO	
WILLPOWER	

Perception	____
Base Speed	____
Recovery	____
Endurance	____
Dam. Rating	____
Mass Factor	____

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ARMOR COVERAGE

AV / CN

1. __ / ____
2. __ / ____
3. __ / ____
4. __ / ____
5. __ / ____
6. __ / ____
7. __ / ____
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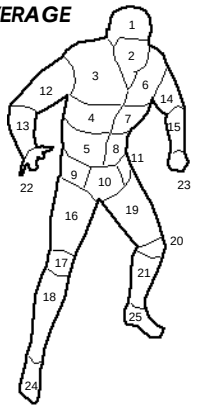
25. __ / ____



Total Armor Speed Penalty ____

Total Impairment

	Mental		Foll. Arm	Legs
1, 2 (imp x ½)				
3, 6 (x ½), 4, 5, 7, 8				
9-11, 16-21, 24, 25				
12, 13, 22				
14, 15, 23				
Total Impairment				

Skills

Roll Skill level uses

Academic Skills

- **Anthropology**
- _____
- **Business**
- _____
- _____
- **Geography**
- **Geology**
- Paleontology
- **History**
- _____
- **Journalism**
- Research
- _____ **Lang.**
- _____
- _____
- _____ **Lang.**
- _____
- **Law**
- _____
- _____
- **Literature**
- **Philosophy**
- _____

Creative Skills

- **Acting**
- Con
- **Art**
- _____
- _____
- **Dance**
- **Make-up**
- Disguise
- Theatrical
- **Music**
- _____
- _____
- **Photography**
- Still
- Film

Dom./Tech. Skills

- **Carpentry**
- **Electrics**
- Electronics
- Wiring
- **Gen. Mech.**
- _____
- _____
- **Metalworking**
- Milling
- **Mini. Mech.**
- Gunsmithing
- Locksmithing

Medical Skills

- **Dentistry**
- **Medicine**
- Em. Medicine
- _____
- **Pharmacy**
- **Surgery**

Natural Skills

- **Farming**
- **Fishing**
- _____
- **Foraging**
- _____
- _____
- **Hiding**
- _____
- _____
- **Meteorology**
- **Navigation**
- _____
- _____
- **Perception**
- **Survival**
- _____
- _____
- **Tracking**
- _____
- _____

Physical Skills

- **Armed H-to-H**
- Block/Parry
- Swing
- Thrust
- **Athletics**
- Bodybuilding
- Gymnastics
- **Climb**
- Mountaineering
- **Jump**
- **Kata**
- _____
- _____
- **Run**
- **Swim**
- Scuba
- **Unarmed H-to-H**
- Kick
- Punch
- _____
- _____
- _____

Reflexive Skills

- **Aim**
- Autofire
- Longarm
- Smallarm
- _____
- _____
- **Drive**
- Automobile
- _____
- _____
- **Parachute**
- **Pilot**
- S.E. Prop.
- _____
- _____
- **Ride**
- **Ski**

Scientific Skills

- **Biology**
- _____
- _____
- **Computer Ops**
- Civil Systems
- Networks
- Programming
- Security
- **Engineering**
- _____
- _____
- **Math**
- _____
- _____
- **Military Sci.**
- Hardware
- Strategy
- Tactics
- **Police Sci.**
- Forensics

Social Skills

- **Animal Trning**
- **Diplomacy**
- Lying
- Prying
- Coercion
- **Gambling**
- _____
- _____
- **Hypnosis**
- **Psychology**
- Deviant
- Psychoanalysis

Weapons

Weapon	Speed	Skill	Inherent acc.	Roll	Attacks/ turn	Eff. range	Hands req.	DF/ DD	Damage type
Punch			0		1	—	1		Impact

Body

	Body Zone	Damage type	TL	Imp.
1.	head			
2.	neck			
3.	shoulder			
4.	torso			
5.	vitals			
6.	shoulder			
7.	torso			
8.	vitals			
9.	hip			
10.	groin			
11.	hip			
12.	upper arm			
13.	forearm			
14.	upper arm			
15.	forearm			
16.	thigh			
17.	knee			
18.	calf			
19.	thigh			
20.	knee			
21.	calf			
22.	hand			
23.	hand			
24.	foot			
25.	foot			

Update impairment box on other side

Possessions

Item	Carried?	Location	Notes
	❑		

Currency/Credit source	Amount carried	Amount avail.

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Vehicles

Vehicle type	Skill	Acceleration Thr. / Lim.	Braking Thr. / Lim.	Cornering Thr. / Lim.	Top speed	Range	Notes
		/	/	/			

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Important!

To use your overlays, print them out on transparency sheets (available at office supply stores) instead of paper.

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Nightwalker/The Villee Affair

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A hefty sourcebook for *Millennium's End* GMs. Chock full of maps, building plans, NPCs, computer net layouts, and adventure seeds. The perfect aid for crafting assignments or running on the fly.

PLUS:

Look for more *Millennium's End* adventures and supplements coming soon, as well as ***Millennium's End*** **miniatures** from **Emperors Choice**!

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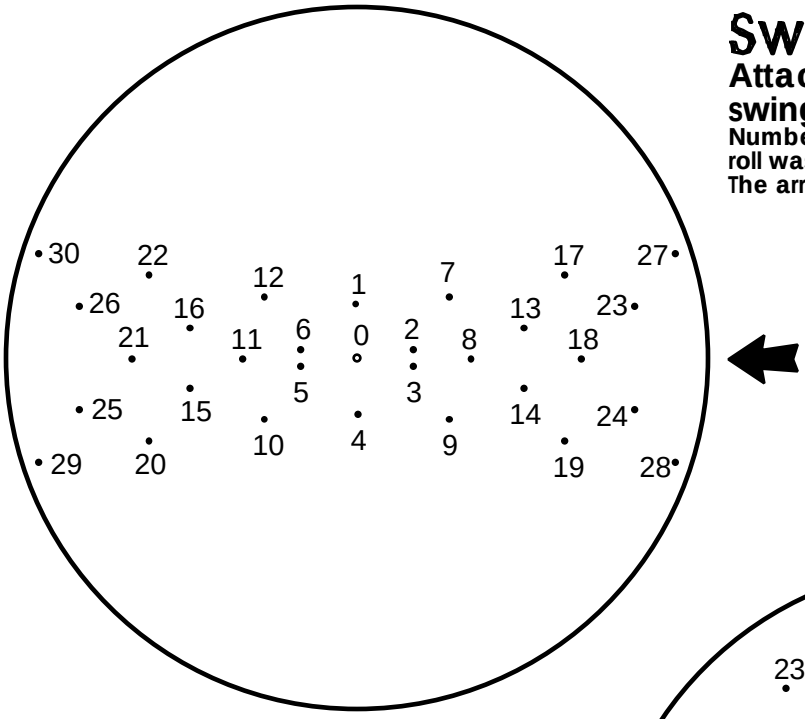
Swing

Attack Overlay for hand-to-hand swing attacks.

Number indicated is the amount by which the roll was missed.

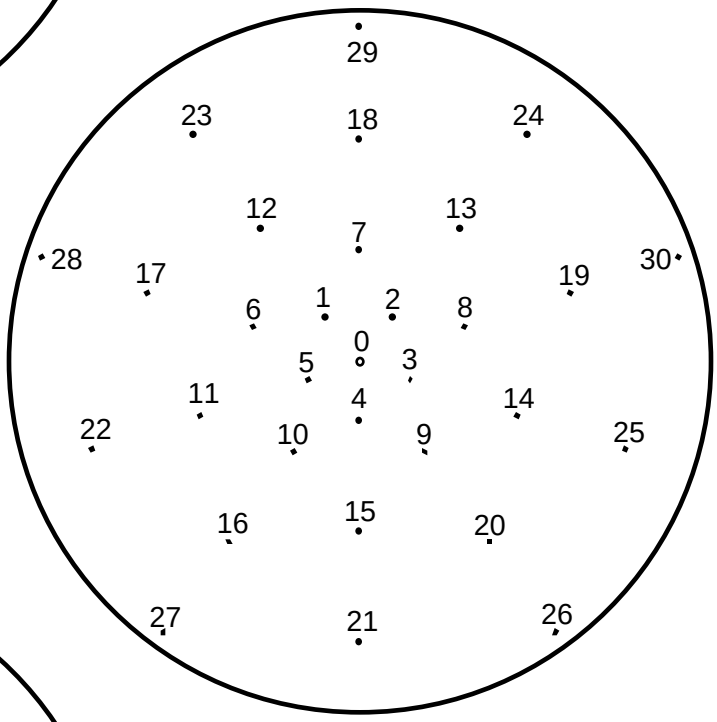
The arrow indicates the direction of the swing.



Point-Blank

Attack Overlay for hand-to-hand attacks or projectile attacks at ranges of 10 or fewer meters.

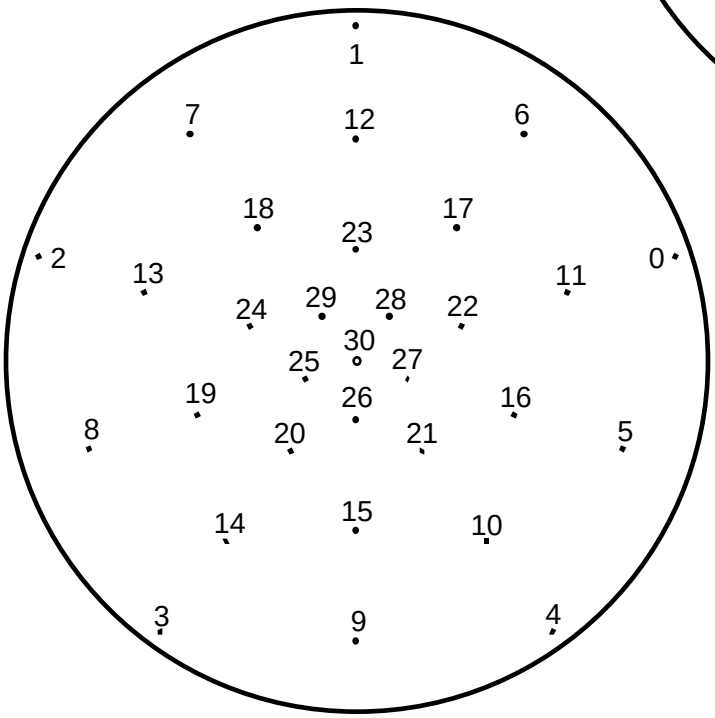
Number indicated is the amount by which the roll was missed.



11-30

Attack Overlay for projectile attacks at ranges of 11 to 30 meters.

Number indicated is the amount by which the roll was made.



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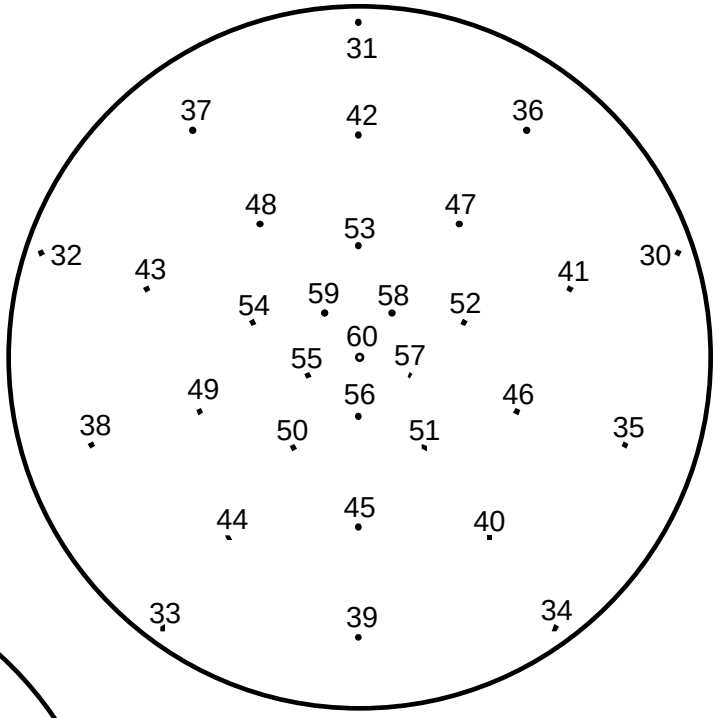
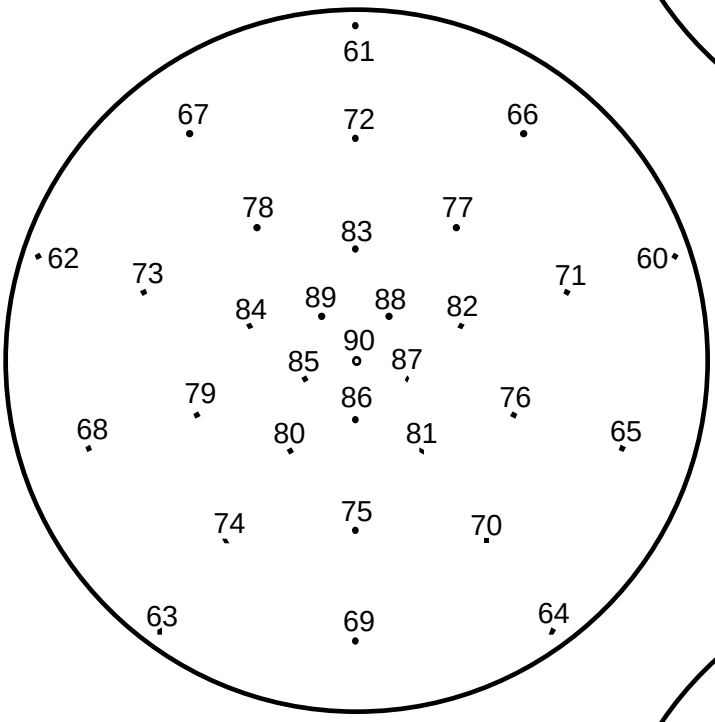
31-100

Attack Overlay for projectile attacks at ranges of 31 to 100 meters.
Number indicated is the amount by which the roll was made.



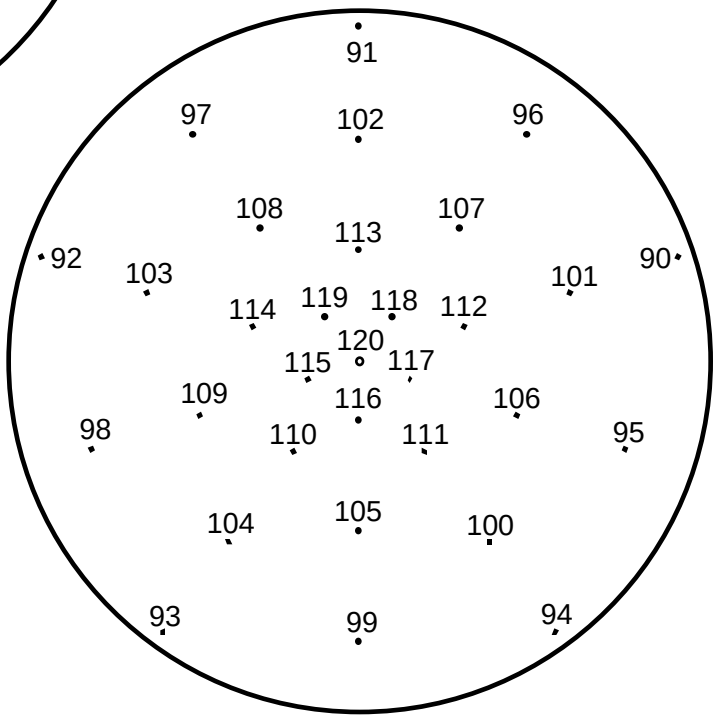
101-300

Attack Overlay for projectile attacks at ranges of 101 to 300 meters.
Number indicated is the amount by which the roll was made.



300+

Attack Overlay for projectile attacks at ranges greater than 300 meters.
Number indicated is the amount by which the roll was made.



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