ROLEPLAYING
CORE RULES
DELUXE EDITION

SILHOUETTE CORE™

VERSION 003.1

DREAM POD 9

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SECTION 1

BASICS

Basics

This chapter introduces the basic rules that form the core of the game. Refer to it whenever a new situation comes up.

Introduction

Welcome to the Silhouette CORE Rulebook! This volume contains all the rules you'll need to play a character in one of the settings designed by Dream Pod 9 (or even one of your own design). The core Silhouette game mechanics are at the base of all Dream Pod 9 games, including roleplaying games and tabletop games.

The Silhouette game engine is based on the principle of "function over structure." What does that mean? Basically, it means that this game system is concerned with how useful things are in play and not with exactly how many wound points remain in the left leg. The system works by placing more and more negative modifiers due to damage, until things stop working. Anything not covered by standard attributes (numeric ratings that tell you the effectiveness of things in a given field) are covered by "Perks" and "Flaws," modifiers with variable uses.

This is called an effect-based system and allows us to use fairly simple rules to cover a large number of situations, rather than rely on an arcane "one rule for every situation" set. The basic rules are contained in Chapter One; you can start playing after reading it. All future rules will be mere variations and applications of the core principles set forth in that chapter.

So what is different, for veteran Silhouette players? Not all that much. This rulebook contains the Silhouette rules already developed, rewritten in a more dynamic style that is easier to refer to. The loopholes have been closed, the content streamlined and a number of new rules (such as Skill Complexity and Genre Points) have been introduced to provide a greater breadth of in-game choices. The main design goal was to have a manual that is as clear and precise as possible and that has maximum usefulness, both for new players and experienced ones. For this reason, an Open Gaming License conversion appendix was added to allow use of other OGL-standard game books with this one and to allow you to convert previous Dream Pod 9 Silhouette products into OGL stats.

The book is organized in a logical fashion, going from the more general topics to the more specific ones. Chapter One, Basics, explains what the book is, what's inside and the core of the rules. Chapter Two, Character Design, explains how to create a character to play the game. Chapter Three, Character Action, contains all the character-related roleplaying rules. Chapter Four, Mechanical Design, explains how to handle tools, vehicles and buildings of all types. It is coupled with Chapter Five, Mechanized Action, which explains how to use them in the game. Chapter Six contains all the specialized rules that didn't fit anywhere else. Finally, Chapter Seven explains how to run a game and use Silhouette in various genres.

ACTION: HEAVY GEAR

1.1 What is a Roleplaying Game?

A roleplaying game (shortened to RPG) consists of a group of people creating an interactive story. Each player, save for one who will be the Gamemaster (explained below), controls the action of one (or more) fictional character(s). These characters are called, not surprisingly, Player Characters or just PCs. A group of player characters working together is generally referred to as a Party.

One player, called the Gamemaster or GM, serves in a role that is analogous to a movie's screenwriter or director. It is the Gamemaster who sets the stage for the game's events, designs a plot, chooses the locales and outlines a story sequence. In addition to designing the setting of an adventure, the Gamemaster is responsible for populating the setting with an interesting cast of villains, allies and extras. These additional characters are called Non-Player Characters or NPCs; during a game, one of the Gamemaster's primary tasks is to slip into the role of any NPC that interacts with the player characters. The Gamemaster's final task is to guide the game's progress and arbitrate over any actions that occur in the game.

Unlike a TV show, movie or novel, the events and character actions are not guided entirely by the author or director (the Gamemaster). Instead, each player chooses the actions of their character. In essence, they help build the story in a freeform manner through their roles. This does not mean that actions are random in any way: just like characters in a great novel, roleplaying characters have goals, personalities and convictions that tend to steer their behavior.

Games have rules and involve an element of chance or skill and roleplaying games are no exception. The abilities of characters are described using various statistics and labels. This information, along with plain-English descriptions of the character's possessions and background, is recorded on a Character Sheet. Dice are used to add a random element to the game and keep everyone, including the Gamemaster, guessing about the outcome of the scenario.

Roleplaying games are not divided into matches. Instead, RPGs consist of sessions, scenarios (often called adventures or missions) and campaigns. A session is simply a period of time, often around two to four hours, that is allotted to play. The length of a session is determined by the schedules of a gaming group's players.

A scenario is analogous to an episode of a television show. During a scenario, the primary plot of a story unfolds. There may be numerous subplots, but they are not the main focus. Some character development usually occurs, but really major changes are unlikely. A scenario will be played over as many sessions as are required to resolve its plotline — usually one to three.

A campaign is a series of scenarios that generally features the same cast of player characters or that are linked together to shape a larger story. As the campaign progresses, the main characters may develop and form strong relationships between each other and with non-player characters. Subplots and actions from previous scenarios sometimes return to haunt the players.

Roleplaying uses a number of specialized terms. Most are defined at the start of the relevant rule sections. Further terms are defined in the Glossary, at the end of the book.

1.1.1 What You Need to Play

You will need the following items to start playing a game using the Silhouette CORE Rules. Some are required, others merely useful:

• At least one copy of the Silhouette CORE Rules, which tells you how to run the game and adjudicate the outcome of events. It is best if each player has access to his own copy for easy reference;

• One character sheet (or more, if playing several characters) per player;

• A pencil and scratch paper;

• A set of ordinary six-sided dice (at least three per player and up to ten);

• Graph paper (to draw maps and diagrams — optional);

• A whiteboard with erasable markers or a blackboard or large sheets of paper (to show maps and give briefings — optional).

In addition to the above, the Gamemaster will need to be familiar with a game setting (either of his own design or an existing one).

Each player should get his own copy of the Silhouette CORE Player's Handbook corresponding to the setting being played. This will provide them with the world and rules information they need to create characters and play in that particular universe.

Hooks & Tips:
Getting Supplies

If people are new to gaming, where can they go to get dice, advice, etc.? Drop by the local game store. Not only do they have the books, dice and miniatures on hand, they can usually provide advice on gameplay and connect you with other gamers. A number of free online resources, including examples, answers to frequently asked questions, additional rules and update are available on the Dream Pod 9 Web site (http://www.dp9.com).

ACTION: JOVIAN CHRONICLES

1.1.2 So How Does it Work?

During the game session, the Gamemaster describes what is going on (and what is not) and describes the location and the action to the group. The quantity of details will depend on both the timing of play (a chase scene needs fewer scenery details than the group's first step into a seedy bar) and the characters' abilities (if it's dark, for example). The players then determine what their characters are going to do and tell the GM, rolling dice if necessary. The Gamemaster will decide, based on this, how things will change and how the plot will advance. After describing the result to the players, the game continues until the scene is resolved.

One of the challenges of being a good Gamemaster is making sure that each PC gets plenty of screen time, so that no one feels left out or bored. In some situations, this requires frequent switches of the GM's attention to different PCs. Chapter 7 examines the art of being a Gamemaster in greater depth.

1.1.3 What can be Done?

Simply put, anything and everything you can imagine, subject to the rules of the game. Unlike computer or board games, there is no set limit or boundary to a roleplaying game, beyond those imposed by your imagination. You can pretend to be (i.e. play) a learned scholar, a fierce fighter pilot, a veteran news reporter or a master of mystical internal energies. Your actions are also open to endless options. For example, if your character is confronted by a slime-dripping alien creature, he might:

• Talk to it;
• Try to slip away unnoticed;
• Shoot it;
• Engage it in hand-to-hand combat;
• Study it;

. . . Or any other option that may come to mind. There is no right or wrong way to go, but each choice has its own consequences — including doing nothing!

Design Notes: Wargaming

You may see some references to 'wargaming' here and there. The term refers to tabletop tactical simulation using miniatures to represent vehicles, infantry or characters. This style of play focuses mostly on combat simulation, pitting players and their armies or fleets against each other. However, this can also be used by roleplayers to better visualize combat scenes.

For example, Arthur, whose character is Sir Fred the Knight, wants to have his character attack a group of goblin guards he just spotted. He would say, "Sir Fred runs up the stairs and charges the guards on the landing, wildly swinging his battleaxe!" The Gamemaster would then tell Arthur whether Sir Fred can take that action without rolling the dice or what dice roll is required to find out what the outcome of Sir Fred's action will be.

When it comes to actual dialogue between PCs and NPCs, many players prefer to speak in the "voice" of their character. Players who aren't as interested in the actual "roleplaying" aspect of the game may simply state what their character says to others, rather than making an attempt to "act out" their character. Likewise, the Gamemaster will respond through either in-character dialogue or by stating what the NPC says to the player character, depending on the Gamemaster's personal preference. Either style of play is fine and depends on the group.

Usually, the Gamemaster goes around the table, giving each character variable amounts of'"screen time," where each player's character is the focus of the action. The amount of time a character gets depends on what is going on in the story. The more dramatic or complex the situation a character is in, the more time the Gamemaster will usually have to devote to that character during play.

ACTION: HEAVY GEAR

1.1.4 How do I Win?

Unlike other games, *roleplaying games are not competitions between the players*. Roleplayers are expected to work together towards a common cause. The Gamemaster is responsible for supplying the obstacles and challenges, but he is not the players' enemy. While some rivalry is acceptable and in some cases even desirable, true conflict between players or between the players and the Gamemaster, is not. Enmities between player characters may lead to disputes between the players themselves.
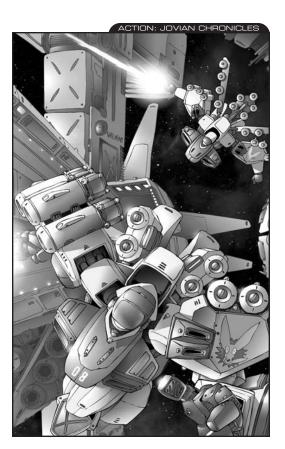
Hooks & Tips:
A Note on Good Playing

The purpose of a game is to have fun. Most roleplayers prefer to use their facial expressions, tone of voices and arm movements to convey their character's actions and emotions. More enthusiastic players often enjoy fully acting out their parts, while shy players may prefer to just describe what their character does. No one should be forced to play in any way that makes them uncomfortable. *No combat should ever be acted out! Serious injury could result!* Always work out combat using game mechanics and verbal descriptions only.

Not all may agree on the exact interpretation of the rules in this book. Using the latter as written, however, allows new players to understand what's going on and makes the game more fun for everybody in the long run. It doesn't mean that the rules can't be adapted to local preferences. The golden rule in gameplay is trust; "house" rules that aren't documented beforehand constitute a violation of that trust, because not everyone is playing the same game if they don't know that the rules have changed.

Some groups like to create a "contract of play" to clearly state house rules and rules of social conduct before play, just to make sure everyone is on the same page. This isn't required, but it's useful when bringing in new players or friends who have never roleplayed before, to a group.

Winning the game depends on the player's personal goal for their character and may occur on many levels, including the character, mission or campaign levels. One way to prevail is for one's character to simply survive for one more day. Another might be for the character to acquire great personal wealth or to attain a desired social position or to reach a certain level of power. It is also possible to set a goal for the character at the start of the game, such as avenging their father or saving the realm from the evil dragon. Success can also be had on a larger scale, stopping the incursions from the 4th quadrant, uncovering the mystery behind the murder of the king or successfully negotiating a peace treaty. In the framework of an entire campaign, these triumphs may be but one of many on the path to ultimate victory... where the next mission may set in motion yet new challenges to overcome. Unlike board games, achieving the goal doesn't necessarily end the game. New goals may be set, if the group wishes to play further.

ACTION: JOVIAN CHRONICLES

1.2 Silhouette Core

The Silhouette rule system is an extremely flexible game engine. Depending upon the players' preferences, it can serve as a roleplaying game, a tactical board game or a smooth integration of both. The "realism" of the campaign, from an accurate simulation of reality right up to a movie-like flash of action and adventure, can even be adjusted (see section 6.4.1). No matter the type or genre of game played, however, the notions explained in this section will always remain at the base of every Silhouette game session.

The system uses the traditional six-sided die to add a random element. They are often referred to as "d6" in the rules. Each player should have several such dice on hand. We'll explain how to roll and read them in Section 1.2.3, but first we must take a look at the numbers that govern their use.

1.2.1 Attributes and Ratings

Items or individuals are assigned numeric ratings to indicate how effective they are at certain tasks. Both a vehicle's Maneuver and its Speed are ratings, as is a person's Build Attribute or his Stamina. They allow comparisons between individuals and their respective abilities.

Many ratings, such as a vehicle's Maneuver or an individual's Attributes, are Zero-Average Ratings. They are the ones presented in the plus/minus format (for example +1, 0, -2). This type of rating is used as a modifier for die rolls. An average score is unexceptional and is therefore rated as a zero. Any below average scores are rated as negative numbers and any above average scores are rated as positive numbers.

1.2.2 Skills

People (and some types of machines and creatures) are rated in terms of their Skills. A Skill is a learned talent or ability which can be

improved with practical experience. Skills are useful in determining the outcome of Skill tests, the most common form of Action tests (see *How to Do Things*, Section 1.2.4, for more on the latter).

In a Skill test, the number of six-sided dice rolled is equal to the Skill level of the character involved.

While Skill levels of up to ten (10) are theoretically possible, most characters will peak at around 5 and diversify their Skill selection instead. Skill levels transfer directly from the Silhouette roleplaying system to the Silhouette wargaming system and vice-versa.

Design Notes: Level of Detail

As was mentioned before, all rule systems have to make a trade-off between extreme realism and playability and Silhouette is no exception. Silhouette is based on real-life numbers that were then simplified to get the game fast-moving and fun to play. Its main purpose is to give a framework to build the action on, not to be a straightjacket; to make the gameplay exciting, while still remaining believable in its results.

Design Notes: Attributes as Modifiers

For those familiar with the d20 rule set, the Attributes in Silhouette may seem a bit peculiar at first. Whereas the d20 core rules use a score of 3 to 18 that relates to a die modifier of -4 to +4, the Silhouette system never bothered with Ability scores and has used modifiers as Attributes and Ratings from the start. So, rather than having a 10 on your character sheet (the average score under d20, which equates to a +0 modifier), you simply have a +0 Attribute in Silhouette. See the OGL conversion, Chapter 8, for more information.

• Skill Complexity

Skills also have a **Complexity rating (Cpx)**. Complexity is noted as a second number after a slash, such as "2/4" for a Skill level of 2 with a Complexity of 4. While the Skill level shows how good the character is, the Cpx rating represents how much general knowledge the character has in that particular field. For example, an aircraft pilot with 5/1 would be a whiz with a propeller plane, but nothing much more sophisticated. A 2/3 pilot would fly a suborbital jet and anything before, with a reasonable amount of skill. All Skills get Cpx 1 for free when acquired.

Some items or tasks can have Cpx ratings as well; this is the suggested ability to use or solve them effectively. If no Complexity rating is given for a task or piece of equipment, a default Cpx of 1 is assumed.

The difference between the character's Skill's Cpx and the item's (or task's) is applied to the dice roll. For example, a certain physics problem can only be solved by people with the right skill set. A difficult problem won't be solved easily by a precocious genius, no matter how good he is; he simply lacks the knowledge required to do so. On the other hand, an expert (Cpx 3 and more) will easily solve most simple problems. For example, a character with Cpx 3 in a Skill working on a Cpx 1 task would have a +2 bonus to his roll (Cpx 3, the expert's knowledge, minus Cpx 1, the task's Cpx, $3 - 1 = 2$, for a +2 bonus).

Complexity ratings are not used in Opposed Skill tests, *unless* both Attacker and Defender use the same Skill. The difference between their Cpx is then applied to the Attacker's roll.

Skill Level Comparisons

SKILL LVL	ABILITY	DESCRIPTION
0	Untrained	Little or no skill
1	Rookie	Basic training
2	Qualified	Minimum level to earn a living
3	Veteran	Professionals; usually represents some experience
4	Elite	Seasoned professionals
5+	Legendary	The very best: living legends and heroes

Skill Complexity Comparisons

SKILL CPX*	TRAINING	DESCRIPTION
1	Basic	Self-taught or basic training
2	Trained	Full training
3	Advanced	Advanced Courses
4	Expert	Wide field of knowledge
5	Legendary	Renowned Expert

*All tasks have a default Cpx of 1.

Design Notes: Skill Complexity

Skill Complexity is a new element to the Silhouette system. It was brought in for two reasons. 1) it expands the breadth of possible characters and tool types: of two Skill level 2 pilots, the one with the higher Cpx is either more experienced or better trained. 2) it provides another potential avenue for improving one's character in the course of the game, without having to resort to endless Attribute increases or a new Skill buying spree.

• 1.2.3 Using the Dice

The Silhouette system uses everyday six-sided dice to add a random element. The same dice rolling convention is used for both the roleplaying and wargaming aspects of the Silhouette rules.

Unless specifically mentioned otherwise, all Silhouette die rolls are resolved in the manner explained at the top of the next page.

When two or more dice are rolled simultaneously, their results are *not* added together. **Instead, the highest value rolled is considered to be the outcome of the die roll. If more than one "6" is rolled, each extra "6" adds one (1) to the total.** If *every* die rolled turns up "1", the die roll is a Fumble and counts as an overall result of one, plus some unfortunate side effects (see *Fumbles*, next page).

The totals of die rolls are often influenced by modifiers, such as Attributes or situation modifiers. Modifiers are added to the total of a die roll. If negative modifiers lower the total below zero, the final result is zero.

Tests without Rolls

If a task is not pressing or there are no distractions around, it is possible for a character to avoid taking a test to complete a task — this is called using a "Take…" result. Because of the stressful and inherently unstable nature of magic, psionics and other supernatural powers, you can never use a Take with them. Nor can Takes be used in combat or other stressful situations, where Fumbles are an unfortunate fact of life. Takes are a good way to speed up the action when lengthy, important but otherwise boring tasks with some possibility of failure are required, such as searching a room for hidden items. Note that Attributes or modifiers don't come into play for Takes, which are averaged results.

Taking Average: When the character is not in a rush or being hurried or threatened, he is allowed to take 2 plus the Skill level as a die result rather than roll for the action the character is attempting. This makes it possible to be automatically successful at tasks that are routine for someone at a given Skill level.

Taking High: When the character has plenty of time (20 times the normal duration required for a given activity) and is not in a situation where a Fumble would be seriously harmful, he is allowed to take 4 plus the Skill level as a die result rather than roll for the action the
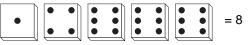
character is attempting. This allows characters to achieve high-end results by spending enough time and effort on them.

Die Rolling Examples

Arthur rolls two dice. The dice read 3 and 5. The total of the die roll is 5 (the highest individual die result).

= 5

Betty rolls five dice. The dice read 1, 6, 4, 6 and 6. The total of this die roll is 8 (the highest roll + 2 for the two extra sixes).

= 8

Chris rolls three dice. All three dice read 1. He has Fumbled the die roll. The total is 1 and something bad happens.

= 1

Diana rolls two dice and has a +2 modifier. The dice read 1 and 5. The total of the die roll is 7 (highest roll + 2).

+ 2 = 7

Design Notes: Why a d6?

The choice of the common six-sider has left many gamers puzzled — why use a die type that offers only six possible random choices? (See the Appendix for the actual probability numbers.) The answer is precisely that, it reduces the impact of raw luck on the game. The concept is that it's better for a player to win because they made the correct choice — in action, equipment or character design — rather than winning through sheer luck. Note that it's always possible to use a more random die type (see the Appendix), but this implies a number of changes and will definitely make for a more unpredictable game session.

Fumbles

A Fumble is a mistake or mishap that can spell disaster. It is not necessarily caused by the incompetence of the character and may be the result of environmental factors. In general, the lower the Skill level, the more likely something will go wrong.

A Fumble counts as a result of 1, to which modifiers are applied (which means the test may even succeed, with enough positive modifiers), but something bad happens — the gun jams, the round kick hits the opponent but the character pulls a groin muscle, etc. The Gamemaster determines what happens — there are notes on how to do this in Chapters 3 and 7.

Design Notes: Fumble

Making Fumbles into a result of 1 is the biggest change from previous versions of Silhouette. This was done to remove some of the lethality from the game, though we kept the "downside" aspect to showcase the relative inexperience of low Skill levels.

1.2.4 How to Do Things

There are many ways to influence the course of the game and almost all of them include doing something. The game system is present to act as both an impartial referee and to provide an element of surprise. One of the following tests is called for whenever a character attempts to do something and the outcome of the action is uncertain.

If the action has a negligible chance of failing (walking in the street, picking up a small object), no test is called for and the action automatically succeeds. Note that certain otherwise automatic tasks may require a test under special circumstances — walking a tightrope or picking up something in the middle of a firefight certainly qualify!

Action Tests

Many actions involve an element of chance. Did the shot hit? Do the sensors detect the enemy ambush? Is the spy's disguise convincing? Is that dose of poison sufficient to kill? In such situations, an **Action Test** is called for. Action tests consist of a die roll whose result is compared to a fixed difficulty value called a **Threshold**; a higher Threshold indicates a more difficult situation.

Because of the peculiar probability curve of the six-faced die system used by Silhouette, the difficulty level between Thresholds increases after 7, i.e. the progression between Threshold levels is not linear. The chart should help to determine the difficulty level of any given test.

Typical Thresholds

THR.	TYPE	EXAMPLE
1	Effortless	Automatic Success
2	Routine	Task requiring little thought
3	Easy	Task requiring some attention or skill
4	Moderate	Task that requires attention or skill
5	Challenging	Task that requires concentration and skill
6	Difficult	Requires much concentration or good skill
7	Very Difficult	Requires much concentration and good abilities
8	Extremely Difficult	Requires much concentration and high abilities
10	Near Impossible	Only the very best may attempt these tasks
12+	Pray for Divine Intervention!	Generally reserved for cinematic-level tasks

If the die roll — with all modifiers (Attribute, situation, gear, etc.) added — surpasses the chosen Threshold, the test succeeds. The degree of success is defined by the **Margin of Success (MoS)**: a value equal to the die roll (plus modifiers) minus the Threshold. The magnitude of the Margin of Success reflects the success of the action test. For example, a MoS of 1 is a marginal success, while a MoS of 6 would be a spectacular success.

If the die roll, again with modifiers added, is less than the Threshold, the test fails. The degree of failure is defined by the **Margin of Failure (MoF)**: a value equal to the Threshold minus the die roll plus modifiers. A high Margin of Failure indicates a miserably failed action test. For example, a MoF of 1 would be a close call, while a MoF of 6 would be a real (and potentially deadly) failure.

If the total die roll and the Threshold are equal, a draw occurs. In roleplaying situations, draws are often interpreted as marginal successes or ambiguous results.

Opposed Action Tests

Sometimes, two individuals will oppose each other's actions. Attacks can be dodged; guards may notice people attempting to sneak past them; negotiations obviously require more than one participant. When two or more individuals oppose each other's actions, an **Opposed Action Test** is called for.

Each opponent makes a die roll using the appropriate Attribute or skill.

Compare them: the highest result wins the test. The Margin of Success of an Opposed Action Test is equal to the winner's roll minus the loser's roll. If more than two participants are involved, separate Margins of Success are worked out between each of the participants as needed. Tied rolls result in draws; draws are wins for the resisting person.

Difficulty Threshold Example

Lhon knows an enemy infantryman is located nearby. He will try to spot him by using his Notice Skill. The Threshold required will vary according to what the infantryman is doing. For simplicity, we will disregard any sensor device Lhon might be carrying and assume he is motionless. Likewise, we will assume the infantryman is not aware of Lhon's presence.

If the infantryman stands atop a rock and waves, the Threshold required to spot him is 1 (Effortless) — Lhon would have to be a fool not to see him. If the infantryman stands still atop the rock, he's still fairly obvious: a Threshold of 2 (Routine) would be appropriate.

If the infantryman stands behind nearby bushes but moves (for example, reloading his gun), he's still easy to spot. The bushes help to mask him, so a Threshold of 3 (Easy) or 4 (Moderate) would be fine. If he's motionless, his camouflaged poncho will blend in with the vegetation, raising the Threshold to 5 (Challenging) or even 6 (Difficult).

Hiding under a derelict robot hulk and behind the bushes would make him extremely difficult to spot. Lhon cannot see him and must rely on sound, so a Threshold of 7 (Very Difficult) is appropriate. Should the infantryman be dug in and completely motionless, Lhon will never spot him without some kind of sensor device — a Threshold of 10 or more will apply.

Hooks & Tips: Advanced Tie Resolution

This system is a bit more complex but gives better results when characters of similar abilities engage one another. When an Opposed Action test is tied, it goes to the character with the highest Skill level. If the Skill levels are the same, it goes to the character with the highest Skill Complexity. If those are tied, the test goes to the highest Attribute. If those are tied, it is truly a tie.

Skill Tests

The Skill test is the most common form of Action test in the game. The number of dice rolled in a Skill test is equal to the level of the Skill being used for that particular test. The appropriate modifiers (Attribute and situation) are added to the result. The *Skills* section of the *Character Design* chapter lists the official Skills and their possible applications. This list doesn't cover every possible Skill a character could have, but rather those that are used most commonly in play. Players can come up with additional Skills and applications, assuming the Gamemaster approves.

Unskilled Tests

Characters may need to accomplish a task for which they have no Skill, though the task requires one. In these cases, two dice are rolled: the result is equal to the **lowest** of the two individual dice. If *either* of the two dice rolled is a "1", a Fumble occurs and the result is 1, without modifiers. If no Fumble occurred, add the appropriate modifiers to obtain the final total roll. This is called an Unskilled test and may be affected by Emergency Dice (a means to use a character's experience and expertise to increase his current chances — see section 2.6), if any are used.

Attribute Tests

Some situations require innate, instead of learned, abilities. Attribute tests are fairly rare since most actions that involve an Attribute are really learned abilities. Attribute tests are used when a truly broad reflection of a character's abilities is required. For example, a Knowledge Attribute test is appropriate for recalling an obscure bit of trivia. An Appearance Attribute test could determine just how stunning a character looks on a particular day.

To perform an Attribute test, roll two dice (picking the highest result, as usual for Silhouette) and add the Attribute in question to the total.

Chance Tests

Chance tests are required when the results of an action are completely random, such as a character playing roulette at the local casino or suddenly dropping in at the local bar to see if someone is there. Roll one die and add the character's Psyche to the result. High results are favorable, low results are unfavorable — the Gamemaster decides upon the exact effect. If appropriate, a "1" is a Fumble. As with all dice rolls, Emergency Dice can be added to improve a character's odds.

Accumulated Successes

Some tasks require a long time and some efforts to accomplish. While a very skilled person could conceivably pull it off in one Skill test, it is very unlikely (and downright impossible for some tasks, such as designing a new spaceplane).

Extended tasks will have not only an associated Threshold, but also an associated MoS requirement. For instance, dislodging a stuck bulkhead might require a Strength test versus 6, with an associated MoS requirement of 10. Each successful test budges the bulkhead a little and opens it completely once ten points of MoS are accumulated. Failed rolls are subtracted — in this case, you don't strain hard enough and the bulkhead falls back!

Many tasks fit this rule, especially when time or a measure of progress is critical: hunting through a database/file cabinet for a specific piece of information, hotwiring a car, opening a lock when under fire, etc.

Attribute Test Examples

AGILITY-BASED TESTS: These are situations which require a high degree of hand-eye coordination and quick reaction times. For example, grabbing a cliff edge when footing gives way.

APPEARANCE-BASED TESTS: People have used their looks to gain advantages and influence people since the beginning of recorded history. For example, doing an Opposed test with someone's WIL to make a first impression.

BUILD-BASED TESTS: Many of the tasks which are related to Build are innate, not learned, thus there are few times a test will be called for this Attribute. For example, using one's mass to keep a trap door closed on pursuers.

CREATIVITY-BASED TESTS: These involve an individual's ability to think up new solutions to a problem. For example, when finding a solution to a logic puzzle.

FITNESS-BASED TESTS: These are situations that place high physical stresses upon the body. For example, resisting the cold.

INFLUENCE-BASED TESTS: These are situations when one tries to convince another person. For example, winning a discussion.

KNOWLEDGE-BASED TESTS: These situations call as much on long study and past experience as they do on natural aptitude. For example, using basic trigonometry to figure out the length of rope needed or recalling a historical fact.

PERCEPTION-BASED TESTS: These tests rely on a character's awareness of his surroundings, taking into account sight, sound and possibly other senses such as smell or a "sixth sense." For example, noticing a peculiar sound or odor.

WILLPOWER-BASED TESTS: These tests rely to a character's mental strength and stability. For example, resisting torture or temptation.

PSYCHE-BASED TESTS: These tests relate to the human "sixth sense," hunches and dumb luck (see *Chance tests*, previous page).

STRENGTH TESTS: these are required for acts requiring sheer, brute strength (e.g. lifting heavy objects, bending metal bars).

HEALTH TESTS: these are required to resist drugs, illness and shock (e.g. surviving a drug overdose or venomous snake bite, staying conscious while in agony).

Design Notes: Attributes vs. Skills

These two values mark the difference between learned abilities and inborn talent. Thus, an average pilot with a long career could rate a Skill level of 3, while a youngblood might have a Skill of 1 but higher Attributes. The veteran will succeed more on average, but only the hotshot will be able to regularly pull the truly heroic stunts (though his failures will be equally spectacular).

Action Test Summary

1) Throw a number of dice equal to the character's appropriate Skill's level;

2) Add the Attribute corresponding to the situation;

3) Compare the result to the Threshold given by the GM or the opponent's roll;

4a) If the result beats the Treshold or roll, the action succeeds. Determine MoS;

4b) If the result doesn't beat the Treshold or roll, the action fails. Determine MoF;

4c) If the result is 1, proceed normally as above — but the GM will apply a complication.

1.3 Quick Start

The core rule information presented in the previous section represents the entire game engine in a nutshell. The following will show you how a character is laid out. You should be able to start playing the game right away after reading this section.

As mentioned before, information about important characters portrayed either by the players or by the Gamemaster is recorded on character sheets. These record each character's abilities, possessions and vital statistics (name, height, weight, etc.). Taking a look around the different elements on the character sheet is a good way to become familiar with the "feel" of the rules and the decisions to be made when making a character.

Your character must first be imagined. Is it a he or a she (you need not play a character of your own gender)? Is he tall and muscular or lean and intellectual? The *Defining a Character* section, next page, offers a few questions that will help define the character. The more answers provided, the more detailed (and alive) the character will be.

1.3.1 Attributes

The first major element is Attributes. Attributes are ratings that are used to modify a dice roll (a value of zero represents an average person). They describe the character's innate mental, physical and social strengths and weaknesses. Attributes are summarized below and fully detailed in *Attribute*s, section 2.1).

Attributes

NAME	ABBREVIATION	DESCRIPTION
Agility	AGI	Physical prowess and coordination
Appearance	APP	Physical comeliness
Build	BLD	Physical size and mass
Creativity	CRE	Mental innovation and quick thinking
Fitness	FIT	Physical conditioning and endurance
Influence	INF	Charisma and persuasiveness
Knowledge	KNO	Education and logical thinking
Perception	PER	Alertness and ability to discern details
Psyche	PSY	Mental health, empathy and luck
Willpower	WIL	Mental endurance and conviction

1.3.2 Secondary Attributes

The Secondary Attributes are a group of five ratings that are neither Attributes nor Skills but are dependent upon them. All are computed from the charater's Attribute and Skill ratings. They are detailed in *Secondary Attributes*, section 2.3 and are summarized below.

Secondary Attributes

NAME	ABBREVIATION	DESCRIPTION
Strength	STR	Raw physical strength
Health	HEA	Physical well-being and resistance to disease
Stamina	STA	Physical endurance and wound resistance
Unarmed Damage	UD	Damage inflicted in hand-to-hand combat
Armed Damage	AD	Base damage in melee combat

Once the character's look and feel are decided upon, a name should be chosen. If time and talent permit, a drawing of the character is always a nice addition.

1.3.3 Skills

Skills are a measure of learned abilities. The three columns of the Skill List are Name, Level and Complexity. Skill Level (Lvl) and Complexity (Cpx) are the same terms that were described in *Silhouette Basics* (section 1.2). Skills are used to determine the number of dice rolled when attempting an action.

1.3.4 Injury List and System Shock

Theses are a measure of how much physical punishment a character can receive before being wounded. The numbers indicated are compared with the total damage received to determine the extent of injury in combat. See *Injury Levels* and *System Shock* in section 3.5, *Injuries*.

1.3.5 Weapon List

This is a list of the weapons carried by the character (if any). The list includes columns for weapon type, damage, ranges (short, medium, long and extreme) and other notes. Note: personal weapon damage is on the Personal Scale, not the Vehicle Scale (see *Mechanical Action*, section 4.3).

1.3.6 Equipment List

Below the Weapon List is the Equipment List. Prized belongings and items that are carried by the character should be listed here (see the appendix for sample items). The Armor points of personal armor should be noted in brackets after the item name, for example Flak Vest (+20).

1.3.7 Description and Personal History

The character sheet provides some space to note details of the character's physical appearance and background. It is often best, however, to take a separate blank sheet to provide a fully detailed history and visual portrait of the character.

Defining a Character

• What is the character's gender?

• What is the character's physical appearance?

• Does the character have a distinctive physical trait?

• Describe the psychological traits of the character.

• Does the character have any good habits?

• Does the character have any bad habits?

• How old is the character?

• Where is the character from?

• What was the character's family like?

• What relationship did the character have with his family?

• Does the character have any current personal relationships?

• What is the character's occupation?

• What is the character's lifestyle like?

• Why does the character do what he does?

• If a military type, what is the character's rank?

• Which organization(s) does the character belong to?

• What are the character's personal goals?

• Does the character have any secrets?

• Who are the character's friends and rivals?

• What is the character's name and/or nickname?

Core Concepts: Chapter One

The followings are examples and further explanations of the core concepts introduced in Chapter One.

Sample Complexity Ratings

See sections 1.2.2 and 2.2.2 for the basic rules on Complexity.

Athletics

Rating	Example
1	Basic movements (running, throwing, climbing, etc.)
2	Advanced movements (gymnastic, etc.)
3	Complex movements (mid-air rotations, etc.)
4	Very complex movements (mid-air rotations on two axis, etc.)
5	Linked sequences of complex movements

Languages

Rating	Example
1	One language
2	Up to two languages
3	Up to four languages
4	U to eight languages
5	Up to sixteen languages

Medicine

Rating	Example
1	Basic First Aid (splints, bandages, etc.)
2	Advanced First Aid (stabilization, stitches, etc.)
3	Basic surgery (internal repairs)
4	Advanced surgery (organ transplant, etc.)
5	Cutting edge surgery (neural work, etc.)

Tech Sciences (Mechanical)

Rating	Example
1	Design/install/change simple items (replace bolts, change oil, etc.)
2	Design/install/change complex items (carburetors, etc.)
3	Design/install/change basic mechanical systems (two-stroke engines, etc.)
4	Design/install/change complex mechanical systems (turbine engines, etc.)
5	Design/install/change advanced mechanical systems (electromechanical networks, etc.)

Design Notes: Complexity or Threshold?

Complexity measures what expertise you need to do a task effectively. Thresholds measure the difficulty of a task in a given situation. Thus, the Complexity rating of a task normally remains the same in a given setting, regardless of the situation. As an example, applying a splint to a broken arm is Complexity 1. In a textbook situation, this would be a fairly easy task with a low Threshold. Applying a splint in the middle of the wilds without proper equipment during a thunderstorm would not raise the Complexity, but would give you a fairly high Threshold.

Example: Fumbles

See Using the Dice, section 1.2.3, for the basic Fumble rules.

Our hero, Jason, is trying to sneak past two overarmed thugs sent to kill him. Jason has a skill of 1, and due to unfavorable terrain, he has a total modifier of -2. Jason fumbles his roll, getting a 1. His total is 1 -2 =-1, but since the lowest a roll can go is 0, that's his result. He'd better hope the thugs aren't paying attention.

Jason, our unlucky hero, is attempting to avoid getting hit by one of the thugs that just noticed him. He has a skill level of 2, and a total modifier of +2, including his attribute modifier. Jason again fumbles his roll, getting two 1's. This means his total is 1 + 2 = 3.

Example: Action Tests

See How to Do Things, section 1.2.4, for basic rules.

Jason is now running from the thugs and ran into an alley blocked by a fence. Jason needs to make an action test with his Athletics skill to try and climb the fence. The GM decides that this test would be modified by Jason's Agility and the Threshold will be 5 because it is challenging. Jason rolls his 2 dice getting a 3 and a 5. He takes the highest and adds 1 for his Agility, making a 6. Just enough to make it over the fence.

Example: Opposed Action Tests

Unfortunately for Jason, the thugs cleared the fence much quicker than he was expecting and are chasing him down. The GM calls for Athletics Rolls, modified by Fitness. Jason and the thugs all have the same Athletics skill, but Jason has one point higher in Complexity. The thugs, on the other hand have +1 Fit each, and Jason is only average (Fit of 0). Jason rolls and gets a 3 and a 4, making total of 5 (4 + 1 = 5), not too bad! The GM rolls for both thugs separately and gets a 2 and a 5 for thug one, making a total of 6. Thug two rolled two 6's making a 7. With his Fit of +1, this equals an 8. Jason is easily run down by the two thugs, and is again in trouble.

Example: Unskilled Tests

Jason is trying to talk the thugs out of taking him back to their boss. The GM calls for an opposed interrogations test, modified by Influence. While the thugs aren't all that good at avoiding fast talk, Jason hasn't ever done it before, and has no skill. He rolls 2 dice, getting a 5 and a 1. He must pick the lowest, meaning he has once again botched. Jason inadvertently lets slip that he is indeed, the man the thugs are looking for.

Example: Attribute Tests

Now that the thugs know who he is, they are trying to knock Jason out with some chloroform. The GM rules that Jason must make a Health test versus a Threshold of 7, or fall unconscious. Jason rolls 2 dice, picking the highest and adding his Hea. He gets a 3 and a 5, plus his Hea of +1, making his result a 6. Jason slowly falls unconscious and is carried away by the thugs.

Example: Chance Tests

The thugs have taken Jason back to their boss, and deposited him in one of the various rooms. The GM gets Jason to make a Chance test to determine whether or not there's any air ducts or other such means of escape. Jason rolls one die and gets a 6, modified by his Psyche of -1 to a 5. The GM rules that Jason has lucked out and that there is an air duct large enough for him to crawl through in the room.

Example: Accumulated Successes

Jason, still groggy from the chloroform, is trying to break open the grate into the air duct before the thugs come back and take him to their boss. The grate is fairly sturdy, so the GM rules that Jason needs to make a Strength test at a Threshold 4, and needs 10 points of accumulated MoS before it will become loose enough to move. The GM also rules that due to the way the grate is situated, it will take 30 seconds per attempt. Jason has a Str of 0, so he simply rolls 2 dice, taking the highest. It takes Jason 10 tries to accumulate the necessary loosen the gate up. Five minutes (30 x 10 / 60 = 5) after he starts, Jason finally loosens the grate. He slips away just minutes before the thugs return.

SECTION 2

CHARACTERS

SILHOUETTE™ CORE

Design

This chapter tells you how to create a character to play in the game. It is also useful to Gamemaster to populate the setting.

Action

This chapter tells you how to make your character do various things, and what happens afterward as a result.

Introduction

Before sitting down to actually roleplay, players will have to create their characters. The characters can be almost any type of person that fits the background of the campaign. The process outlined in the following pages assumes characters above the average, but still far from the level of the elites. This can be adjusted to better accommodate the style intended for the game, be it gritty or cinematic.

The characters are going to be the conduit through which the players interact with the game world. They will, as mentioned in section 1.1, be the heroes of the story that will be told through playing the game. The characters can be pure or flawed and their motivations may differ, but it doesn't matter as long as they are interesting to control and watch. And remember, all characters can grow further through experience, adding new abilities and contacts.

ACTION: HEAVY GEAR

ACTION: HEAVY GEAR

In order to keep the basic character generation rules as clear and concise as possible, a number of advanced options (such as Special Abilities, which are "super" Perks and alien race design rules) have been placed in Chapter Six. They follow the same point spending rules, but their use is restricted to certain types of campaigns — the Gamemaster and players should confer together to see what will be allowed.

The important thing to remember is that there is no right or wrong way to do things, as long as the point-spending rules are respected. The player is in complete charge of the design decisions — no one is forced to purchase a certain Skill, unless they are required for the campaign (a game about a squadron of fighter pilots will obviously need characters who can pilot planes). Examine each choice closely, remembering that all characters have potential strong points.

2.1 Attributes

The basic abilities, knowledge and weaknesses of a character are defined by their Attributes. These largely represent the characteristics a character was born with, or acquired in their formative years. These range from physical Attributes, such as Agility and Fitness, to mental proficiencies such as Willpower and Knowledge. The ten basic Attributes represent a character's natural proficiencies and potential. A character with high Fitness will tend to be a better athlete, one with high Influence will gravitate to leadership positions and so on.

Attributes can be improved through hard work, but it is very tough and time-consuming. They can be lowered, but usually this is the result of awful wounds or advanced age that will likely retire the character from an active adventuring life. Attributes, unlike Skills and other abilities, thus vary little throughout much of a campaign (see *Character Improvement*, section 2.5).

2.1.1 Descriptions

The following texts describe the ten basic Atributes and their use in the game. Along with each description, a table giving a real world equivalent for different ratings is listed. Attribute levels are based on an average human person in their young adulthood; some creatures or aliens may have much more widely dispersed Attribute ranges. The human average range is -3 to +3, with Build being the sole exception.

Agility (AGI)

Agility is the character's hand-eye coordination, nimbleness and reflexes. This Attribute is best suited to action-oriented characters such as pilots, bodyguards and pickpockets, all of which are likely to have high Agility ratings.

Agility (AGI)

AGI RATING	EQUIVALENT
+3	Olympic gymnast
+2	Agile
+1	Well-coordinated
0	Average Person
-1	Awkward
-2	Clumsy
-3	Suffers from a crippling disease

Appearance (APP)

Appearance rates the physical attractiveness of the character. This can modify how other people react to him: many heroic characters have a high Appearance rating in order to impress those they come in contact with. Note that Appearance applies solely between members of the same race.

Appearance (APP)

APP RATING	EQUIVALENT
+3	World-class models
+2	Beautiful
+1	Attractive, Cute
0	Average Person
-1	Plain
-2	Homely
-3	Physically revolting

ACTION: HEAVY GEAR

Build (BLD)

Build is a rating of the character's size and body frame. It does not represent the character's physical might — that's what's the Strength Secondary Attribute is for — but the actual body size and mass. This is most apparent in the archetypal couch potato who is very large (high Build), but can barely lift the remote to change the channel.

Build (BLD)

BLD RATING	EQUIVALENT
+5	180-249.9 kg
+4	140-179.9 kg
+3	115-139.9 kg
+2	95-114.9 kg
+1	80-94.9 kg
0	70-79.9 kg
-1	60-69.9 kg
-2	50-59.9 kg
-3	40-49.9 kg
-4	25-39.9 kg
-5	10-24.9 kg

Creativity (CRE)

Creativity is a measure of the character's ability to use his mind in innovative ways. It is also a measure of the character's ability to think on his feet. This Attribute is useful for most characters who are likely to be thrust into unfamiliar situations and for leaders who have to make many decisions while on the run.

Creativity (CRE)

CRE RATING	EQUIVALENT
+3	Great artists and tacticians
+2	Bright
+1	Witty
0	Average Person
-1	Slow
-2	Dumb
-3	Mentally Disabled

Fitness (FIT)

Fitness rates the character's general flexibility, cardiovascular endurance, resistance to effort and overall muscle tone. While Build measures raw size, Fitness measures how well maintained the character's body is. Illness can temporarily reduce this Attribute, as can other hardships (such as a substandard air supply and starvation).

Fitness (FIT)

FIT RATING	EQUIVALENT
+3	Olympic athlete
+2	Professional athlete
+1	College jock
0	Average Person
-1	Out of shape
-2	Shrimp
-3	Gets winded after a few steps

Influence (INF)

Influence measures the character's charm, wit and persuasiveness. A high Influence rating is a must for any charismatic leader. It is also useful for those who desire to spend lots of time in corporate or social settings, or characters who need to get past security in more subtle ways.

Influence (INF)

INF RATING	EQUIVALENT
+3	Charismatic leader or professional con artist
+2	Believable
+1	Likable
0	Average Person
-1	Timid
-2	Annoying
-3	Either obnoxious or socially inept

Knowledge (KNO)

Knowledge is the character's ability to learn and recall information and also takes into account the number of years of education the character has successfully completed. Scientists and "brainiac" characters typically have high Knowledge ratings.

Knowledge (KNO)

KNO RATING	EQUIVALENT
+3	Eminent Scholar
+2	Well-educated
+1	Knowledgeable
0	Average Person
-1	Doesn't read much
-2	Poor education
-3	Learning disability, or just dense

Perception (PER)

Perception is a measure of the character's attentiveness to detail and overall alertness. It is crucial for action heroes, since the enemy who cannot be seen cannot be dealt with. Perception is especially important for scouts and investigators, who need to pay attention to obscure details and find things hidden from view.

Perception (PER)

PER RATING	EQUIVALENT
+3	Amazingly sharp senses
+2	Quick
+1	Fast
0	Average Person
-1	Slow
-2	Absent-minded
-3	Unaware of his surroundings

Psyche (PSY)

Psyche is an abstract measure of the character's karma, happiness, sensitivity and love of life.

It also reflects the empathy of the character and how "in tune" he is with his own emotions and those of others, as well as his innate luck. Psyche is an abstract concept which is best reflected by extremes; someone with a low psyche seems to have a black cloud over his head all the time and people will intuitively avoid him. A person with a high Psyche is empathic towards the feelings of others and tends to be easily trusted.

Psyche (PSY)

PSY RATING	EQUIVALENT
+3	Unusually spry and sane
+2	Very happy
+1	Happy
0	Average Person
-1	Unhappy
-2	Troubled
-3	Unstable

ACTION: JOVIAN CHRONICLES

SILHOUETTE CORE
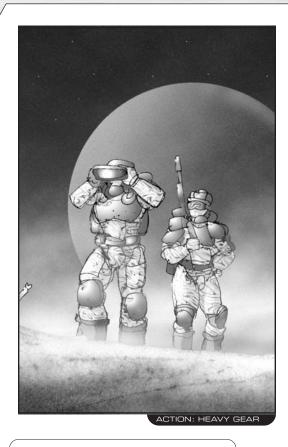
Willpower (WIL)

Willpower is a rating of the character's self-discipline, determination and pain threshold. Unlike Psyche, Willpower does not imply a love of life; it does however reflect the character's ability to deny death using sheer strength of will. Headstrong and arrogant characters are good candidates for a high WIL, as are shocktroopers who want to be able to take a bullet.

Willpower (WIL)

WIL RATING	EQUIVALENT
+3	Can endure weeks of torture without cracking
+2	Strong willed
+1	Willful
0	Average Person
-1	Easily swayed
-2	Weak resolve
-3	Cannot stay on a diet longer than five minutes

ACTION: JOVIAN CHRONICLES

ACTION: HEAVY GEAR

2.1.2 Picking Attributes

Players purchase Attributes to flesh out the rough mental image of their character. A certain number of Character Points (CPs) are available to purchase Attributes. The cost in CPs of an Attribute rating is listed in the *Attribute Costs* table. Purchasing very low stats "gives back" some CPs. A rating must be purchased in all ten Attributes. None are truly more important than the others and all have their usefulness. If any CPs are left over, each point becomes one Emergency Die (see *Emergency Dice*, section 2.6.2) or a Skill Point, at the player's choice.

Joe Average, the man on the street, has only 10 CPs available. This is just enough to purchase 0 (normal, average Attributes) in all Attributes. Player characters are heroes, so they receive a few more points, depending on the style of play of the campaign chosen by the GM (see *Reality Distorsion Factors*, section 6.4.1, for more details).

Though normal humans cannot have Attributes above +3 or below -3, the cost table can be extended further to accommodate creatures and alien beings. The point cost is equal to the Attribute plus one, squared: e.g., +4 would cost (5 x 5) or 25 points. For negative Attribute, the cost is the rebate in points: e.g., -4 would cost (-3 x -3), giving back nine points.

'Quick Start' Generation

For rapid generation of a player character in a standard Adventurous-level Silhouette game, the character starts with one +2, four +1's and five +0's, placed in the ten basic Attributes as desired. This accounts for exactly 30 CPs.

Design Notes: Simplifying Attributes

Ten Attributes were chosen to reflect as many facets of a character as possible. Some players prefer to deal with fewer characteristics, however, in order to spend less time worrying about the mechanical aspects of the game and more time on the plot. Luckily, this is possible by simply *averaging* Attributes (rounding toward zero) that govern similar areas. Some detail is lost, but game speed is increased.

Six Stats: essentially, a d20 version. See the OGL conversion guide in Chapter 8.

Five Stats: Alertness (AGI+PER)/2, Body (BLD+FIT)/2, Intelligence (KNO+CRE)/2, Charisma (APP+INF)/2, Mind (WIL+PSY)/2. Strength tests use the new Body Attribute, Health tests use Mind; Stamina is (5 x (Body+Mind)/2) x 25. Divide starting CPs in half, rounded up.

Three Stats: Body (AGI+BLD+FIT)/3, Mind (CRE+KNO+PER)/3, Spirit (APP+INF+WIL)/3. PSY is not used, except if magic or other special powers are required. Strength tests use the Body Attribute, Health tests use Spirit; Stamina is (5 x (Body+Spirit)/2) x 25. Divide starting CPs by three, rounded up.

Character Points
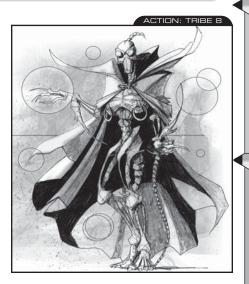
	JOE AVERAGE	PC	MAJOR NPC
Gritty Game	10	20	30
Adventurous Game	10	30	50
Cinematic Game	10	50	70

Attribute Costs

ATTRIBUTE RATING	CHARACTER POINT COST
+3	16
+2	9
+1	4
0	1
-1	0
-2	+1*
-3	+4*

* These values are added to available CPs instead of being subtracted.

Hooks & Tips: Gritty or Cinematic?

The Character Point table provides listed point costs for various game styles. These are covered in greater length in section 6.4.1. Basically, the more heroic the game, the more powerful the characters have to be to face its challenges.

ACTION: TRIBE 8

2.2 Skills

While a character's Attributes define his potential, his Skills define his actual abilities. This section details all the basic Skills available; Core Player Handbooks may add more as necessary to cover the requirements of their individual campaign worlds. Note that some Skills have a pre-modern version (for use in fantasy settings, for example).

Gamemasters should feel free to invent new Skills if they are absolutely required in their campaign. A new Skill should not be too general nor too specific — *Shooting* is an example of something too general, as it might allow any sort of ranged weapon to be used, while *Identification of Martian Flatworm Subspecies* is definitely too specific.

Skills are used in Skill Tests, where a number of six-sided dice equal to the Skill level is rolled and the highest number picked. Modifiers are then added to the result, including situation and Attribute modifiers. The latter will vary according to the task at hand:

Agility-based Skill Tests: These are situations which require a high degree of hand-eye coordination and quick reaction times, as well as those which require precisely controlled movements of the body.

Appearance-Based Skill Tests: By using a Skill to accentuate his attractiveness, a character can modify what other people's reactions will be, or, on the other hand, use his looks to boost the result of a social Skill.

Build-based Skill Tests: Most of the tasks which are related to Build are innate, not learned, thus there are few times a Skill test will be called for this Attribute.

Creativity-based Skill Tests: These are situations that involve an individual's ability to think up new solutions to a problem. An artist tries to find new ways to entertain his audience; a lost person tries to make the best he can with what he has at his immediate disposal; a commander tries to find a new way to achieve his mission objectives. All of these show the ingenuity of an individual under at least somewhat stressful conditions.

Fitness-based Skill Tests: These are situations that place high physical stresses upon the body. Pushing one's body to the edge has long been a source of fascination of Humankind.

Influence-based Skill Tests: The natural desires of people to try and get the most in return for their work have manifested themselves through communications of various types for ages. The ability to convince another person of one's ideals without the use of force is now far preferred to violence by many cultures.

Knowledge-based Skill Tests: These situations call as much on long study and past experience as they do on natural aptitude.

Perception-based Skill Tests: These tests rely on a character's awareness of his surroundings, including both actions and objects. These take into account sight, sound and possibly other senses such as smell or a "sixth sense."

Willpower-based Skill Tests: These are generally Opposed Skill tests between two people, to see who will crack first. These tests are also used when focus on a task is important.

Psyche-based Skill Tests: The rather ethereal quality of the Psyche Attribute is reflected in its tests, with the ability to pick up on the body language, eye movements and other subtle signals which people send. What information this type of test imparts is even more at the whim of the GM than other types of tests and players should not rely on it as a lie detector.

2.2.1 Skill Levels

Players should now choose Skills for their characters with their stock of Skill Points (see below). The *Skill Costs* tables list the Skill point costs for both Level and Complexity. Starting Skill Levels and Cpx are generally low, but can be improved through experience.

Skill Points Available

	JOE AVERAGE	PC	MAJOR NPC
Gritty Game	20	40	60
Adventurous Game	20	50	80
Cinematic Game	20	70	120

Skill Level Costs

SKILL LEVEL	COST
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100
Specialization (each)	5

Skill Complexity Costs

SKILL COMPLEXITY	COST
1	Free
2	4
3	9
4	16
5	25

2.2.2 Skill Complexity

Complexity was first explained in section 1.2.2 and represents the breadth of knowledge. All Skills begin with a free Complexity of 1. Additional levels of Cpx can be purchased at a cost in Skill Points (see *Skill Complexity Costs* table). A higher Complexity allows the character to use higher technology or more versatile tools with his Skill and also provides him with additional breadth of knowledge that will make completing a task easier. Complexity is noted as a second number after a slash, such as "2/4" for a Skill level of 2 with a Complexity of 4.

Unless specifically noted in their description, all Attributes and Skill tests, equipment and weapons are Complexity 1.

2.2.3 Skill Specialization

A character may obtain a Skill Specialization at a cost of 5 Skill Points. This gives the character a +1 modifier to his Skill test totals under certain conditions. For example, a soldier could have a Small Arms Specialization in "rifles," and thus add one to every roll made while using a rifle. A scientist could have a Physical Sciences Specialization in nuclear physics and gain the +1 whenever a relevant test is called for. The Skills section later in this chapter includes suggested Specializations, but the Gamemaster and players can add more should they wish.

A character may purchase multiple different Specializations in the same Skill, but no more than one Specialization (i.e. +1 bonus, maximum) can be applied on a single die roll. Players may be tempted to focus their characters at excelling in a few Skills by purchasing specializations and high levels in three or four Skills. Quite often, the advantages of this are more than offset by the inflexibility of the character, which will surface whenever the Gamemaster thrusts him into unfamiliar situations.

On record sheets, Specializations are usually noted either as a footnote to the Skill entry or right after it, in parenthesis.

2.2.4 Skill List

In order to make future character creation easier, only the Skills' names are listed in the table on the next page. Full descriptions can be found in the reference section at the end of this game manual.

Skill descriptions have several entries. The *Attributes* entry shows which Attributes are used for which tasks; note that this is not an exhaustive list and the Gamemaster may call on other Attributes depending on the nature of the test at hand. The *Specializations* entry lists a few suggestions for Skill Specializations. The next entry lists some professions that normally have some training in the Skill. The final entry is a short, plain-English description.

Some Skills are noted with a (Specific) after their name. These Skills cover a wide field of related abilities that rely on the same basic knowledge. When buying one such Skill, a specific field of expertise must be specified, but the character can also use the Skill for situations that fall under the general header, albeit with a penalty. It is possible to buy multiple instances of the Skill to cover multiple fields, if desired (for example, a scientist with multiple doctorates could have Natural Sciences (Physical) and Natural Sciences (Earth), to avoid taking a penalty and boost them to high levels).

In cinematic games (see section 7.3), where characters tend to be expert at everything, the above requirements are waved. The professor with Natural Sciences is equally adept at biology, physics and geology.

Design Notes:
Hey, Where's Skill 'X'?

A number of Skills were folded together in the Silhouette revision. Many of them, such as Acrobatics and First Aid, are now expressed as an additional Complexity of another Skill. (If converting an old character, take the folded Skill's level and apply it as a free bonus to the Cpx of the new Skill.) Skills that are not used often in a typical action game, such as the various art- and science-related Skills, were likewise merged together to free up points and allow well-rounded characters that are useful outside the lab or workshop.

Hooks & Tips:
Favored Item

When initially purchasing a Skill, a related item (be it a reference book, weapon, vehicle, etc.) can be chosen. It is then known as the character's "Favored Item," and only one favored item is allowed per Skill (it may not be changed later, either). When using a favored item, the character may ignore the bad side of any Fumbles rolled and treat the roll as a result of one. If the item is lost or destroyed in the course of an adventure, one Experience Point (XP) can buy a replacement for future sessions.

ACTION: HEAVY GEAR

Skill List

•	Animal Handling
•	Archery
•	Athletics
•	Business
•	Combat Sense
•	Craft (Specific)
•	Defense
•	Demolition/Traps
•	Disguise
•	Etiquette (Specific)
•	Forgery (Specific)
•	Gambling
•	Gunnery (Specific)
•	Hand-to-hand
•	Heavy Weapons
•	Information Warfare
•	Interrogation
•	Investigation
•	Language (Specific)
•	Leadership
•	Medicine
•	Melee
•	Natural Sciences
•	Navigation (Specific)
•	Negotiation
•	Notice
•	Personal Flight Device
•	Performance Art
•	Pilot (Specific)
•	Riding
•	Seduction
•	Sleight-of-Hand
•	Small Arms
•	Social Sciences (Specific)
•	Stealth
•	Streetwise
•	Survival
•	Teaching
•	Technical Sciences
•	Tinker
•	Throwing
•	Trivia/Lore (Specific)
•	Visual Art (Specific)
•	Zero-G

SILHOUETTE
CORE

SILHOUETTE
CORE

2.3 Secondary Attributes

Secondary Attributes are labeled that way because they are not selected like the basic Attributes, but are derived on the latter (and, in some cases, Skill levels). They represent facets of the character's physical and mental abilities. Unlike the basic Attributes, the Secondary Attributes can and do vary over the course of the game to reflect additional Skills gained, or injuries suffered.

The character's Secondary Traits, Wound Thresholds and System Shock are calculated using the following formulas. Although the formulas appear involved, most of them are simply an averaging of two or three Attributes. Some Traits have minimum values, meaning this is the lowest value they can have regardless of Attributes and skills.

Calculating Secondary Attributes

Strength =	(Build + Fitness) / 2, round towards zero
Health =	(Fitness + Psyche + Willpower) / 3, round off
Stamina =	(5 x (Build + Health)) + 25, minimum 1
Unarmed Damage =	3 + Strength + Build + Hand-to-Hand Skill level, minimum 1
Armed Damage =	3 + Strength + Build + Melee Skill level, minimum 1
Flesh Wound Threshold =	Stamina / 2, round up
Deep Wound Threshold =	Stamina
Instant Death Threshold =	Stamina x 2
System Shock =	5 + Health, minimum 1

2.3.1 Descriptions

The following texts describe the five Secondary Attributes and their use in the game. Along with each description, a table giving a real world equivalent for different ratings is listed. Attribute levels are based on an average human person in their young adulthood; some creatures or aliens will have more widely dispersed Secondary Attribute ranges.

Strength (STR)

Strength is a measure of a character's raw physical power and brute strength; it is a zero-average rating. Strength is the average of Build and Fitness, rounded towards zero. Cross-indexing with the Build mass table (section 2.1.1) shows the maximum weight that can be deadlifted and carried a few paces — the lowest weight value in the corresponding entry is used. Thus, a character with a +2 Strength can heft around 95 kg and stagger for a few steps before running into difficulty. A mass equal to half the deadlift capacity can be held above the head and a mass double the deadlift capacity can be dragged along.

Strength (STR)

STR RATING	EQUIVALENT
+3	Weightlifter
+2	Professional wrestler
+1	College jock
0	Average Person
-1	Out of shape
-2	Shrimp
-3	Weakling

Hooks & Tips:
Pushing One's Strength

Characters may attempt to push their Strength beyond its normal limits. This lasts only for the duration of the STR test. Strength can be pushed by up to +2 for characters with STR 0 or higher and by +1 for characters with STR below 0. Characters risk physical injury when doing this: make a Health Attribute test vs. a Threshold of 4 for an additional +1 Strength, or a Threshold of 6 for +2. Failing this roll results in a Light Wound for the character (torn ligaments, strains, back pain, etc.); Fumbling it will result in a Deep Wound (slipped disk, ripped muscle, etc.). Characters may push their strength as often as they like, but each additional push per day (before a full night of sleep) incurs additional risk of injury: add +2 (cumulative) to the base Threshold.

ACTION: HEAVY GEAR

ACTION: HEAVY GEAR

Health (HEA)

Health rates a character's resistance to illness, toxins and physiological shock; it is a zero-average rating. Health is the average of Fitness, Psyche and Willpower, rounded to the nearest whole number. People who never seem to get sick and those who can drink large quantities of alcoholic beverages have a high HEA rating.

Health (HEA)

HEA RATING	EQUIVALENT
+3	Never gets a cold
+2	Great health
+1	Good health
0	Average Person
-1	Weak health
-2	Poor health
-3	Perpetually ill

• Stamina (STA)

Stamina is a rating of how much sheer physical punishment a character's body can tolerate. Unlike many other Attributes, Stamina is *not* a zero-average rating: it is equal to five times the total of Build and Health, plus 25. No character may have a Stamina lower than 1 (if lower, round up to one). While a high Stamina will decrease the chances of injury, it is still quite easy for a character to be wounded by gunfire or other deadly weapons. Stamina will be used to work out the Wound Thresholds, which determine when and if a character gets hurt (see sections 2.3.3 and 3.5).

Stamina (STA)

STA RATING	EQUIVALENT
10	Frail old grandmother, child
15	Young teenager
20	Weak adult
25	Average individual
30	Fitness enthusiast
40	Professional athlete
50	Professional boxer

• Unarmed Damage (UD)

Unarmed damage is the Damage Multiplier of any unarmed (Hand-to-hand Skill) attacks performed by the character. It is *not* a zero-average rating: Unarmed Damage is equal to three plus the total of Hand-to-hand Skill level, Strength and Build. The minimum Unarmed Damage rating is 1. This damage is on the Personal Scale, not the Vehicle Scale (see section 4.4). The Damage Multiplier is a reflection of both how much force a character can put behind a punch and how well the character can place the blow.

Unarmed Damage (UD)

UD RATING	EQUIVALENT
1	Small Child
3	Average adult
5	Brawler
8	Martial artist

• Armed Damage (AD)

Armed Damage is the base Damage Multiplier of any of the character's armed attacks (Melee Skill). It is *not* a zero-average rating: Armed Damage is equal to three plus the total of Melee Skill level, Strength and Build. The minimum Armed Damage rating is 1. The Damage Multiplier of a melee weapon is equal to the character's Armed Damage rating and the weapon's own base DM. This damage is on the Personal Scale, not the Vehicle Scale (see section 4.4).

Armed Damage (AD)

AD RATING	EQUIVALENT
1	Small Child
3	Average adult
5	Street Thug
8	Skilled swordsman

Design Notes: Damage Multipliers

Most game rules include provision on injuries and damage and Silhouette is no different. In order to speed up gameplay and avoid multiple dice rolls for hitting, damaging and guarding against damage, all this is done in one fell swoop. The Margin of Success of a hit is multiplied by the Damage Multiplier of the attack to yield the total damage; armor and other protections will be factored into the Stamina ratings, which are used to determine wounds. Speed of resolution, always!

2.3.2 Injury List

Physical Status represents the level of resistance to physical wounds. There are three types of injuries. Flesh Wounds are nasty but not crippling wounds; Deep Wounds are immediately life-threatening injuries; Instant Death requires no further explanation.
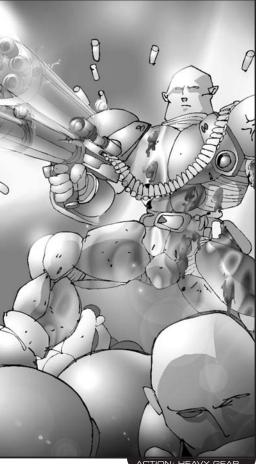
Each level of injury has an associated wounding Threshold. Wound Thresholds are the amount of damage an attack must cause to produce a certain type of wound. An attack produces the type of injury whose Wound Threshold is equal to or under the amount of damage inflicted by the attack; only the most severe of the possible results is applied. For example, if an attack does 40 points of damage to an average individual (whose Wound Thresholds are Flesh Wound = 13, Deep Wound = 25, Instant Death = 50), the attack victim suffers a Deep Wound (40 is greater than the Deep Wound score "25" but is less than the Instant Death score "50").

The Wound Threshold of Flesh Wounds is equal to half of the character's Stamina (round up). The Wound Threshold of Deep Wounds is equal to the character's Stamina. The Wound Threshold of instant death is twice the character's Stamina. Personal armor, if any is worn, adds its Armor Points to *each* Wound Threshold individually when the character is under physical attack; the modified Wound Threshold should be noted in parentheses after the original Wound Threshold.

Action penalties are negative modifiers to all actions that reflect the pain and distraction induced by wounds. A character is penalized -1 to **all** actions per Flesh Wound and -2 to **all** actions per Deep Wound. For example, a character with two Flesh Wounds and one Deep Wound would have a -4 penalty to all actions: -2 from the Flesh Wounds and another -2 from the single Deep Wound.

The final column of the injury list is used to note how many of each type of injury a character has sustained and possibly what they are (see section 3.5).

ACTION: HEAVY GEAR

2.3.3 System Shock Rating

The System Shock rating is a measure of how many injuries a character can take before going into shock and dying. If the total of System Shock and a character's wound-induced action penalties equals zero or less, the character goes into shock (see *Injuries*, section 3.5). System shock is equal to five plus the character's Health. System Shock cannot be lower than one.

System Shock is shown on the character sheet as a row of boxes — unused boxes are simply crossed out. As wounds are taken, boxes can be crossed out according to action penalties, representing the damage. See *Injuries*, section 3.5, for more details on bruises, wounds and their game effects.

2.4 Perks and Flaws

In order to keep the dice rolling and the bookkeeping to a minimum, the Silhouette system uses a fairly small range of numbers to describe the basic capabilities and skills of an individual. This can lead to characters that are fairly similar, especially if they are in the same general line of work. To help create unique characters with their own capabilities, Character Perks and Flaws (and Special Abilities, for some worlds — see Chapter Six) are used to provide additional details.

Each Perk costs a certain amount of Skill Points (SPs) and each Flaw "gives back" a certain number of SPs. These are the same Skill Points that are given to purchase Skills, so a character with more Flaws than Perks can gain additional Skills or Skill Levels, while a character with more Perks will start with fewer Skills. Perks and Flaws can be acquired later on during the game, as well (see *Experience*, section 2.7).

There is no strict limit to the number of Perks and Flaws a character can have. In order to prevent excess, we recommend not exceeding 12 points of Flaws (20 in a Cinematic game). Gamemasters have final approval and should make their decision according to two criteria: whether the Perks and Flaws fit the character concept and whether they fit the campaign concept. The first criterion prevents blind pilots; the second prevents multimillionaires in a campaign about pioneers scrounging for resources (for example).

Gamemasters can also choose to remove some Perks and Flaws from the selection altogether. For example, those who believe in letting Players define their character's psychology without concern for points can eliminate all personality-related Flaws.

Gamemasters should also not impose unfair costs for Perks. If the campaign concept calls for everyone to have military rank, be police officers, or be political leaders, then the Players need not pay for the relevant Perks. Gamemasters may have them pay for elevated rank or especially good reputations, but the campaign "base line" should be free.

Design Notes: Previous Versions

If you're a veteran Silhouette player, you'll no doubt notice that some of the Perks and Flaws have changed. This is mostly for play balance. We've also removed the "Innate/Acquired" note, because it brought an additional complexity with little benefits.

Hooks & Tips: Min-Maxing

Perks and Flaws are intended to give players a variety of options to define their character. Unfortunately, the variety of options, each with a cost or benefit, drives some to make the most of the system, purchasing a ludicrous number of Perks and Flaws to get extra Skills and special abilities. The number of blind, one-armed combat monsters wanted by the law and saddled with a large disabled family to care for is legion in the halls of roleplaying history.

Solutions to this problem include limiting the number or gravity of Flaws and Perks. You can tell Players they can get only one Perk and one Flaw, forcing them to take only that which is really important for their character *concept*.

In order to make future character creation easier, only the Perks' and Flaws' names and costs are listed in the table on the next page. Full descriptions can be found in the reference section at the end of this game manual.

Perk List

Perk			Cost
Accelerated Healing			4
Acute Senses (Specific)			
Hearing			1
Sight			1
Smell/Taste			2 each
Ambidextrous			1
Animal Companion			1-8 (depending on usefulness)
Animal Kinship			1 for modern setting, 5 for fantasy
Authority			3
Common Sense			4
Connections			1
Allies			between 3 and 7 per ally, depending on quality
Contacts			between 1 and 5 per contact, " " "
Double Jointed			3
Fake Identity			3 per fake indentity
Famous			between 1 (local actor) and 7 (world famous)
Favor			

Financial Debts	Debts of Honor	Point Cost
20,000 credits	key favor	1
50,000 credits	multiple favors	2
75,000 credits	major boon	3
150,000 credits	multiple boons	4
500,000 credits	life boon	5

Perk			Cost
Immunity			1
Influence			2-6 depending on scope & power
Intuition			4
Light Sleeper			5
Longevity			3
Lucky			10
Machine-Touch			5
Perfect Pitch			5
Photographic Memory			2 per rating, up to +3
Property			1 to 9, depending on property
Quick Learner			2
Radiation Resistance			2
Military Rank			

Rank	Military	Civilian
Enlisted/Member	2	0-2
Junior Nco/Veteran Member	4	2-4
Senior Nco/Assistant-Director	8	6-8
Senior Officer/Director	12	10-12

Perk	Cost
Sense of Direction	2 for 2D, 5 for 3D
Sense of Time	2
Strong Immune System	3
Subordinates	1 per subordinate's 5 CPs or SPs
Thick-Skinned	5
Wealthy	3 points per rating (1 pt. if non-renewable)

Flaws List

Flaw	Cost
Addiction	Addiction or Dependence Value/3 as appropriate
Age	-4 (young), -2 (old)
Amnesiac	-4
Animal Antipathy	-2
Bad Luck	-5
Beliefs	-1 to -3, depending on nature of belief
Bloodlust	-4
Code of Honor	-1 to -4, depending on depth of code
Criminal Background	-1 to -2, depending on severity
Curse	-2 to -6, depending on gravity
Debt	(Same as perk, but - instead of +)
Dedicated	-1 to -3, depending on demands & duties
Dependent	

CP/SP*total	Cost	CP/SP*total	Cost
20/30	-1	10/30	-2
10/20	-3	5/10	-4
*Character Points/Skill Points			

Flaw	Cost
Destitute	-2
Flashbacks	-2
Goal	-3
Heavy Sleeper	-2
Infamous	-1 to -4, depending on severity
Insomniac	-1
Lame	-6 if permanent, -2 if removable
Liar	-1, -5 if mythomaniac
Mechanical Inaptitude	-5
Motion Sickness	-1 per Rating
Nemesis	-1 per nemesis' 10 CPs or SPs
Obligation	-1 to -3, depending on severity and frequency
One-Armed	-2, -5 if permanent
Paranoid	-3
Phobia	-2 for Mild Phobia, -4 for Severe Phobia
Poor Senses (Specific)	
Hearing	-1
Sight	-1
Smell/Taste	-1
Blind/Deaf	-2 each to -8 each if permanent
Quirk	-1 per Quirk (max. -2)
Radiation Vulnerability	-2
Secret	-2 to -3, depending on gravity
Sick	-1 to -7, depending on gravity
Slow Healing	-4
Slow Learner	-2
Social Stigma	-1 to -3, depending on severity
Split Personality	-7
Thin-skinned	-4
Wanted	-1 to -5 depending, on power of the hunter
Weak Immune System	-3

2.5 Character Improvement

One of the more blatant rewards of roleplaying is character improvement. As they learn new Skills and abilities and grow through the trials they face in their lives, the characters' Attributes and other characteristics will correspondingly rise. They will also learn new tricks and become more cunning, helping them to get out of trouble more easily. Simply put, experienced adventurers are better than greenhorns. In the Silhouette game system, the characters' life experience is recorded in the form of abstract Experience Points (XPs).

2.5.1 Earning XPs

Experience Points are awarded by the Gamemaster at the end of each playing session. His decision is final. Some players also like to judge each other's performances and give additional "audience merit points," but this requires a high level of maturity to avoid self-congratulatory excesses. In general, an average of five XPs should be awarded for each session (ten for cinematic campaigns). Some Gamemasters use the distribution of Experience Points as the stick and carrot to control their players, but this is generally a bad idea that is likely to cause dissension within the group.

Awarding Experience Points*

BASE XPS	
Player showed little interest in the game and did not get involved	0
Player gave a good effort, but did nothing exceptional	1
Player stayed in character and showed enthusiasm	2
Player always stayed in character and showed genuine enthusiasm	3
TECHNICAL BONUSES	
Performed critical maneuver that moves the story forward	1
Discovered vital information or plot element	1
Makes clever and unexpected use of character abilities	1
COMBAT BONUSES	
Being in a combat encounter	1
Defeated opponents of lower power	0
Defeated opponents of equivalent power	1
Defeated opponents of higher power	2 or more
ROLEPLAYING BONUSES	
Dramatic acts of self-sacrifice	1 to 5
Player selflessly provides scenes for other characters	1
Player acts wildly out of character, even if successful	-1 to -3
SCENARIO BONUSES	
Players worked as a team	1ea
Minor setback or failure in a multi-session adventure	-1ea
Major setback or failure in a multi-session adventure	-3ea
GAME BONUSES	
Short Game Session (two hours or less)	x0.5
Typical Game session (three to four hours)	x1
Long Game session (five to ten hours)	x2
Marathon Game session (ten hours or more)	**
*No session can end with less than 0 XP	
** Award XPs as normal every four hours of game play	

The system proposed here is somewhat coarse — there are many occasions where an XP reward is obviously indicated, but a full XP is too much. In this case, use a more detailed XP model, by multiplying all XP awards and uses by a factor of 1000. This allow the Gamemaster to hand out smaller amount of XP as rewards, for example 50, or 300. Some Silhouette-based settings, such as **CORE Command**, use this model by default.

For example, a player that stayed in character and showed enthusiasm would receive 2000 XPs at the end of the session. When the time comes to convert them to, say, Emergency Dice, one ED will be purchased for 1000 XPs.

Combat

Nothing seasons a character more than fighting for one's life. Combat is a great source of XPs, though it shouldn't used to excess (because of the risk involved and its lethality). Each player receives 1 XP, just for being in a combat situation.

Each player receives 1 XP per group of opponents defeated, if the opponents are roughly the same in terms of power (i.e., have similar Character and Skill Point totals). Defeating larger or more dangerous opponents, such as a monster or well-equipped henchmen, multiply the XP bonus by their relative power (e.g., defeating an ogre twice the size of a human brings 2 XPs).

Defeating opponents that are less powerful do not give any XP at all.

Encounters & Problem-solving
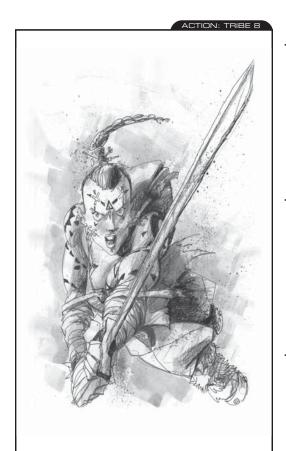
Simply overcoming challenges can generate XPs. Difficult situations may be overcome through death, persuasion, trickery, or simply figuring out a way to avoid the confrontation in the first place. Sometimes, bribing the guard to look the other way is just as efficient (and less troublesome) than knocking him out cold. Each player receives 1 XP per significant challenge, puzzle or encounter resolved.

Goals

Characters that reach their stated goals will receive XPs for doing so. How many depends on the goal itself. This is a good way to provide the XPs required to buy off Flaws.

ACTION: TRIBE 8

Design Notes: Small Rewards

It is sometimes hard to reward amusing, interesting or well-roleplayed actions with the coarse XP system. The easiest way to do so is to use the "detailed XP" rule and give out small amounts of XPs (1-50) for small but interesting actions, such as inviting a lovely girl to dance at the ambassador's ball, or grabbing a beer at the local tavern.

The idea is that a character doing activities that a real person would do and find stimulant should be rewarded somehow, to make the game more believable and the characters more "human" (if applicable). Alternatively, keep a table of small "favors" for players (like a momentary Skill bonus, or an additional clue, for example) to reward this type of roleplaying behavior.

2.6.2 Spending XPs

A character can stockpile XPs if desired, but most players will wish to spend theirs, either to improve their characters or to press their luck. There are two ways to spend XPs: buying the life-saving Emergency Dice or improving either the characters' Attributes or Skills.

Experienced roleplayers will notice that character abilities progress rather slowly. The reason for this is simple: Skills levels of 3 or more are very powerful. Most of a character's core occupational Skills should be level 2. Secondary occupational Skills and hobby Skills should be level 1. If a character has level 3 in a "hobby" Skill, it is more than a hobby: it is an obsession, or a way of life!

Design Notes: XPs Distribution
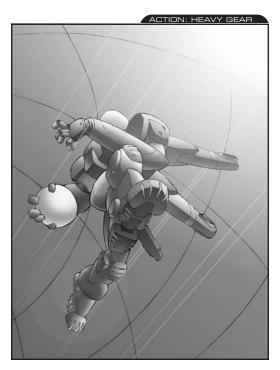
Gamemasters should encourage character growth without making them into demi-gods. Make sure the players put some XPs aside as Emergency Dice, which is probably the most tangible benefit of good play — they allow PCs to survive increasingly difficult situations. As a rule of thumb, about half the XPs received should be spent on Emergency Dice.

Emergency Dice

Everyone gets a certain number of lucky breaks in life. To represent these lucky breaks, any or all XPs can be converted to Emergency Dice, which are then spent to boost crucial die rolls. Each XP spent buys one Emergency Die. When spent, these are added to the dice already available for the roll. Unless the Gamemaster disagrees, up to five Emergency Dice may be spent on any single roll.

Emergency Dice can also be spent to save a character's life when his vehicle is Overkilled. Rather than use the normal ejection procedure outlined in section 5.5.3, the player can opt to spend five Emergency Dice and escape automatically with no damage. No roll is involved — just delete the Emergency Dice from the character's total.

Emergency Dice are most often used in Cinematic Games. For this reason, Gamemasters of Cinematic Campaigns usually will give more XPs than usual (see above). They can also directly give Emergency Dice to the players, in addition to Experience Points.

ACTION: HEAVY GEAR

New Skills cost one XP to gain, always starting at level one (gaining Cpx 1 for free, as usual). Ideally, there should be an in-game explanation — Skills don't appear out of nowhere.

Skills are improved one level at a time; levels cannot be skipped in order to save XPs. All new Skills must be purchased at level one first; it is recommended that the players develop a background element to how their character acquired the Skill.

Skill Improvement Costs

LEVEL	XP COST	CPX	XP COST
1	1	1	Free
2	4	2	4
3	9	3	9
4	16	4	16
5	25	5	25
6	36		
7	49		
8	64		
9	81		
10	100		

Hooks & Tips: Emergency Dice

These represents your character's true experience. Experience Points that are put in raising stats or buying new Skills represent training and techniques. The real bonus, though, comes from using Emergency Dice. That's the experience that saves the skin of the pilot — he may not know all those fancy advanced maneuvers, but he's got the timing down pat with what he does know. In the real world, real experience is essential to reach a certain level of expertise. Tutors cannot teach that.

As an optional rule, Gamemasters could require that a number of Emergency Dice be spent before the Player can buy the next level for one of his character's Skills. We recommend a number of EDs equal to (next Skill level x next Skill level). For example, to bring a Skill up to level 4, the Player should have used 16 Emergency Dice with that Skill since he's brought it up to level 3.

Attribute Improvement

Improving the character's Attributes is possible but very costly in Experience Points to reflect the time and deep commitment required. Raising one Attribute by one point costs 50 XPs. An Attribute cannot be increased more than three times in this manner, although multiple Attributes can be increased up to three times each. Beyond the purely rule-oriented issues, the player should also come up with detailed background information on the process — perhaps his character spends his free nights at the gym or the library?

Skill Improvement

Skills are much easier to improve than Attributes — all that is required is patience and regular practice sessions. The base cost to improve a Skill by one level is the next level squared, in XPs. Likewise, the base cost to improve a Skill by one Cpx is the next Cpx squared, in XPs.

ACTION: CORE COMMAND

2.6.3 Tutors

Tutors reduce the XP cost of learning or improving a Skill. Anyone who has a Skill level greater than the Skill level of the character wishing to improve can serve as a tutor; only those possessing the Teaching Skill or a high level of Skill, however, will really make a difference.

Hiring: Unless the tutor is another PC, it is likely that the tutor will have to be hired, often for a high fee. The suggested cost for one course is (tutor's Skill level x Skill level), multiplied by 1000 credits (or equivalent, in goods or tasks to perform; credits being a generic monetary unit roughly equivalent to a modern dollar). Finding such a tutor may not always be easy, especially with high level ones.

Time Required: The period of time needed to be taught is a number of months equal to the XP cost of learning the Skill minus the tutor's Teaching Skill. A minimum of one week is required for the student to gain any benefits from the tutor's teaching. The months above are 150-hour learning periods (about 40 hours per week). Alternatively, the learning period could be spread over multiple months or even years. A minimum of one hour per week must be maintained to gain any benefit to the character.

In a boot camp-like environment, a number of these 150-hour "months" equal to (tutor's Teaching Skill Cpx +1) can be squeezed into one real month. This sort of environment is highly oppressive — a Willpower or Psyche check against the Skill level being taught is made every month to prevent nervous breakdown. Few individuals willingly choose to undergo training of such intensity.

Teaching XP Rebate: Once the tutelage is finished, the tutor makes a test. This Skill roll uses either the Teaching Skill or the Skill being taught, whichever is highest. This is modified by the Creativity Attribute of the tutor. The result is the number of XP points that are subtracted from the cost of learning or improving the Skill.

If the roll is Fumbled, the cost is doubled due to the confusion induced by the tutor's poor guidance. The cost of learning the Skill cannot be reduced below a minimal XP cost which is equal to the new level of the Skill.

> **Hooks & Tips:**
> **Mentors and Teachers**
>
> Tutors make excellent Gamemaster characters. They run the gamut from the tough drill sergeant that wakes up the rookies every morning with a yell loud enough to wake the dead, to the patient old scientist showing the intricacies of a complex molecule to his best students. And of course, one must not forget what is perhaps the best-known tutor character of all, the gruffy veteran pilot. He'll take the player characters under his wing and teach them all he knows, then generally get killed in mid-game so they can become full-fledged heroes.

ACTION: TRIBE 8

2.6.4 Levels (Optional)

Many roleplaying games assign "levels" to characters, to help show how experienced (and generally, how powerful) the characters are. While the Silhouette experience system doesn't rely on Experience Levels, it is possible to assign some to characters. This remains entirely optional.

Assigning levels are useful in a number of ways: it showcases the character's progress; it allows a comparison of abilities at a glance; and it helps the Gamemaster assign proper opposition to the player characters. Some settings will use levels to give or deny access and equipment to the character, or use them as a mark of rank.

To generate a character's level, tally all the XPs he has received so far and compare them to the table. XPs that have been converted to Attributes, Skills or Emergency Dice all count — levels are based on the total XP ever earned by the character. As one can see, XP requirements for additional levels become exponential as one rises through the ranks. This will force characters to seek greater challenges (which provide more XPs) as they grow in power and influence.

Character Levels

LEVEL	XP TOTAL
1	0
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100

The XP cost of additional levels is equal to (Level x Level).

ACTION: HEAVY GEAR
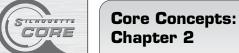
Design Notes: Ugh, Levels...

Many gamers consider Levels and other experience markers to be somewhat primitive and artificial, harkening back to their early days as wet-behind-the-ears roleplayers. Still, artificial or not, Levels do provide several advantages: they offer a way to measure a character's worth (and the kind of challenge he's able to face), they allow some game balance to take place by putting restrictions on what a character can or cannot use and (probably their most useful side) they provide an incentive for continued play. Human beings are reward-driven: we always want to see what's over the next hill, what kind of neat things we can acquire for our personal treasure horde. Often, the extra few XPs required to make it to the next level are the little push that will get people to play the next session... and go on brand new adventures.

Core Concepts: Chapter 2

The followings are examples and further explanations of the core concepts introduced in Chapter Two.

Step 1: Concept

Lisa is taking part in a fantasy game. This game will be run using the Adventurous Reality Distortion Level. Each character is to be part of a fairly clearly defined archetype like Bruiser, Mage, Thief or Woodsman.

Lisa decides she will be playing the "Woodsman" character and comes up with a few basic key character points. The character was a hunter who grew up in the country. (Lisa thinks it will be fun to play a bit of a "country bumpkin.") He's fairly fit and is exceptionally perceptive, with "eagle eyes." He's got a strong will, and is fairly quick to pick up new things. The character is good with a bow, good at hiding and sneaking and has a variety of skills that would prove useful in the woods. Lisa also thinks that the character should have a code of honor or be unlucky in love, but she's not sure which would be more fun to play.

It takes Lisa a bit to decide on Taran for her character's name. Since the group wants to get playing right away, Lisa wants to start on the character's attributes and skills. She'll fill out the personal history and description a bit later.

Step 2: Attributes

See Attributes, section 2.1, for basic rules.

Lisa isn't very fond of buying Attributes and would really like to get on to picking her Skills, so she chose the 'Quick Start' Generation option (see section 2.1.2). This means she gets one Attribute at +2, four at +1, and the rest at 0.

Based on her character's description, she assigns the +2 to Perception. She assigns the +1's to Agility, Fitness, Creativity and Willpower. Build, Knowledge, Psyche, Appearance and Influence are assigned 0's (no particular bonus).

Since Lisa has spent all of her Character Points, she doesn't have to worry about whether she'll use any extra CPs for Emergency Dice or for Skill Points. She writes Taran's attributes down on the character sheet.

Taran's Attributes

AGI: +1	APP: 0
BLD: 0	CRE: +1
FIT: +1	INF: 0
KNO: 0	PER: +2
PSY: 0	WIL: +1

Step 3: Skills

See Skills, section 2.2, for basic rules.

Lisa already has a few ideas about which skills Taran should have. She picks Notice right away, due his noted perception. He's good with a bow, and is a hunter, so he should have Archery and Traps. He's also a woodsman and she wants him to be good at sneaking and hiding, so she thinks that Athletics, Craft (Woodcraft), Stealth, Survival and Navigation would be good. He should be able to defend himself, so basic levels in Hand-to-Hand and Melee would be good. Both Defense and Combat Sense would be useful in situations outside of combat. She also thinks that Taran should know the basics of tending wounds and such, so she gives him Medicine.

The total costs of the skills is currently 49. Lisa can still spend one more point, but wants to move on to Perks and Flaws before finalizing anything.

Lisa writes down Taran's skills on a spare sheet of paper, along with the costs.

Taran's Skills

Skill	Lvl/Cpx	Cost	Total Cost
Archery	2/2	4/4	8
Combat Sense	2/1	4/0	4
Craftf (Woodcraft)	2/1	4/0	4
Defense	2/1	4/0	4
Athletics	2/1	4/0	4
Hand-to-Hand	1/1	1/0	1
Navigation (Land)	1/1	1/0	1
Medicine	1/1	1/0	1
Melee	1/1	1/0	1
Notice	2/1	4/0	4
Stealth	2/2	4/4	8
Survival	2/2	4/4	8
Traps	1/1	1/0	1

quickly speaks to her GM about the woods near the area the game is supposed to take place, and finds out that the Elves often frequent that area. With her Gamemaster's approval, she spends her final Skill Point on Language (Elven) at level 1/1. Now that she's spent all of her skill points, she writes her skills down on her character sheet.

Step 5: Secondary Attributes

See Secondary Attributes, section 2.3, for basic rules.

Now all Lisa has to do is calculate Taran's Secondary Attributes.

Strength: Taran's Bld is 0, and his Fit is +1. This averages out to +0.5. Since Str is rounded down, Taran's Str is 0.

Health: Taran has a Fit of +1, a Psy of 0, and a Wil of +1. This averages out to +0.667. Hea is rounded off as normal, so Taran has a Hea of +1.

Stamina: The total of Taran's Bld and Hea is +1. This gives Taran a Sta of 30 ((5 x 1) + 25 = 30).

Unarmed Damage: Since Taran's Bld and Str are 0, and his Hand-to-Hand level is only 1, his total UD is 4.

Armed Damage: AD is calculated the same as UD, but with Melee instead of Hand-to-Hand. This gives Taran an AD of 4.

Flesh Wound Threshold: This is equal to Sta/2, so Taran has Flesh Wound Threshold of 15 (30 / 2).

Deep Wound Threshold: Equal to Sta, so it's 30 for Taran.

Instant Death Threshold: Double Sta, so Taran has 60.

System Shock: SS is equal to 5+ Hea, so Taran has a SS of 6.

Lisa writes these down and talks to her GM about equipment. She is now ready to play.

Step 4: Perks and Flaws

This is an Optional Step — see Perks and Flaws, section 2.4.

Lisa looks first at the Flaws, because they help define the character more, and she thinks they're more fun to play. She looks at both Curse and Code of Honor, and decide that giving Taran a cursed love life would be more fun. She thinks that giving Taran the Quirk "Country Bumpkin" would be good.

After looking at the Perks list, the only one that Lisa thinks would fit with the character concept is Acute Sense: Sight.

Lisa talks to her GM, and he approves of the perks and Flaws. He assigns a value of 4 to Taran's Curse, because while love does play a large role in the game, it won't affect him all of the time.

Lisa totals up the points for Taran's Perks and Flaws and realizes she has 5 extra Skill Points to spend. She thinks that Taran's Notice skill could be bumped up a bit, but doesn't think he is a "Veteran" at noticing things. Instead, she spends 4 points and ups the complexity rating of his Notice skill, because he's really good at noticing details like faint tracks. This brings his Notice skill up to 2/2 from 2/1. Lisa

Introduction

There exists a close relationship between action and drama, especially in a high-octane setting like most game worlds. Many stories will involve some form of combat, an exciting high-speed chase , a shootout or a grand showdown. There is nothing quite as a satisfying as finally defeating a tenacious villain in a climactic battle.

This chapter provides Gamemasters and players with all the rules necessary for resolving actions involving characters. This includes combat, but also a variety of other tasks and hazards (though the truly specialized hazards, such as electrocution and asphyxiation, are examined in Chapter Six, *Specialized Rules*). The rules for dealing with combat between machines is dealt with in Chapter Five, *Mechanized Action*.

ACTION: HEAVY GEAR

ACTION: HEAVY GEAR

Always remember that these rules exist to make your life easier. If they truly get in the way, you can alter or discard them as you see fit, provided all the players are made aware of the change(s). Of course, Gamemasters should be the final arbiters of the rules and make sure that everything is fair for the players and their characters. Gamemasters can "fudge" dice roles to obtain a result that is better for the story, but they should keep it to a minimum. Players need to feel that they have a fair impact on the action.

Gamemasters should also remember that roleplaying is more than just combat and dice-rolling. Whole scenes can be dedicated to character interaction, with the only dice-rolling being a few Human Perception tests. Even in a combat scenario, Gamemasters should rely on descriptions and characters to make the battle memorable, not just the roll of the dice. Players will be happier knowing that their friend Jan was thinking of his fiancé Lena when he was struck down by an assassin's bullet, than knowing that he got a 2 on his defense roll.

3.1 Basics

Drama centers around conflict. In adventure stories, this conflict often manifests itself as open combat and split-second or nerve-wracking action, such as chases and infiltration. Deplorable as it may be in real life, combat is one of the key elements of adventure. This is not to say that non-stop action equals adventure: a game session that consists of little else but combat is simply an exercise in mindless slaughter. A well-placed fight or tense event can, however, spice up an adventurer's life by adding an element of risk.

In the roleplaying game, time is divided into 6-second rounds during combat and any situation where time, stress or complicated events are a factor. A round is an abstracted means of separating the actions of the characters involved in the scene and does not have to correspond to a certain time — it starts when the first character acts and ends when all characters have had a chance to take an action.

3.1.1 Action Definition

An action is defined as anything initiated by the Player which requires a Skill or Attribute roll, or anything that normally requires the character's full attention. The Gamemaster has final say as to what counts as an action — reloading a weapon might not require a Skill test, but it is definitely an action (see below).

During a round, a character may perform one action (e.g. shoot a gun, operate a complex control) at no penalty. If the character chooses to perform multiple actions (e.g. drive a car and shoot a gun at pursuers), **all** actions are penalized by -1 per extra action. Actions are chosen when it's the character's turn to act. Actions can be repeated — for example, a gun can be shot twice in the same round (at -1 each time, since it's one extra action).

Design Notes: Hey, Where Are The Combat Rules?

Most roleplaying games allocate a fairly large section of their rule content to combat. In the Silhouette CORE rules, combat is just another high-risk task, broken down into individual actions. Tinkering with the lock to get the blastdoor open in time is just as important to the story as hitting a bad guy and so both work off the same rules. Another example of the effect-based design in action.

Action Types

The Gamemaster decides whether an action initiated by a character is automatic, standard, simple, or impossible.

Automatic Actions: These are tasks that require little time or concentration (e.g. opening a door, walking on a sidewalk, shouting for help). They are not actions at all and do not require Skill tests. Thus, they always succeed unless something complicates them, in which case they may become Standard or Simple Actions.

Standard Actions: These are actions that could either fail or succeed (e.g. forcing open a locked door, walking on a tightrope, shouting for help while muffled). These require an Action test consisting of a modified dice roll which is compared to either a Threshold value or an opponent's own dice roll; see section 1.2 for a detailed description of Action tests.

Simple Actions: they are actions that don't need a test but take time — standing up, kneeling, etc. Other examples include drawing or sheathing a weapon, changing grips on a long weapon, readying or loosing a shield, opening a door, picking something up, getting something from a pack or pocket, loading a crossbow or firearm, mounting or dismounting, or controlling an animal. One simple action can be made at no penalty; taking two such actions becomes a standard action and will incur the standard penalty as well as Attribute or Skill tests for actions that may not normally require them.

Impossible Actions: These are those acts that are doomed to fail, often because they are logically impossible or just incredibly challenging (e.g. flying by flapping one's arms, finding a needle in a large haystack in under one minute). They fail automatically.

Refocus: This is a full round action, in which the character may not attack or move. During this time the character collects himself, catches his breath and gets his bearings on the current situation. His Initiative automatically becomes 4 + his Combat Sense Skill level for the next round.

Example: Actions

A character that picks up a shotgun shell (a simple action) and loads it (another simple action) is fine; they combine to equal the one action the character is allowed that round. If he were, however, to pick up the shell, load it and then fire, he would incur an AGI test to load the shell correctly, as well as a -1 to that test and the Small Arms test to hit the target.

Design Notes: Actions

Actions exist to put a believable limit to what the character can do during a round. They force the player to make choices and choices are at the base of any interesting game. For players of earlier Silhouette editions, actions work much the same — they've just been clarified and expanded.

• Special Actions

Readying: Readying is a Standard Action and allows the character to do something even after his turn is over. It is essentially a way of holding one's action until a specified event occurs. An example of readying is, "I draw my gun and will shoot anything that comes out of that doorway." Should someone walk out of the doorway, before that person can perform any actions the readied character may fire at them.

If the turn ends and the Readied Action does not come up, a character may choose to stay readied into the next round, or forgo the Readied Action and roll for initiative the next round as normal. A character can remain with their Readied Action in definitively (until fatigue sets in).

Delay: Delay is the same as Readying, except for two points: the character does not need to identify a particular action they wish to take, however, this also means they can not pre-empt another's action. Otherwise, Delay operates in the same way as Readying. Using the example from Readying, above, a character could state they are delaying; if someone walked through the door they would be able to perform their actions before the delaying character could draw their pistol and fire.

• Running Action Tests

The most common way is for the Gamemaster to tell the players what the action's Threshold is and have them roll the dice, add modifiers and report their Margins of Success or Failure. This method is the easiest but focuses much of the players' attention on dice and bookkeeping tasks.

The second way is for the Gamemaster to announce what Skill or Attribute is being tested and have the players report only their die totals. It is then up to him to compare the number to his chosen Threshold and describe the results.

The third alternative is for the Gamemaster to tell the players nothing in terms of game mechanics and perform the roll behind a screen. This is useful for Perception-related tasks, such as Notice or Combat Sense tests. Besides, rolling dice every now and then while wearing a fiendish grin keeps players on their toes...

The fourth alternative is for players who prefer to dispense with dice altogether in favor of drama and plot development. The Gamemaster must simply make a judgment call, based upon the task complexity and the character's competence. This works well when speed of play is important.

3.1.2 Initiative

Initiative determines who acts first in a combat round. To determine who gains initiative, all combatants roll an opposed Combat Sense test. No Margin of Success is determined; instead the combatant with the highest result will act first. The next highest will act second and so on for the remaining combatants in decreasing order. Those with tied results act simultaneously (but also see *Advanced Ties* in section 1.2.4).

Any character who fumbles the test is confused for a moment by the panic and chaos of the situation and cannot begin to perform any action except duck — but he may continue any action that began in a previous round and requires more than a round (e.g. treating a wounded buddy). See section 7.4 for more.

The roll for initiative is repeated at the beginning of every combat round.

Surprise

Surprise occurs when a character attempts to affect an unwary target. The game effects vary depending on whether the attack is at close range or from a stand-off distance. See section 3.3 for the former and 3.4 for the latter.

Free Strike

In combat, characters can affect the area immediately around them in a radius equal to their reach plus any wielded weapon's or tool's (see *Reach*, section 3.3.1), rounded up to the nearest whole meter for simplicity; in general, this will be a one-meter radius for most human-sized characters. When opponents perform certain actions while within this area, they let their guard down, allowing the character to make a Free Strike against them. Only one Free Strike may be made by a character within any given round, but the attack doesn't count as an action and doesn't incur multiple action penalties. The character must be aware that the opponent

is taking an action that will allow a Free Strike. Characters facing multiple Free Strikes within a round do not incur multiple attacker penalties to defense.

Actions that can provoke an Free Strike include fumbling a close defense test (see section 3.3), sheathing a weapon, attacking with a ranged weapon, picking up or using an item, loading a crossbow or firearm, gaining control of a mount, or any other action where the opponent's guard can be deemed as down.

Readying does not provoke a Free Strike (although the Action taken later may do so).

ACTION: HEAVY GEAR

3.2 Movement

Many Gamemasters prefer to abstract movement for dramatic purposes, but some GMs and players like to have precise numbers on hand. These are especially useful if a map of some kind is used to show the position of the characters during a scene.

3.2.1 Movement Types

There are five types of movement possible: crawling, walking, jogging, running and sprinting. Other types of movement, such as swimming and flying, are special cases and are covered elsewhere (see section 6.1). Climbing is covered in section 3.2.7 and further below.

Crawling means the character lies flat on the ground. It is not a very fast way to move, but it offers excellent protection in ranged combat (though it places one in a bad position in close combat). It might also be the only possible way to move, for example in a small cavern or in an ventilation shaft.

Walking needs no explanation: the character is moving at an unhurried pace, able to rapidly change direction and otherwise react to the environment. Walking is not very tiring.

Jogging is a move halfway between a walk and a run. It is most often used in combat, since it is both somewhat fast yet still allows one to react to the situation.

Running is a fast way to move, but it impedes most actions that the character can attempt (such as accurately firing a weapon). It is also tiring.

Sprinting is an all-out run, with the character giving everything he's got. Nothing except moving can be attempted while sprinting and sudden changes of direction are next to impossible (Athletics test vs. 6 for 45 degrees, +2 for each additional 45 degrees). It is very tiring and can usually only last a short time.

3.2.2 Move Rates

Under normal circumstances, a character can sprint up to 25 meters per combat round plus 5 meters times the total of the character's Fitness Attribute and Athletics Skill level (if any). A character's running, jogging, walking and crawling speeds are equal to 2/3, 1/2, 1/3 and 1/5 of his sprinting speed, respectively. No action may be taken while sprinting.

Move Rates

MOVE TYPE	SPEED (M/ROUND)
Sprinting Move	20 + 5 x (Fitness + Athletics Skill)
Running Speed	2/3 Sprinting Speed
Jogging Speed	1/2 Sprinting Speed
Walking Speed	1/3 Sprinting Speed
Crawling Speed	1/5 Sprinting Speed

3.2.3 Action Modifiers

The type of movement used by a character will affect their chances of succeeding at an action, be it an offensive one (like firing a gun) or a task of some kind (opening a hatch while running alongside a vehicle). Movement also affects the defense of a character — in general, the faster one moves, the harder the character is to hit or otherwise affect.

Movement Action Modifiers

MOVEMENT	ACTION MODIF.	DEFENSE MODIF.
Prone	+0	-3/+1*
Crawling	-1	-2/+2*
Stationary	+0	-1
Walking	-1	+0
Jogging	-2	+1
Running	-3	+2
Sprinting	n/a	+3
Climbing	n/a	-2

*Modifier before the slash is for Close Actions, after the slash for Ranged Actions.

Movement During Close Combat

The *Movement Action Modifiers* table imposes penalties on attackers who walk, jog or run during combat. These work well for ranged combat, where attackers should stay still in order to take aim. In close combat, however, a strict interpretation of these modifiers can lead to bizarre results: a warrior charging into melee could suffer a -3 penalty, for example. Real close combat is very fluid, with participants constantly moving both to avoid or parry blows and to deliver them. This movement is not considered as moving for the purposes of Offensive Modifiers in close combat. Only large scale movements such as running for cover matters.

While the motions of close combat are not sufficient to impose a penalty on Hand-to-Hand and Melee attacks, it is enough to make the combatants less than easy targets. Unless there is a reason otherwise (e.g. they are entangled), those fighting in close combat are considered to be walking for defensive purposes and so have a +0 Defensive Modifier.

To put it more simply, movement modifiers for close combat do not apply unless a character is either completely immobilized or actively trying to cover ground.

3.2.4 Carrying Capacity Effects on Movement

Use the deadlift capacity for Strength (see section 2.3.1) to establish a character's maximum load. A character can carry up to half his maximum load at no penalty, cannot move faster than a jog between half and three-quarter load and can only walk while carrying between 3/4 and full load.

Items not designed to be easily carried (no straps, handles, etc.; e.g. a big cardboard box) count as double their actual weight. Items which must be actively carried (i.e., require actual attention to balance and such — guns and backpacks obviously don't count) apply a -1 penalty to Actions, -2 if carried two-handed.

3.2.5 Injuries Effects on Movement

Severe injuries are very painful and crippling. They will affect the way a character can move, whether they are treated or not. Injuries are discussed at greater length in section 3.5.

Flesh wound is a catch-all term for painful but generally non-life- threatening injuries such as minor gunshot wounds, deep cuts or minor concussions. Characters with Flesh wounds cannot sprint, but they can maintain a steady, if painful, jogging pace.

Deep wounds are more severe injuries: compound fractures, punctured or crushed organs, damage to major blood vessels, etc. Characters with a single Deep wound can move no faster than a walk. Characters with more than one Deep wound are reduced to crawling and cannot stand unassisted.

3.2.6 Chases and Pursuits

Chase scenes and frantic pursuits are a staple of the action genre. The Gamemaster should decide how far apart the participants are from each other at the beginning and note the speed (in meters/round) down on paper. Each combat round, the players should make an Opposed Skill test using Athletics, then add their character's speed meters/round and any applicable modifiers, such as terrain effects.

The winner of the test may increase or decrease the distance between the participants by a number of meters equal to their Margin of Success. Fumbles by the prey decrease the distance by an additional 1d6, while Fumbles by the pursuer increase it by 1d6. The pursuit ends when one side is disabled or stopped, the pursued party moves out of sight, or someone gives up. Note that these rules can also be used to determine the outcome of a race.

A character may choose to purposely go over or through hard obstacles to try and lose his pursuers. This requires an additional Athletics test against a Threshold of 2 (low

fence), 4 (bench, throwing garbage pails behind) or 6 (scaling a tall fence). The pursuer must take the same test if he wishes to continue the chase. As before, the winner of the test may choose the distance change, equal to the MoS. In this case, however, a Fumble means a crash, giving a free movement round to the opposing side.

Chase Scene Modifiers

CONDITION	MODIFIER*	EXAMPLES
Foot Traffic	-1	Path, mall alley
Minor Obstacles	-1	Occasional bench, slick floor
Heavy Foot Traffic	-2	Crowded sidewalk, shop
Multiple Obstacles	-2	Boxes, stacks, shelves, rugged ground
Winding Path	-3	Park trail
Tightly Winding Path	-6	Corridors
Slalom (+1 to Defense rolls)	-1	Dodging maneuver

*All modifiers are cumulative

3.2.7 Climbing

Climbing is a special movement case, since gravity and skill come into play. In order to move up, down or across a wall or slope, a character must make a successful Athletics test. To move one-fourth the character's walking speed requires a standard action, while a full-round action allows movement of up to one-half the character's walking speed. Failure means the character makes no progress that round and stays where he is. A failure with an MoF of 4 or greater, or a Fumble, indicates the character has begun to lose his grip and must spend the next round regaining it (with a successful Athletics test). Once the grip is lost, each additional failed test gives a -1 modifier to further tests (cumulative). When the character can no longer pass the test (i.e., the Threshold cannot be met in any way), he falls (see *Falling*, section 3.2.8).

A character can spend a round to regain his grip and footing. If he succeeds a Climbing test at his current modifier, he may remove one from his current Climbing penalty (a character who has failed two tests and spends one round successfully regaining his grip would now have a modifier of -1).

A character who remains stationary on the wall must continue to make an Athletics test per two rounds spent stationary, or he begins to lose his grip (as above).

A character can't move easily to avoid blows while climbing and suffers a -2 penalty to defense while doing so. Characters also cannot use shields while climbing.

Any time a character is wounded while climbing, he must make an additional Athletics test. Failure in this case means the character falls from his current height and sustains the appropriate falling damage.

Certain types of equipment make climbing easier; if available, these will be found in the Equipment section of a setting's Handbook.

Climbing Options

Accelerated Climbing: The character tries to climb more quickly. As a full-round action, the character can attempt to cover a greater climbing distance, but suffers a -2 penalty on Athletics tests. The character must pass two tests each round: each successful test allows the character to climb a distance equal to one-half the character's Walking speed.

Making Handholds: The character can make his own handholds by pounding pitons into a surface, breaking something off and so on. Doing so takes one minute per handhold and one is needed per meter. This changes the surface's Threshold into 5.

Catching One's Self: It's near impossible to grab onto something while falling. The character can make an Athletics test vs. a Threshold of (surface's + 5) to do so. A slope is a lot easier: the Threshold is (surface's + 2). A success stops the fall.

Climbing Thresholds

THRESHOLD	SITUATION
2	A slope too steep to walk up. A knotted rope with a wall to brace against.
3	A rope with a wall to brace against, or a knotted rope.
4	A surface with many ledges or handholds to grab onto and stand on.
5	Any surface with adequate handholds (natural or artificial), or an unknotted rope.
6	An uneven surface with some narrow handholds.
7	A rough, irregular surface, such as a natural rock wall or a brick wall.
8	Overhang or ceiling with handholds but no footholds.
12	A perfectly smooth, flat, vertical surface.
-2*	Bracing against two close opposite walls (chimney).
-1*	Bracing against perpendicular walls (stemming).
+2*	Surface is slippery.
*These modifiers are cumulative; use any that apply.	

3.2.8 Falls

Falling is very damaging to the body. A number of dice equal to the number of meters fallen (maximum of 10 dice, taking the highest result as usual) are rolled and the result multiplied by the number of meters fallen (up to a maximum of x30). If the falling person was purposefully dropped in a manner that would cause him to impact head first, add ten to the die roll. The total is then multiplied by the local gravity, in gee (for example, a fall on the Moon — 0.167 g — would hurt a lot less than on Earth). This is compared to the Wound Thresholds, like any other attack (see *Injuries*, section 3.5).

For example, falling one meter causes (1 die x 1) of damage; falling two meters causes (2 dice x 2) of damage; falling four meters causes (4 dice x 4) and so on. Taking the latter as an example, a four-meter fall on Earth would cause, using the Silhouette 4-dice average, (5.3 x 4 = 21.2) or 22 points of damage. This

is a Flesh wound for most people — a badly sprained ankle, or a broken wrist perhaps. On the Moon, the same fall would cause a mere 4 points of damage — not even a scratch.

Softening Impact

A conscious person who is falling may attempt to soften the impact of landing. To do so, the character must make an Athletics Skill roll; the result is subtracted from the number of meters fallen before calculating the damage. If the number rolled is equal to or greater than the actual number of meters fallen, he lands unharmed on his feet, probably after doing a forward roll. If the roll Fumbles, the person falls head first and takes the standard extra damage.

Impact Surfaces

Base falling damage assumes that a moderately solid surface, such as grassy soil, is fallen on. Unusually hard surfaces, such as concrete and asphalt, double the effective number of meters fallen for damage purposes. Soft surfaces, such as sand and shallow water, halve the effective number of meters fallen for damage purposes (round down). Liquid surfaces, such deep water, quarter the effective number of meters fallen for damage purposes (round down). Special crash pads and nets used by firemen for evacuating buildings divide the number of meters fallen for damage purposes by ten times (round down).

3.2.9 Jumping

To jump, a character must make an Athletics test, modified by Fitness and the defensive close modifier of the character's current movement. The basic Threshold is 3; this is modified by the condition(s) of the terrain (+3 if rough; +6 if slippery; +9 if crumbling; etc.). The MoS x 0.75 is the number of meters jumped horizontally. Vertical distance is MoS x 0.25 in meters.

3.3 Close Actions

Close Actions are any actions that take place inside of the character's immediate reach (see *Reach*, below). They usually involve working on something, talking to someone, or physically engaging in combat.

To perform a task of some kind (applying first aid, plotting a navigation course on a map, etc), the character must succeed a Skill test against a Threshold set by the Gamemaster, based on the difficulty of the task (see section 1.2.4) and any applicable modifiers. If the character succeeds at the test, the result is based on the Margin of Success; similarly, if the character fails the test, the result is based on the Margin of Failure. If the character fumbles, bad things happen, based on the Skill being used.

To affect a wary target, the attacker must defeat the defender in an Opposed Skill test. For combat, the attacker rolls his Skill in the attack form being used (Melee or Hand-to-hand). The defender either uses his Defense Skill (to avoid being hit), Melee Skill (to parry with a weapon) or Hand-to-hand Skill (for unarmed blocks). Attackers should add the appropriate modifier from the modifier list to their roll depending upon what range they are attacking from.

Attacking unwary targets requires the attacker to pass a standard (not Opposed) Skill test with a Threshold number of 1 plus the defender's modifiers (like movement and cover). However, unlike a normal attack, the attacker must roll the lower of two Skills: either his chosen attack Skill or his Stealth Skill. Untrained individuals tend to be noisy or otherwise mess up surprise attacks by alerting the victim at the last moment.

To attack an inanimate object requires a Skill test with a Threshold equal to 1 plus any applicable modifier. This assumes that the target is man-sized or larger; if not, refer to the *Aiming* rule (section 3.4.2).

If the attacker wins the test, the attack hits or the action succeeds. If the defender wins or the result is a tie, the attack misses or the action fails. If the attacker Fumbles, he overshoots or otherwise finds himself open and is subject to a Free Strike (see section 3.1). If the defender Fumbles, he slips or otherwise finds himself in a bad defensive position and is subject to a Free Strike. If both fumble, ineffective blows are exchanged and nothing happens.

Hooks & Tips:
Advanced Tie Resolution

Ties between attack and defense rolls are treated normally (i.e., in favor of the defender). Tied Combat Sense rolls still indicate simultaneous action as far as the other combatants are concerned, but the combatant with the highest Combat Sense acts slightly faster than the one(s) he's tied with during that round. The rolls during the tied round are resolved normally, but if the slower combatant is wounded only the action penalties apply during that round (the Health roll is made at the end). If the slower combatant during a tied phase gets an Instant Death result, he will still get to act at a -2 penalty before the result takes effect.

3.3.1 Reach

Close actions can only be attempted within a character's reach, that is, how far he can directly touch and affect things. A mechanic cannot fix a machine that is even one meter away from his hands — he has to be in direct contact, or use tools that extend his effective reach (such as a pair of remote-control waldo arms). Reach also comes into play in some specific situations (can a character reach the lock of the cell from inside it?).

Reach gains most of its importance in melee combat: a large or skilled combatant can make sure their opponent is within their reach at all time, while staying out of theirs. Since combat is a highly mobile affair, this is largely abstracted through the character's Skill level. Hand-to-hand

and melee combat take place within arm's reach (roughly one meter); for each level of Complexity above one, add one meter to the distance (for example, a martial arts master with Cpx 4 would be able to strike at targets anywhere in a four-meter radius around him).

If an exact value is required, a character's reach is equal to 50 + (FIT x10) + (BLD x 10) in centimeters, in a 270 degrees arc centered on the front of the character (some aliens or creatures can reach further, or even all-around).

3.3.2 Close Modifiers

The following modifiers apply to an attacker's attempt to hit or affect a target within reach. Don't forget that movement or equipment modifiers (such as a weapon's Accuracy rating) may apply as well. See sections 3.2 and

the description and stats of any weapon or equipment used.

3.3.3 Special Circumstances

Close Actions can occur in a variety of constraining or dangerous situations. Gamemaster may choose to use the following rules to reflect the added difficulty.

Close Quarters: When fighting or acting in a small space or one full of inconvenient obstacles (e.g. in a tight corridor or a dense forest), powerful blows and actions that involve large items are more difficult. Any action done with the help of a piece of equipment longer than the character's arm is at -1. Some items are so cumbersome that they either cannot be used at all or deserve a higher penalty (e.g. a bull-whip).

Close Modifiers

SITUATION	ATTACK MODIFIER	DEFENSE MODIFIER	EXAMPLE
COVER			
Under light cover	n/a	+1	Shrubs, garbage cans, tall grass, thin walls
Fully hidden by light cover	n/a	+2	See previous entry
Under heavy cover	n/a	+3	Strong walls, rocks, large vehicles
Fully hidden by heavy cover	n/a	*	See previous entry
LIGHTING			
Area is very brightly lit	-1	-1	Direct spotlights, high yield beams
Area is poorly lit	-1	-1	Dim lighting, moonlight
Area is very poorly lit	-2	-2	Candlelight, starlight, fog
Area is barely lit	-3	-3	Single candle, indirect light, heavy fog
Area is completely dark	-4	-4	No illumination at all
PHYSICAL STATUS			
Mildly intoxicated**	-1	-1	A few drinks
Moderately intoxicated**	-2	-2	Heavy drinking
Heavily intoxicated**	-3	-3	Under medication
SITUATION			
Facing Opponent	0	0	Face to face
Flanking Opponent	0	-1	Attacker to side and rear
Behind Opponent	0	-2	Attacker coming directly behind
Multiple Opponents	0	-1***	More than one foe in the same round
Using off hand	-1	n/a	Using the hand that's not usually favored

*Automatic Success — the target cannot be hit, short of destroying the cover.

**The GM may wish to apply the rules for drug effects instead (see *Hazards*, section 6.3).

***Per additional Attacker; the first one is defended against normally, the second one at -1, the third one at -2 and the fourth and any subsequent ones at -3.

In Water: Characters acting or fighting in water above their heads use the lowest of the appropriate Skill or their Swimming Skill. All actions are also at -1, since one action is required to stay afloat, unless the character is using some sort of flotation device or is unconcerned about drowning (e.g. because of a Special Ability). Heavy armor or carrying other weighty equipment imposes a -1 penalty.

Characters in water deeper than their hips but not above their shoulders, suffer a flat -1 penalty to AGI-based Skill tests. Deeper water requires Swimming or imposes a -2 penalty as appropriate; shallower water imposes no AGI penalty, but halves movement speeds.

Multiple Attackers: When several people are attacking a single defendant, that defendant gets penalties to his Defense and Parry rolls. The defender suffers a -1 penalty for all attacks from a second attacker, -2 for those from a third attackers and -3 for those from any additional attackers. A single attacker who takes multiple actions in a round does not count as two attackers for these purposes.

3.3.4 Combat Techniques

Hand-to-hand combat is a complex art, full of subtle moves and brutal power. Brawlers can be defeated by someone half their size. The feel of each technique is different and differentiate the grizzled veteran from the brash, talented green recruit.

More advanced martial arts techniques are possible but outside the scope of the basic core rules. Still, check section 6.4.2 for more.

Fast and Lightning Attacks

These techniques simulate desperate offenses designed to take an opponent by surprise with a correspondingly increased risk of not landing the attack at all. Characters with lots of native talent, but not a lot of training will tend toward using speed or lightning attacks — an expression of brute force and raw talent over skill just as would be expected of them.

An attacker may choose to apply a penalty of -1 but strike twice (Fast Attack) in the same action, or a penalty of -2 (Lightning Attack) to strike three times in the same action. The penalty applies to one attack roll, which result is then used for all strikes. The defender must make a separate defense for all strikes, however.

Deception Attacks

Deception attacks allow attackers to use raw skills to reduce an opponents ability to defend himself, instead of boosting the attacker's ability to inflict raw damage. This simulates feints and dirty tricks. Skilled characters who don't have high Attributes will use deception attacks as a means of sneaking attacks in against people who outclass them in native talent.

An attacker may choose to reduce the number of dice used in an attack roll (effectively lowering their Skill) in exchange for applying the same penalty to the defender's own dice. If the defender's dice are reduced to zero, he rolls as if unskilled.

Defending Against Multiple Attackers

A defender can completely cancel the multiple attacker penalty (see *Close Modifiers* table) by removing one die per additional opponent from his Defense tests (i.e, lowering his effective Skill level by one for each additional foe). For example, a skilled fighter with Defense 5, when attacked by three thugs in the same round, may chose to defend with Defense 3 instead for all three thugs and thus not suffer the increasing defense penalties.

Combinations

Combinations like "Lightning Deception Attacks" are possible, but risky. Apply the effect of all options selected to the dice test.

Social-oriented Stats

Social STR	(INF+WIL)/2
Social HEA	(WIL+PSY+KNO)/3
Social Stamina	(5 x (INF+SocHEA)) + 25, minimum 10
Social Damage	3+Relevent Skill+Social STR+INF, minimum 1
Embarrassment	Social Staminia/2
Hurt	Social Stamina
Instant Shame	Social Stamina x 2
Reputation	5 + Social HEA, minimum 1

3.3.5 The Social Game (Optional)

Imaginative gamers may wish to use the close actions rules to simulate complex social interactions, going so far as to create settings where physical combat is entirely absent (or taken care of entirely off stage). This is well-suited for byzantine court settings where a razor-sharp tongue is more useful than a rapier. Do note that both approaches to the rules can be used in the same campaign, though using both at the same time will cause additional bookkeeping.

The physical Attributes (AGI, BLD, FIT) have roughly corresponding social ones: CRE, INF and WIL. Out of these social Attributes, you can generate Secondary Traits that reflect the nature of this type of game. The relevant social Skills include Etiquette, Seduction, Interrogation, Intimidation, Business. The Notice Skill, with any Human Perception specialization, can take on the initiative role that Combat Sense covers in physical interaction. Wounds Thresholds become the character's social standing and the System Shock becomes one's reputation — take too many hits and shame will force you into exile (which, unlike death, isn't permanent).

Because there are no specific weapons in a social setting, the Gamemaster can come up with values for different social attacks and ploys, based on the style of the setting. Or, more easily, the base value of the Social Damage could be increased to 8, with a minimum value of 5, as a general damage value.

XPs are awarded by social interactions, "defeating" a social enemy, making connexions, staying out of debt, making good business deals, meeting important people and so on. As the characters become better, their Skills and Social Standing go up, letting them ignore minor insults, *faux-pas* and other social gaffes.

Each character would have to define certain social goals to achieve. Parties of characters can be thrown together by events or by business.

ACTION: JOVIAN CHRONICLES

3.4 Ranged Actions

Ranged Actions are any actions that take place outside of the character's immediate reach (see *Reach*, previous section). They usually involve spotting, signaling/shouting, or sending a projectile on its way.

To affect a wary target, the attacker must defeat the defender in an Opposed Skill test. For combat, the attacker rolls his Skill in the attack form being used (Small Arms, Heavy Weapons, Archery or Throwing). The defender either rolls his Defense Skill (to duck behind cover or just dodge) or Melee Skill (if attempting to parry or deviate the action). Attackers should add the appropriate modifier from the modifier list to their roll depending upon what range they are attacking from.

Attacking unwary targets requires the attacker to pass a standard (not Opposed) Skill test with a Threshold number of 1+defender's modifiers (like movement and cover). To catch a target unaware usually requires some prior planning, laying an ambush; targets may make an Opposed Notice test against the attacker's Stealth test (minus modifiers for range, conditions, etc). Success means the target notices the attacker and can take defensive actions; this can sometimes happen long before the attacker was ready to fire.

To attack an inanimate object requires a Skill test with a Threshold equal to 1 plus any applicable modifier. This assumes that the target is man-sized or larger; if not, refer to the *Aiming* rule (section 3.4.2).

If the attacker wins the test, the attack hits or the action succeeds. If the defender wins or the result is a tie, the attack misses or the action fails. If the attacker Fumbles, he jams his weapon (one standard action is required to clear it). If the defender Fumbles, he slips or otherwise finds himself in a bad defensive position and is at -3 for the next Initiative test.

3.4.1 Ranged Modifiers

The following modifiers apply to an attacker's attempt to hit or affect a target out of his reach. Movement or equipment modifiers (such as a weapon's Accuracy rating) may apply as well. See sections 3.2 and the description and stats of any weapon or equipment used.

ACTION: HEAVY GEAR

Ranged Modifiers

SITUATION	ATTACK MODIFIER	DEFENSE MODIFIER	EXAMPLE
RANGE			
Point blank range	+1	n/a	Just outside of arm's reach
Short range	+0	n/a	Within a few meters
Medium range	-1	n/a	Within a dozen meters
Long range	-2	n/a	Within a few dozen meters
Extreme range	-3	n/a	Within a hundred meters
PHYSICAL STATUS			
Mildly intoxicated*	-1	-1	A few drinks
Moderately intoxicated*	-2	-2	Heavy drinking
Heavily intoxicated*	-3	-3	Under medication
LIGHTING			
Area is poorly lits	-1	-1	Dim lighting, moonlight
Area is very poorly lit	-2	-2	Candlelight, starlight, fog
Area is barely lit	-3	-3	Single candle, indirect light, heavy fog
Area is completely dark	-4	-4	No illumination at all
COVER			
Under light cover	+0	+1	Shrubs, garbage cans, tall grass, thin walls
Fully hidden by light cover	-1	+2	See previous entry
Under heavy cover	+0	+3	Strong walls, rocks, large vehicles
Fully hidden by heavy cover	-2	**	See previous entry

*The GM may wish to apply the rules for drug effects instead (see *Hazards*, section 6.3).

**Automatic Success — the target cannot be hit, short of destroying the cover.

3.4.2 Aiming

A character can spend a few combat rounds steadying his aim to improve his odds to hit. Add one die (i.e., increase the shooter's effective Skill level by one) to the attacker's roll per combat round spent aiming, up to a maximum equal to the shooter's Skill level. The character may not move while aiming. Burst fire attacks cannot be aimed at specific body locations.

A character can aim at a specific small target or body part (e.g. chest, arm or leg, abdomen). Aiming at a torso-sized target removes one die from the Skill test (i.e., reduces the attacker's effective Skill level by one). Aiming at a limb-sized target removes two dice from the Skill test (i.e., reduces the attacker's effective Skill level by two). Aiming at a head-sized target removes three dice from the Skill test (i.e., reduces the attacker's effective Skill level by

three). Aiming at a finger-sized target removes four dice from the Skill test (i.e., reduces the attacker's effective Skill level by four). Ignore Fumbles while aiming — the rules imply a greater than usual attention for the act.

The victim's normal Wound Thresholds are halved (round up) for all shots aimed at vital locations, such as the lower chest and head (but armor protecting that location is at full value). Shots aimed at specific limbs are useful as non-fatal attacks — they cannot cause Instant Death, unless through trauma (see *Injuries*, section 3.5).

Design Notes: Aiming

Aiming was always a problem in the early version of Silhouette because hitting and causing damage were linked. The most common reason for aiming at a specific point is to cause more damage, but giving negative penalties to the test *reduced* the damage! By playing with the attacker's Skill level instead, we truly affect the probability to hit, without touching the damage (it's also a good incentive to get a higher Skill level).

3.4.3 Burst Fire

Many weapons have a Rate of Fire bonus of +1 or greater. These weapons are called burst fire (or fully automatic) weapons because they can fire a hail of projectiles in short order. (Weapons with negative ROF require one or more rounds to load between shots.)

Burst fire weapons are assumed to be able to fire at any ROF bonus equal to or lower than their listed rating. Thus, a +3 ROF weapon could fire as a +3, +2, +1, or 0 ROF weapon. This is done to conserve ammunition since a weapon expends five shots per +1 of ROF in each attack — slightly unrealistic, but this is to simplify the bookkeeping. If the weapon doesn't have this much ammo left, round up to the nearest ROF and the ammo magazine is emptied (5 shots minimum are required for burst fire). For example, a seven-round clip could feed +2 ROF. ROF 0 weapons expend one shot per attack.

Burst attacks usually consist of firing a tight burst towards a single opponent. If the attack succeeds, the ROF bonus of the weapon is added to the attack's Margin of Success.

Walking Fire

Weapons capable of burst fire can be used to attack multiple targets in a single action by walking the burst across the targets. This can also be used as a shooting technique, starting intentionally low and watching the impact of the rounds to lead following shots onto the target. Thus, people or objects between the shooter and target (or between targets) can be hit as well.

A player must declare that he is walking fire before any attacks are made. The player then chooses the targets of his attack. A number of targets equal to the weapon's ROF plus one may be attacked. All targets must be within the weapon's firing arc and no more than one meter apart (if they are, count each additional one-meter space as a target). For each extra target, the weapon's ROF is reduced by one for damage purposes (but not for ammo expenditure). Each separate attack is rolled separately. Each individual target may not be attacked more than once per round by the same weapon (no extra attacks against one target).

Before resolving the attack on the intended target, potential targets in a zone between the shooter and the target must avoid the incoming fire. The danger zone extends one meter to either side of the intended line of fire. Each potential target in that zone must roll a defense versus a number of dice equal to one plus the ROF used in the attack. The total number of hits may not exceed the number of rounds fired.

Saturation Fire

Also called suppression fire, Saturation Fire is a military term for putting lots of lead in the air, either to improve one's chance to hit, or to make others keep their head down.

The attacker chooses an area (up to 5-meter wide at the weapon's Medium range band), then rolls his attack normally, except that the weapon's ROF is added to the result. Record the result: that's the Saturation Fire Threshold. Anyone or anything which enters that saturated zone later during the combat round must beat the Saturation Threshold or take damage. If the defender fails, the Margin of Failure is multiplied by the Damage Multiplier of the weapon and the resulting damage is treated as usual.

If the defender is already in the satured zone before the attack and under cover, they cannot move this round unless they first pass a Willpower Attribute test against a Threshold equal to 2 + (RoF used in the Saturation Fire).

Attackers can augment the size of the area affected by spreading the projectiles around. This doubles the width of the area affected, but divides the Saturation Fire Threshold in half (rounded up).

There are two limitations to Saturation fire: the saturation zone must be within the medium range of the weapon or closer and the weapon uses 20 shots of ammunition per ROF point invested into the attack. If the weapon doesn't have this much ammo left, round up to the nearest ROF; the result still stands but the ammo magazine is emptied (10 shots minimum are required for saturation fire).

3.4.4 Throwing

Throwing is the attack used to hurl items such as rocks or grenades. At least one free arm is required for throwing. If the object being thrown is larger than a quarter of the weight of the thrower, the other arm must be added to the effort. The base throwing range (in meters) is equal to the character's Strength +5 for objects weighting 1 kilogram or less. Each additional range band is double the previous one, as for a weapon. The maximum distance is reduced by the weight of the object being thrown by multiplying it by (1/weight in kilogram); for simplicity, round up to the nearest whole kilogram. Recalculate the range bands accordingly, as long as the Short Range equals at least 1 (if not, the normal range modifiers are disregarded — count all throws as Short range).

When an object is thrown, a Throwing Skill roll, modified as normal for range and movement, is made. A point on the ground can be chosen as a target — treat it as a stationary character for targeting purposes. If the modified die roll is equal to or higher than the defense roll, the object thrown lands right on target.

If the test is failed, the shot will deviate from its intended destination by a number of meters equal to the Margin of Failure. For the direction of the deviation, roll a die, with "1" being straight ahead from the thrower and other results proceeding clock-wise in 60 degrees increments.

If the test was Fumbled, the throw deviates as normal, but *toward* the thrower. Sometimes, a Fumble will land a projectile right on top of a target anyway; the attack is resolved as normal.

A thrown item will have a personal Damage Multiplier equal to its weight in kilograms, plus the thrower's AD. Some items designed to be thrown (throwing daggers, for example) may also add to the Damage Multiplier.

Throwing Base Range (m)

Project. Weight (kg)	-3	-2	-1	0	+1	+2	+3
			STRENGTH ATTRIBUTE				
1 or less	2	3	4	5	6	7	8
1.1 to 2	1	2	2	3	3	4	4
2.1 to 3	1*	1	2	2	2	3	3
3.1 to 4	1*	1*	1	2	2	2	2
4.1 to 5	1*	1*	1*	1	2	2	2
5.1 to 6	1*	1*	1*	1*	1	2	2
6.1 to 7	1*	1*	1*	1*	1*	1	2
7.1 to 8	1*	1*	1*	1*	1*	1*	1
8 and more	1*	1*	1*	1*	1*	1*	1*
Less than a quarter of thrower's mass	One arm required						
More than a quarter of thrower's mass	Two arms required						

*Maximum throwing distance; count as Short range for modifier purposes.

Grenades

Attacking with a grenade differs slightly from other weapons: the grenade is thrown or shot near its target and it detonates either on impact, after a short delay, or in the air. Most of the time, throwing accuracy is not as important, given that grenades have areas of effect that don't require them to land directly on a target to affect it.

Using grenades requires two tests — one Throwing test (or Small Arms or Heavy Weapons, if using a grenade launcher or similar device) to figure out where the grenade has landed (see *Throwing*) and a second one with the same modifiers to determine how much time there is between landing and detonation, for the target(s) to take cover or flee. A high result on the latter test signifies that detonation quickly followed impact; inversely, a low test result will mean that the grenade was thrown too soon after arming it, leaving enough time for the target to get out of harm's way (if possible).

A Defense roll is allowed against grenades if the defender is aware of the attack; compare it to the attacker's second Throwing roll (the one for detonation timing). Grenades usually have wide area of effect; anyone deemed by the Gamemaster to be in it must defend or take damage from the explosion. Targets in the grenade's secondary area of effect get a +1 to their defense roll. Only one defense roll needs to be made per explosion, regardless of the character's position. Characters who move to cover or otherwise defend against the grenade lose any readied action.

Design Notes: Grenades

Grenades have always been a problem in previous versions: merging placement, timing and damage in a single dice roll created weird situations. The current rules, while a little slower (because they require two attack rolls instead of one), makes more sense, results-wise. They also allow for hair-raising 'dud' situations — the first roll may place the grenade right on target, but if the second roll is Fumbled...

3.5 Injuries

Sooner or later, the dangerous life of the adventurers is going to catch up with them and they are going to get hurt. Injuries are dramatic in the Silhouette system, just like in real life. Though genre conventions and some optional game rules (see *Emergency Dice* and *Genre Points*, sections 2.6.2 and 6.4.6) can mitigate their effects, wounds remain something to be avoided whenever possible.

3.5.1 Damage

If an attacker hits an opponent, he does an amount of damage equal to his weapon's Damage Multiplier times the Margin of Success of the attack.

Damage = Damage Multiplier x Margin of Success

This damage total is compared with the Wound Thresholds of the victim. If the damage equals or surpasses any of the three Thresholds, the effect of only the highest one exceeded affects the victim. If an injury does damage less than the target's Flesh wound Threshold, the target suffers a minor injury that is somewhat painful, but has no game effects (bruise, minor cut, etc.).

Armor

Many people in high risk occupations, such as police and military personnel, wear body armor. Personal body armor is rated by its Armor Rating. That rating is added to all three of the character's Wound Thresholds. Some heavy or bulky armor also have an Encumbrance rating, which is applied as a penalty to all physical tests.

Shots aimed at locations that are not covered by a character's body armor are not affected by the Armor Rating. If a specific location is not declared as the target of an attack, the Armor Rating of the victim's torso is used.

Blunt Damage (Optional): Weapons and hits that cause blunt damage (maces, clubs, being

shoved into a wall, etc...) allow the character being attacked to treat his Armor as being 5 points higher than his normal amount for Flesh wounds. Deep wound and Instant Death Thresholds are not affected.

Stabbing Damage (Optional): Weapons and hits that can be classified as hack/slash types can use stabbing damage instead of the slashing damage assumed by the rules. The character being attacked treats his Armor as being 5 points lower than his normal amount for Flesh wounds. The attacking character is at -1 if he uses this technique with a weapon or tool that does not have an inherent Parry bonus. Deep wound and Instant Death Thresholds are not affected.

3.5.2 Action Penalties

Severe injuries are very painful and crippling. These effects are simulated by the action penalty associated with injuries. Each injury applies a penalty to all Attribute, Secondary Attribute and Skill tests due to pain and trauma. This also includes tests to resist degeneration of wounds and avoid unconsciousness and action penalties affect the Medicine tests of any medic who attempts to treat the character.

Flesh Wounds

Flesh wound is a catch-all term for painful but generally non-life- threatening injuries such as minor gunshot wounds, deep cuts, minor concussions and other severe flesh wounds. Multiple Flesh wounds can induce shock and are thus potentially life-threatening. Each Flesh wound applies a -1 action penalty. Characters with Flesh wounds cannot sprint or run, but they can maintain a steady, if painful, jogging pace.

Deep Wounds

Deep wounds are more severe injuries than Flesh wounds. Compound fractures of major bones, punctured or crushed organs, damage to major blood vessels and severe concussions are all classified as Deep wounds. Deep wounds can be immediately life-threatening and are often fatal if left untreated. Deep wounds apply a -2 action penalty. Characters with a single Deep wound can go no faster than a slow walk. Characters with more than one Deep wound are reduced to crawling and cannot stand unassisted.

Knockouts

Anytime a character suffers a Wound (Flesh or Deep), he may be knocked unconscious from pain or cranial trauma. The character must pass a Health test versus a Threshold of 1 (remember to apply the wounds' action penalties!) to avoid unconsciousness. If the character fails the test, he will remain unconscious for 1d6 minutes per Flesh wound plus 1d6 hours per Deep wound. If the character fumbles the unconsciousness test, he slips into a coma. The GM should decide how long the coma will be based upon the character's injuries. Most comas are unpredictable in duration and severity and make excellent plot devices.

Bruise Damage

It is possible to die from unarmed combat, though it's generally not the idea. Fists are used to knock out an adversary, not kill them — guns are used for that. Likewise, untrained fighters lack the skills required to inflict true harm (if a character doesn't have the Hand-to-Hand Skill, he is restricted to inflicting Bruise Damage only). Therefore, unarmed damage is treated differently than other types of wounds.

The Character Sheet has two columns of modifiers placed next to the System Shock column. One of them shows the Action penalty incurred by wounds; the other shows the Action penalty when bruised in unarmed combat. Unarmed fistfights proceed just like normal combat, with damage being compared to the Wound Thresholds and penalties applied as "wounds" are taken. For example, a "Flesh wound" will lower the System Shock by one, but not give any penalty; a more solid "Deep

wound" immediately after will lower the SS by two more points, past the "-1 Action" threshold — the character is dizzy after a solid hit.

Unlike actual wounds, however, these just represent fatigue and bruises and will disappear after a short time (see *Recovery,* section 3.5.6). Should enough hits be taken to surpass the System Shock, however, the character begins to sustain normal (real) damage from further attacks and is subject to Knockout tests (see previous page). If both unarmed damage and actual wounds are taken simultaneously, the bruise damage affects shock and healing just like a real wound.

3.5.3 Untreated Injuries

Any major wound that is left untreated will, after a while, begin to fester and become infected. Untreated wounds (not stabilized by a medic) also cause additional blood loss and trauma. The effects of leaving wounds untreated is simulated by wound degeneration.

Degeneration is tested daily for Flesh wounds and hourly for Deep wounds, independently of each other. Multiple injuries of one type cause the time between the degeneration tests to be divided by the number of injuries of the appropriate type (round up). For example, three untreated Flesh wounds will cause a test once every (1 day = 24 hours; 24/3) = 8 hours.

Degeneration tests are Health tests with a Threshold of 1 (remember all action penalties!). If the test is passed, the character's wounds do not worsen. If the test if failed, the character adds a new Flesh wound to his injury list. If the test is Fumbled, the character adds a new Deep wound to his injury list (nasty bleeding or infection). These additional injuries can lead to the character's death (see below).

Hooks & Tips: Describing Wounds

Because the Silhouette system uses Thresholds that create clear-cut game effects, it is often assumed that unless there's a Flesh or Deep wound result, nothing has happened. Wrong — if the attack connects, there is at least a minimal level of pain. Even though the damage may not be enough to cause a penalty (and remember that even a -1 penalty will affect tests greatly!), it does not prevent the pain from being at least distracting. When there is a Flesh wound, it hurts. A lot. When there is a Deep wound, it hurts to tears.

Flesh wounds may seem negligible, but they represent deep cuts, bleeding bruises, cracked ribs, twisted articulations, etc. They cause a great deal of trouble. Several players work under the assumption that although their character has a Flesh wound, they should not see the -1 penalty apply to anything intellectual they do. This stems from the fact that few Gamemasters take the time to properly describe what the wound looks like: "your character has gotten the kick right in the face — he's broken his nose and his forehead is bleeding enough to partially blind him, not to mention the pain involved."

Deep wounds are even worse. They represent fractures, internal bleeding, punctured lungs, torn ligaments, cut muscles, etc. They are rapidly incapacitating, enough to cause a -2 penalty on all tests. The pain is sharp and extremely distracting. As with Flesh wounds, they should be described with great detail to ensure that players realize the extent of the damage their character has received.

Keep in mind, when describing wounds, that combatants don't always keep facing one another. People move, dodge, weave, spin and expose their backs. Also, injuries happen from peripheral contact and are sometimes self-inflicted.

3.5.4 Stabilizing Injuries

To stabilize an injury, a medic must pass a Medicine Skill test with a Threshold of one. This test is modified by the victim's Health Attribute and the victim's action penalty due to injuries. Therefore, any medic attempting to stabilize his own injuries is penalized twice (once as a person in pain and once as the medic dealing with messy injuries). A successful test stabilizes one injury (Deep wounds usually are stabilized before Flesh wounds). A failed test accomplishes little and wastes five minutes. A Fumbled test wastes five minutes and aggravates the victims injuries, creating an additional Flesh wound. One attempt to stabilize a single injury (one Flesh wound or Deep wound) may be made per five minutes.

Stabilized injuries do not degenerate, but they can be destabilized. Flesh wounds are destabilized by any heavy activity (including combat). Deep wounds become destabilized by anything greater than minimal activity (bed rest, feeding, bathroom and little else). Destabilized wounds once again begin degenerating until they are stabilized again.

3.5.5 Death

There are two ways a character can die in combat: instant kill or because of trauma. If a character receives damage that surpasses his Instant Death score, he is instantly dead. These injuries are those that are beyond the help of medical science (e.g. head blown off, decapitation, skull utterly crushed, cut in half). The character cannot be recovered, unless the setting being played in features magic or very advanced science that can bring dead people back to life.

Trauma and Resuscitation

The other method of death is by trauma. A character begins to die of trauma as soon as his injury action penalty lowers his System Shock rating (Health +5, minimum of 1) to zero or less. The character can be resuscitated by modern medical techniques if he is reached soon after "death." The time between apparent death and irrevocable (non-resuscitable) death is equal to twice the character's original System Shock rating plus the character's current action penalty (a negative value) in minutes. If a character's action penalty plus twice his System Shock rating is less than or equal to zero, the trauma is too severe to save the character and he dies.

A resuscitation test is conducted in the same manner as a stabilizing test for injuries. Due to the large action penalty, it is very difficult to resuscitate a dying person unless one's character is a well-trained medic (don't forget that Medicine Cpx gives a bonus to the test). If the test succeeds, the victim is resuscitated and the medic gets one chance to stabilize one of the victim's injuries (most often a Deep wound). If the test is failed, the victim will die after the time limit is expired. If the test is Fumbled, the victim dies immediately.

If, after resuscitation and injury stabilization, the total action penalty from the victim's non-stabilized wounds doesn't bring the victim's System Shock rating below zero, the victim will live so long as he receives constant medical attention and his wound has not reopened (destabilized). If the action penalty from the victim's non-stabilized wounds still brings the victim's System Shock rating below zero, the victim once again begins to go into shock and "die." The time until death is reset and the medic must once again resuscitate the victim and attempt to stabilize an injury. This process continues until the victim dies of his injuries or enough of his injuries are stabilized to allow him to live.

3.5.6 Recovery from Injuries

With time, almost any individual injury can be healed. Even missing limbs can be regrown in some settings (either by scientific or magical means). Only one wound heals at a time; Flesh wounds heal before Deep wounds do. The resuscitation resting period (see *Constant Medical Aid* below) occurs before Flesh

wounds begin to heal. Comatose individuals heal normally, regardless of when they actually emerge from the coma. The rate of healing depends upon the availability of modern medical facilities: wounds heal faster with proper care.

"Flesh" Bruises disappear 1d6 hours after being received and "Deep" Bruises disappear 1d6 days after being received. Neither require medical assistance to recover from.

Hooks & Tips: Instant Death

As mentioned before, the Silhouette system is very realistic — shoot someone in the head with a pistol, or decapitate them and they are dead, irrevocably. This is fine for extras and other non-player characters, but for the main heroes of the story, it can put a serious block to risk-taking and good storytelling. There is a way to go around this, however. Whenever a player character (or a major villain) suffers an Instant Death result, give him additional Deep wounds to lower his System Shock rating to zero instead, keeping any previous wound penalty. This puts them into trauma instead and gives other characters a chance to save them. Of course, it is always better to ask players to spend Emergency Dice instead (see section 2.5).

Without Constant Medical Aid

Only minimal care is applied to the wound, such as a splint or bandage; the body is basically left to mend itself. Flesh wounds take one week to heal. Deep wounds take one month to heal and inflict a penalty of -1 to physical actions until the wounded can get proper rehabilitation treatments. Resuscitated individuals and those in long comas (over a week) will die without medical aid.

With Constant Medical Aid

To count as under constant medical aid, the healing process requires a properly staffed medical facility such as a hospital. The following healing rates assume that healing drugs (if available in the setting) are used. Flesh wounds take three days to heal. Deep wounds take two weeks to heal. Resuscitated individuals must spend one week recovering from the shock and trauma of resuscitation before their injuries begin to heal. Comatose individuals can survive on life support until they die of old age.

3.5.7 Hit Location and Damage (Optional)

Though it is often best to leave damage as a generic entry to keep play fluid, sometimes more details are required (for called shots, for example — see *Aiming*, section 3.4 for more). Different areas handle damage in different ways. If a limb is incapacitated it cannot be used in action or combat in any way.

Arms and Legs: An arm or leg can only take a certain amount of damage until it is incapacitated. Two Flesh wounds or a single Deep wound will render a limb useless (in addition to the standard Action Penalties). An Instant Death result is considered a Deep wound, but crushes or severs the limb. Ignore any additional damage aimed at an incapacitated limb.

Hands or Feet: An hand or foot can only take a bit of damage until it is incapacitated. A single Flesh wound or Deep wound will render a limb useless (in addition to the standard Action Penalties). An Instant Death result is considered a Deep wound, but crushes or severs the limb. Ignore any additional damage aimed at an incapacitated limb.

Head or Vitals: A hit to the head or other sensitive area (groin, throat, etc.) can be painful indeed. The defenders Wound Thresholds are halved (round up) for the purposes of these attacks. Armor still has its full effect, if it covers that area. Characters who receive a Deep wound aimed at the head must make a Health test to remain conscious.

3.5.8 Fatigue (Optional)

A living body is not a machine and will tire rapidly when submitted to heavy work or extreme conditions. To simulate this, the Gamemaster may award fatigue-caused penalties throughout the session; in time, these will affect the characters' performance, forcing them to rest periodically. Action penalties caused by excessive fatigue are applied to every action test — it is much harder to work and concentrate when tired. Even Appearance is affected — bags under the eyes and a slumped posture will certainly not help to seduce anyone.

Fatigue penalties are applied immediately after the period or activity in which they were gained; they are cummulative. Each player should keep track of his character's fatigue penalty; the FIT Attribute is always added to this. If the total fatigue penalties drop to -5 or below, the character falls unconscious and will not wake until all fatigue has been eliminated.

Sleep: if the character is unable to get at least four hours of sleep after a full day awake, a fatigue penalty of -1 is applied to all actions until the next rest period. Should the character miss more than one night, another -1 is added per additional night missed; for example, after three nights without sleep, the character would be at -3 to all actions.

Work: a -1 penalty is gained for every eight hours of hard physical work (chopping wood, tilling the fields, tending the animals, etc.).

Travelling: a -1 penalty is applied for each day spent walking. A -1 is applied for each four hours of climbing, running or swimming.

Loads: characters bearing half to three-quarter of their full capacity will suffer a -1 modifier per day. Characters carrying three-quarter to their full load will receive a -2 penalty per day, -1 per half day.

Combat: a typical fight (five minutes or less) gives a -1 modifier for a length of time equal to the fight itself. Longer combats, such as a pitched battle, will incur additional fatigue,

determined by the Gamemaster (generally, it is better to break this down into a series of smaller encounters).

Temperatures: If the day is very hot or very cold, add -1 to the above. If the character is wearing body armor, add another -1 due to added heat and load.

Recovering from Fatigue

The most efficient way of losing fatigue penalties is to rest quietly (no movement, talking and thinking only). A -1 penalty is removed for a full half hour of rest; this cannot replace sleep, however. A full night of rest cancels a -2 penalty. A good night of sound sleeps cancels a -3 penalty. It is not possible to accumulate sleep for the future.

Stimulant drugs (if available in the setting being played in) can be used to cancel fatigue points (see *Hazards*, section 6.3).

ACTION: HEAVY GEAR

Core Concepts: Chapter 3

The followings are examples and further explanations of the core concepts introduced in Chapter Three.

Example: Initiative

See Initiative, section 3.1.2, for basic initiative rules.

Jason and Al challenge Bubba and Steve to a fight. To determine who takes his actions first, the GM calls for initiative to be rolled. Each adversary rolls his Combat Sense.

Since all of the participants are using the same skill, Complexity comes into play. In this case, Al has a Cpx of 3, and Bubba has a Cpx of 2. Jason and Steve only have Cpx of 1, so Bubba will get a +1 modifier to his roll, and Al will get a +2. The results of the rolls are:

Jason gets a 6. Al gets a 5, +2 for Cpx, for a total of 7. Bubba rolled a fumble. Steve gets a 3.

Al goes first, followed by Jason. Steve will act third. Bubba is taken aback at how fast Jason and Al acted, and so may not act this round, but he may still defend himself.

Example: Free Strikes

Bubba just ran out of ammo and is within reach of Jason. Rather than attacking Jason outright, Bubba decides to holster his gun, trying to look intimidating. Since Jason is aware that Bubba must let his guard down in order to holster his gun, Jason may take a free strike at Bubba, even though he's acted already this round. Jason isn't one to let honor get in the way of staying alive, and tries to punch Bubba.

Example: Chases and Pursuits

See Chases and Pursuits, section 3.2.6, for basic pursuit rules.

Al is now hurriedly running for the door. Bubba and Steve are giving chase. Al currently has a 3-meter lead on Bubba and Steve, and has 5 meters to go before reaching the door. All participants roll Athletics, and have a -3 penalty due to the bar being crowded and furniture being in the way. All participants have the same Complexity rating, so it does not come into play. Al's total roll was 2, and both Bubba and Steve received 0, after modifiers. Steve is now 2 meters close to the door, and neither Bubba nor Steve has moved much.

Example: Climbing

See Climbing, section 3.2.7, for basic climbing rules.

Jason is trying to climb the 9 meters down a brick wall to the ground. The Threshold for climbing a brick wall is 7, and there are no handholds. Jason makes his Athletics roll, and since this is a Complexity 1 task, adds 1 due to his Athletics Complexity being 2. Jason rolls a 8, and may move up to 1/2 his walking speed because he's spending the whole round climbing. His next roll is a 3. Jason begins to lose his Grip! He tries to regain his footing, and rolls a 2, including the -1 modifier for losing his grip. Jason can no longer beat the Threshold for climbing a brick wall, and falls.

Example: Injuries and Armor

See Injuries, section 3.5, for basic injury rules.

Bubba really doesn't like Al, and shoots him with a heavy pistol (Damage Multiplier of x15). Al has a Stamina of 30. His wounding scores are Flesh Wound = 15, Deep Wound = 30, and Instant Death = 60. Bubba gets a Margin of Success of 2 (total damage 30). Since the damage is equal to or higher than Al's Deep Wound score, but lower than his Instant Death, Al takes a Deep Wound. He does not suffer a Flesh Wound as well, only a single Deep Wound.

If Al had been wearing an armored jacket worth 20 points of armor, his wound scores would

be Flesh Wound = 35, Deep Wound = 50, and Instant Death = 70. This would mean the gunshot would not cause a Flesh Wound, let alone the Deep Wound he suffered.

Example: Action Penalties

See section 3.5.2, Action Penalties, for basic rules on action penalties.

Al has now suffered two Flesh Wounds, and a Deep Wound from Bubba. This produces a (-1 -1 -2 =) -4 action penalty which is applied to all Action Tests, including Health tests to stay conscious.

Example: Knockout

See Action Penalties, section 3.5.2, for basic knockout.

Al's last wound brought his action penalty to -4. Since he suffered a wound, he must make a Health test with a Threshold of 1 to stay conscious. Al rolls a 5, which is modified to a 1. Just enough to produce a draw and stay barely conscious. Had he rolled any lower, he would have fallen unconscious for 2d6 minutes (1d6 minutes per Flesh Wound) and 1d6 hours (1d6 hours per Deep Wound).

Example: Bruise Damage

See Action Penalties, section 3.5.2, for bruise damage rules.

Steve had caught up to Jason and hit him hard with his fist for a Deep Wound. Since this is only Bruise Damage, Jason suffers a -1 action penalty, rather than a -2. If Jason had any real wounds, the punch would affect him as a normal wound and he would suffer a -2 action penalty.

Example: Wound Degeneration

See Untreated Injuries, section 3.5.3, for wounds rules.

Al has 2 Flesh Wounds and a Deep Wound. The Deep Wound must be checked for degeneration every hour. The Flesh wounds must be checked for degeneration every (24 / 2 wounds =) 12 hours. Al must pass a Health Test with a Threshold of 1 to prevent degeneration. He rolled a 4, which is modified to 0, and suffers another Flesh wound to represent the degeneration.

Example: Trauma and Resuscitation

See Death, section 3.5.5, for trauma rules.

Al had a Health of +1. This gives him a System Shock of 6. A new Deep Wound brought his action penalty down to -6. Rex begins to die due to trauma. He can be saved if a medic arrives in (6 x 2 - 6 =) 6 minutes. Fortunately for him Jeff, an experienced medic, arrives one minute later. He has 5 minutes to try and save Al. Jeff has a skill of 3/2 and rolls a 7. Al's injuries reduce this to 1 (still enough to save him). Jeff must now stabilize at least one injury to bring the action penalties above -6. He attempts to stabilize one of Al's Deep wounds and rolls an 8 (reduced to a 2), and succeeds. Jeff has barely saved Al's life.

Example: Recovery from Injury

See Recovery from Injury, section 3.5.6, for recovery rules.

Al is now resting in a hospital. He spends the first week in intensive care. After that, he begins to heal. His two Flesh Wounds heal at a rate of one every 3 days. Once those have healed, his two Deep Wounds take two weeks each. So after (7 + (2 x 3) + (2 x 14) =) 34 days in the hospital, Al is pronounced healthy and released from the hospital.

Jason took a Deep Wound from his fall, and doesn't want the authorities to find him, so he's trying to heal at home. His Deep Wound takes a full month to heal from his Deep Wound (a broken arm) and he suffers a -1 penalty to all physical activities until he can get into a rehabilitation program.

SECTION 3

MECHANICALS

Design

This chapter tells you how to create mechanical objects such as vehicles, armors and weapon systems.

Action

This chapter tells you how characters and mechanical objects interact with one another; it is mainly used for vehicles.

Introduction
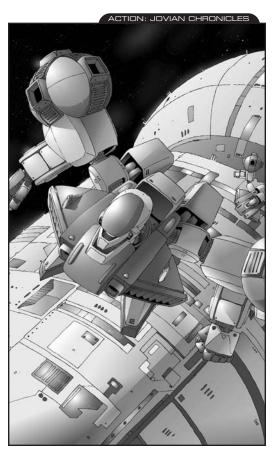
This chapter covers the generation process used to define the statistics of the vehicles and other high-tech items used in the game. One does not have to go through the construction system to play; pre-generated equipment and vehicles are provided in the various Silhouette settings. But to many, designing new items and testing them is definitely an enjoyable part of the game.

When the Silhouette mechanical design system was created, two primary goals were set: first, keep things simple; second, allow players the maximum flexibility possible. These two principles led to the creation of a reverse engineering-based design system. Instead of having designers pick a standardized chassis and then assign points to cram as much as possible onto it, the system let them pick their final result first and worry about cost later.

ACTION: JOVIAN CHRONICLES

ACTION: HEAVY GEAR

As a result, the system is quite liberal compared to the ones found in many other games. It is meant to provide interesting, "real" designs instead of just mere sets of game statistics pulled out of charts and complex formulas. There is no artificial formula-based space or weight limits placed on the components: if the vehicle *must* have a certain piece of equipment, the engineers will find a way to make it fit somewhere.

Since this system was created to handle most equipment type, it is non-linear in nature and involves a few calculations. These have been broken down in easily manageable formulas for ease of play and reference, so the math should not prove to be a burden.

Always remember that these rules exist to make your life easier. If they truly get in the way, you can alter or discard them as you see fit, provided all the players are made aware of the change(s). Of course, Gamemasters should be the final arbiter of the rules and make sure that everything is fair for the Players and their characters.

4.1 Basic Design

The first step in designing something is to decide on the overall concept behind the item or vehicle. No limits have been placed on the number of weapons and equipment, or indeed on almost anything. This is intentional and is meant to simplify the game and make the construction system more adaptable. While it is possible to build a tank that will sport battleship armor and weapons while still performing like a race car, that one tank will probably cost more — in technology, resources, time and money — than an entire brigade of more regular tanks. Guidelines and technological limits will be defined to fit the style of each setting, but are absent from the core system.

Once the basic parameters of the vehicle have been decided upon, the design process may begin. In addition to the book, some scratch paper, a pen and a calculator (if Threat Value and cost are desired) will also be needed. This section covers the generation of items and vehicles larger than a human being, but smaller than a building (see Section 4.4); this is known as the Vehicle scale (see Section 4.3.1 for more).

Design Notes: Limits

So what is preventing engineers from mounting twelve heavy beam cannons on a single, tiny vehicle? Nothing, except common sense and cost. After all, we're not in *your* campaign — for all we know, this might be quite standard! However, all design elements and concepts should have a purpose and fit the vehicle.

4.1.1 The Record Sheet

Each item is assigned the necessary statistics for game play. To make reference and modifications as simple as possible, the various entries that make up the item or vehicle are listed one after the other on the sheet, under the category to which they belong. Each stat is explained in greater details as it comes into play in Chapter 5, *Mechanical Action*.

Header

This is where the vehicle's name and overall characteristics are listed. The numbers are used as indicators to show how good or bad, strong or weak each machine is. Variation in these numbers between vehicles indicates various design objectives.

Threat Value is a measure of a vehicle's overall strength and usefulness. This is calculated by a few formulas to reflect the vehicle's offensive, defensive and miscellaneous abilities. Games can be easily balanced by allocating an equal amount of points to each side, which is then used to purchase vehicles.

The **Size** is based upon the item's mass. It's primarily used to determine the outcome of physical attacks, such as ramming attempts and carrying capacity. Size is not linear: a Size 10 vehicle is not just twice as big as a Size 5 vehicle, but four times as big.

Defensive Threat Value (DTV)

This is where the item's defensive capacities, including how much damage it can take, are listed, along with their Threat Value costs. An item with a high Defensive Threat Value is very tough or hard to hit.

Movement defines how a vehicle moves along. Each movement type confers some advantages and some disadvantages, depending on the environment where the vehicle operates. A vehicle may have more than one movement type (which do not imply a transformation — see Section 4.3.7 for that). To each movement type corresponds a speed in kilometers per hour (kph) and in Movement Points (MP). The only exception is Space, which is measured by acceleration (see *Space*, section 5.2.3.).

Maneuver indicates a vehicle's ease of control and its responsiveness to sudden changes of direction. The value is a zero-average value and is used as a modifier to all Piloting Skill tests.

Armor represents the maximum toughness of the item's structure — in effect, its strongest location. Light Damage, Heavy Damage and Overkill are equal to one, two and three times the base Armor value, respectively.

● Miscellaneous Threat Value (MTV)

This is where the item's other capacities, if any, are listed, along with their Threat Value costs. A vehicle with a high Miscellaneous Threat Value is very versatile or otherwise useful.

Crew and Passengers are listed here, if any are present. Vehicles always carry a crew, though hi-tech vehicles can replace living crew members with robotic systems. Additional crew members increase the number of actions a vehicle can perform; big vehicles generally need many crewmen to activate all their systems.

Deployment Range is the maximum distance (in kilometer) a vehicle may travel without being refueled or otherwise serviced. Realistic space vehicles add an entry for reaction mass.

Perks and Flaws are special features or defects that cannot be represented by the basic statistics. They are detailed in Section 4.2.

● Offensive Threat Value (OTV)

This is where the item's offensive capacities, if any, are listed, along with their Threat Value costs. A vehicle with a high Offensive Threat Value is very dangerous. Weapons and other similar devices may be present. The Offensive & Defensive System Design (see Section 4.3) is used to create them. They have the following stats:

The **Firing Arc** determine whether or not a given system can be aimed at a target.

The **Accuracy** (Acc) of each affects the odds of damaging opponents. It is applied as a modifier to each attack test and can drop because of damage.

The **Damage Multiplier** (DM) is a rating of how effective a system is. Like Size, the Damage Multipliers work on an exponential scale.
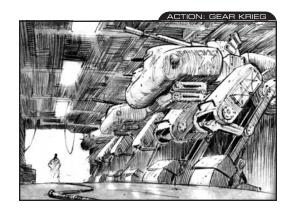
The **Base Range** (BR) is equal to Short Range; the Medium, Long and Extreme ranges are equal to twice, four times and eight times the Base Range, respectively. The actual distances in meters depend on the milieu in which the system operates (a laser will be longer-ranged in space).

The **Rate Of Fire** (ROF) works the same as the character-based version.

The **Characteristics** customized the system and its effects (full explanations are listed in Section 4.3).

Design Notes: Effect-based Design

Astute gamers will not doubt notice that there is a lot of similarity, stats-wise, between characters, items and vehicles. Stamina and Armor, for example, work the same way. This is intentional and allows us to provide quick equivalences (see Section 4.4).

ACTION: GEAR KRIEG

Items are assumed to occupy a basic volume (in cubic meters) equal to (Size/2 +1) cubed, rounded up. This includes access and maintenance space around it. Knowing the volume is not required for the design process but is useful when doing "reality checking."

Maximum Mass = $((Size + 0.5) \times 3)^3$

Size = ((cube root Maximum Mass)/3) - 0.5

The maximum mass for all Size categories is in kilograms (divide by 1000 to get metric tons). The mass is rounded up for all Sizes for simplicity.

Size Comparison

SIZE	ITEM
1	Human-sized
2	Large Animal, Motorcycle
3	Car
5	Heavy Truck
10	Light Tank, Fighter Plane
15	Heavy Tank, Bomber
25	Fully-loaded 747
50	Naval Frigate

Hooks & Tips: Advanced Technology

The game system has been calibrated to handle the capabilities of most technological items within a few hundred years' timespan. Extremely long-lived campaigns, however, might find cost and size spiralling upward as Gamemasters try to adjust game stats to reflect a rapidly improving technology base.

The solution is to use Technical Levels. Each construct or piece of equipment can be assigned an abstract numerical value that represent how sophisticated the item is. Abstract, because none can predict the future's capabilities. Items of the same technological level are built and used with the standard rules. If pitted against a lower or higher Tech Level, however, the difference between the two is applied to the dice roll. If using Threat Value and cost to choose units, each Tech Level multiply the cost by ten. Sensor and Comm Base Ranges are also multiplied by ten. Each TL adds or subtracts one from the Cpx of the item.

For example, a 2210-era campaign can be used as the Tech Level baseline. If one of the campaign's mecha is pitted against a 1990 jet fighter (which would be, say, two TLs lower), it will gain an automatic bonus of +2 to all die rolls. If the very same mecha was found and used by rebels in the year 13,508 to be pitted against TL+5 grav-spheres, the latter would have a +5 modifier to all dice rolls.

4.1.3 Select Armor Rating

This rating defines how resistant to damage the item will be; it doesn't only represent the thickness and angle of the armor plating, but also the general resistance of every component. Even if not armor-plated, it must still have an Armor rating to represents the protective value of its structure. Nothing can have an Armor rating below 1. It is possible to boost the Armor rating through the addition of specialized armor plates (see *Perks and Flaws*, Section 4.2).

Just like Size and Damage Multipliers, Armor increases is not linear: Armor 10 is not just twice as strong as Armor 5, it is *four* times as strong. The number of damage points required to produce Light Damage, Heavy Damage and Overkill results are equal to once, twice and three times the base Armor rating, respectively.

4.1.2 Select Target Size

The first design step is to choose a reasonable Size by using one of the formulas below (human-sized items, as well as truly large vehicles, are special cases covered in Section 4.4). Size is related to both weight and volume, in that it determines the actual weight of the item and the amount of damage it will cause in the event of a collision. Some items occupy more space than their Size would indicate — lighter-than-air craft, for example; this will be detailed further on, in the Perks and Flaws.

Typical Armor Ratings

VEHICLE	ARMOR RATING
Civilian Vehicle	1 to 5
Utility Vehicle	3 to 8
Battlesuit	5 to 10
Mecha	20 to 30
Fighter Jet	8 to 15
APC	10 to 20
Tank	20 to 30
Naval Ship	50 to 150

Design Notes: Armor

For the military enthusiasts, the base Armor rating of a vehicle is approximately equal to the square root of the armor plate thickness in millimeters, assuming perfect armor steel. Armor does not have to represent the exact thickness of the plating — some materials are stronger than others.

A good rule of thumb for choosing a vehicle's Armor rating: unarmored or slightly armored vehicles have Armor ratings roughly equal to their Size rating. Lightly armored vehicles have Armor equal to roughly twice their Size. Moderately armored vehicles have Armor equal to about two and half times their Size. Heavily armored vehicles have Armor equal to roughly three or more times their Size.

4.1.4 Select Crew

The number of individuals that are required to operate the vehicle is chosen here. Numerous specialized crewmembers improve a vehicle's combat efficiency, but they increase cost and vehicle size. All vehicles need at least one crewmember, but crew can be augmented or even replaced by automated systems (see *Perk and Flaws* and *Offensive & Defensive Systems*).

Design Notes:
The Clown Car Syndrome

Theoretically, the designer could maximize a vehicle's performance by allotting it an unusually large crew. A crewmember, however, occupies almost two cubic meters of space (with seat, instruments and egress/ingress space) — sixteen people will *not* fit confortably in a sub-compact car! What's more, a good crew is expensive. Training and paying each vehicle crewman costs hundreds of thousands of credits. In fact, the crew is often worth more money than the vehicle, so most designers will put only the minimum amount of crew required for the job.

Passengers

The vehicle can house passengers in addition to crew (marked as a number after a slash, like this: Crew/Passengers). They do not confer any extra actions, nor can they control anything. They do, however, count as crew for damage purposes (any damage is randomized between crew and passengers).

Passengers cannot use the crew's ejection system (if any); this must be purchased separately, at the same cost as for normal crew. A number of passengers equal to the Size of the vehicle may enter or exit each turn at no action cost, provided the vehicle is moving no faster than 12 kph.

Computer

The vehicle may have one (or more) built-in crew computer(s) instead of living crew. Rules-wise, they are treated as a human crew; if they are very quick, with many actions per round, the computer simply replaces an equivalent number of crewmen. Computers can come in either "dumb" or "sentient" version: neither type affected by "Crew" hits. See section 4.1.1 for costing effects — in the meantimes, just assign an equivalent crew within parenthesis.

4.1.5 Select Movement Systems

Movement types define how a vehicle moves along. Each movement type confers some advantages and some disadvantages, depending on the environment where the vehicle operates. Some are more versatile than others.

A vehicle may have more than one movement type. Common examples of this are amphibious vehicles (Ground and Naval), mecha with thrusters (Walker and Space), or any combination thereof. There is no limit to the number of movement types a vehicle may use. Having more than one movement type does not represent an actual transformation; the movement types are available at all times (see Section 4.4 for transformable machines).

Air: this movement type is used by all flight-capable vehicles, including gravitic ones. Each aircraft's peculiar flight characteristics are provided by suitable Perks and Flaws (see *Perks and Flaws*).

Ground: any wheeled or tracked vehicle. Wheeled vehicles are assumed to be equipped with large wheels and strong suspension for rough terrain; ordinary wheeled vehicles such as city cars have the Poor Off-Road Flaw to represent the nature of their drive system (see *Flaws*, section 4.2.2).

Hover: this movement type is used by all vehicles which travel above but near the ground, such as ground-effect hovercraft. Ground-effect systems only work within an atmosphere.

Naval: any conventional water vessels and hydrofoils, or anything that can float. This makes only the vehicle's hull water-tight, however: it is still susceptible to flooding and capsizing.

Rail: any vehicle which uses a rail or guide of some kind to move about is part of this category. This includes classic steel railroad, MagLev, monorail and many others. These vehicles can only move along a rail line and the rail(s) must be of the same type as the one the movement system was designed for.

Space: a vehicle equipped with reaction thrusters uses this movement system. This movement type does not confer the ability to perform standard atmospheric flight or reentry — these must be purchased separately. It can be used as a "jumpjet" system in a gravity well (see *Jumping*, section 5.2.1).

Submarine: this movement type covers underwater craft of all sorts. Most Submarine vehicles also have the Naval movement type, but it is not required.

Walker: this represents a multi-legged walking vehicle. The exact number of legs presents is totally up to the designer and has no bearing on either speed and toughness, both of which are determined separately.

Speed

A Top Speed, measured in Movement Points (MP), must be selected for each movement type. This MP value is divided in half to obtain the Combat Speed of each movement type, rounding up.

To get the speed in kilometers per hour, multiply the MPs by 6 for land and naval vehicles and by 30 for air vehicles. Space vehicles use acceleration rather than speed: multiply the MPs by 0.1 g to figure out the vehicle's acceleration (fractional MPs are possible for vehicles with very low acceleration — solar sails, ion drives).

Special Case: Air

The Air movement mode includes all manner of flying machines and does not discriminate between fixed and rotary wing crafts. There is, however, a fundamental difference between VTOL (vertical take-off and landing) crafts and other types of aircraft: the Stall Speed.

All vehicles with the Air movement mode are given a Stall Speed: this is the minimum possible speed at which the aircraft can travel before falling. A VTOL craft has a Stall Speed of 0, which means it can hover in place.

Most non-VTOL aircraft have a secondary movement type (usually Ground or Naval) to taxi around, though it does not necessarily have to be motorized. In such case, the second system's speed is 0 and its MPs come from the Flight MPs; the designer chooses a Top Ground Speed (normally 1/2 to 1/3 of the Air Combat Speed in kph) higher than the Stall Speed of the vehicle (in kph). Top Ground Speed can only be used in a straight line, and Ground Combat Speed has a -3 Maneuver penalty. Unpowered Ground Speeds do not count towards DTV. Many aircraft with powered Ground speeds have the Reduced Maneuver Flaw.

Maneuver Values

MANEUVER	TYPICAL VEHICLE
+1	Nimble Battlesuit, Dirt Bike
0	Nimble Mecha, Battlesuit, Motor Bike, Dirt Buggy
-1	Mecha, Car, Nimble Hovercraft
-2	Large Mecha, Large Car, Hovercraft, Fighter
-3	Truck, Tug Boat, Small Space Ship
-4	Patrol Boat, Large Truck, Medium Space Ship
-5	Large Hovercraft, Large Space Ship
-6	Large Naval Vessel or Ponderous Spaceship
-8	Ponderous Naval Vessel
-9	Supertanker
-10	Space Station

Design Notes: Maneuver

The Maneuver rating partly represents the sophistication of the vehicle's controls. An agile vehicle that is next to impossible to control in battle will earn a low Maneuver rating.

Design Notes: Powerplant

Silhouette does not require the designer to buy a powerplant. It is assumed that the engineers in charge of the project know their job and will select an efficient engine that fits the chassis for the desired movement systems and speeds. If they don't... well, that's what Lemon Rolls are for.

Special Case: Space

The Space movement mode includes all manner of thrust-based movement. The movement mode does not discriminate between reaction and reactionless drives. As usual, precise description of how the vehicle functions is left to the designer.

4.1.6 Select Maneuver

The Maneuver rating represents how controllable and agile the vehicle is. Zero is a generic "average" rating for a human-controlled mecha; other vehicles are often assigned lower values. Positive values denote nimbleness while negative values indicate a slower reaction time or poor turn radius.

4.1.7 Select Deployment Range

The Deployment Range is selected next: this is the maximum distance (expressed in kilometers) the vehicle can cover without refueling or maintenance, barring any crew needs such as food and rest.

Combat vehicles often have somewhat inefficient engines that guzzle their fuel or electric charge in just a few hours. Most ground vehicles can cover somewhere between 200 and 800 km before needing to be refueled or otherwise serviced. Understandably, aircraft tend to have pretty large Deployment Ranges. Fixed-wing planes have more autonomy than rotary wing aircraft: averages for the former range from 800 to 5,000 km, while for the latter it rarely exceeds 1,000 km. The "generic" cost-efficient value for all designs is 500 km, though small vehicles will probably have a lower range.

Space vehicles obviously cover far larger distances and, thanks to inertia, may not even need to expend fuel to do so. When in space, each hour of travel is treated as one kilometer of Deployment Range. Thus, a mecha with a Deployment Range of 500 km could walk 500 kilometers or fly in space for 500 hours (or any combination thereof) before requiring maintenance.

Reaction Mass

This applies only to vehicles with the Space movement type which are also intended to be realistic. Some kind of reaction mass (or fuel, in the case of older chemical engines) must be provided in order to propel the vehicle forward.

Reaction Mass is the Burn Points (BPs) capacity of the internal tanks (jettisonable tanks can be designed with One-Way Transformable — see Section 4.4). The weight of the reaction mass will be added to the final weight of the vehicle after the design is completed; the *Burn Points Per Ton* table is used to determine its weight. It is important to note that the acceleration of the spacecraft, as selected in section 4.1.5, already takes this extra weight into account.

The amount of Burn Points per ton will depend on the type of reaction mass used. Fusion engines are extremely efficient, while primitive fuel rockets will often carry many time their empty weight in fuel.

See *Space Movement*, section 5.2.3, for more information on Burn Points and their use in game.

4. Chapter Four: Mechanical Design

Burn Points Per Ton

RM Type	Weight Multiplier	Volume per Weight
Hydrogen	0.00001 x total BP	0.071 ton/m3
Helium-3	0.00002 x total BP	0.142 ton/m3
Water	0.0002 x total BP	1 ton/m3
High Efficiency Rocket Fuel	0.01 x total BP	2 ton/m3
Low Efficiency Rocket Fuel	0.05 x total BP	5 ton/m3

Multiply the above number by the empty weight of the craft to know the weight of the reaction mass. The Volume per Weight is given for transporting Reaction Mass as cargo.

Design Notes: Reaction Mass

Reaction Mass and Deployment Range are the twin factors that will determine the autonomy of a space vehicle. It is useless to carry more reaction mass than can be used in the vehicle's entire deployment range, though the reverse is possible (the vehicle can always coast partway to its destination).

If the vehicle is intended to have ground-to-orbit capacity, it must carry enough Reaction Mass to allow its thrusters to operate long enough at the required thrust level to get to escape velocity. Refer to *Reaching Orbit*, section 5.2.

4.1.8 Select Perks and Flaws

Many vehicles have special characteristics called Perks and Flaws. Perks are systems or design features that give additional capabilities to the vehicle. Flaws are design shortcomings or defective systems that impair the vehicle.

A complete explanation of each Perk and Flaw can be found in the *Perks and Flaws* reference section, at the end of the book. Those that apply to the vehicle should be marked down along with their rating (if applicable) and their point cost.

Perks List

PERK	COST
ACCESSORIES	
Acceleration Protection	1
Airlift Winch	Rating
Autopilot	5
Catapult	Rating
Emergency Medical	1 x number of crew actions
	0.1 x number of passengers
Escape System	total number of actions due to crew (ejection seats)
	total number of actions due to crew x 2 (escape pods)
Gun Ports	1 (gun ports for 1/3 of the crew and passengers)
	2 (gun ports for half the crew and passengers)
Large Doors	1
Life Support	1 x number of crew actions (limited life support)
	3 x number of crew actions (full life support)
Loudspeakers	1
Mining Equipment	5 (Light Duty)
	20 (Heavy Duty)
Pintle Mount	5
Power Booster	(Rating x Rating)
Ram Plate	4
Refueling Equipment	2 per refueling boom
	1 for intake and receiving equipment
Searchlight	1 per 200 m range (fixed)
	2 per 200 m range (swivel)
ARMS	
Battle Arm	0.2 x Rating for each arm
Manipulator Arm	0.5 x Rating for each arm
Tool Arm	0.3 x Rating for each arm
ARMOR QUALITIES	
Ablative	Rating/2
All-Around	10
HEAT Resistant	Rating
Location	0.5 x Rating, rounded up
Reinforced	Rating
Brittle	-10
COMMUNICATIONS	
Cost = (Base Range (km)/10) x Comms Cost Multiplier	
• Comms Cost Multiplier	

Rating	Multiplier	Rating	Multiplier
+5	10	-1	0.7
+4	7	-2	0.5
+3	5	-3	0.3
+2	3	-4	0.2
+1	2	-5	0.1
0	1		

Perks List Continued

PERK	COST
Airborne Comm	Free with Air Movement
Spaceborne Comm	Free with Space Movement
Satellite Uplink	10
One Way	-2
FEATURES	
Accomodations	cube root (vol. in cubic meters) (x2 for luxury)
Airdroppable	4
Airlift Ready	1
Bio-energy Powerplant	8 + (Rating x Rating)
Cargo Bay	cube root (volume in cubic meters) for enclosed cargo bay
	(cube root (surface area in square meters) / 10) for open bay
Diving Wings	2
Easy to Modify	2 per subassembly
Fire Resistant	10
Fuel Efficient	2 for one and a half times the range
	5 for twice the range
	10 for three times the range
Glider	2
Haywire Resistant	10
High Towing Capacity	5 (double) or 15 (triple)
Laboratory	5 + (5 x Rating)
Lighter-Than-Air	2 (standard envelope)
	5 (self-sealing envelope)
Low Profile	2
NOE Flyer	5
No Fuel Required	10 (permanent power)
	5 (if the power can be cut off)
Off-Road Ability	10
Reentry Systems	2 per ballute/ablative shield (single use)
	10 for permanent feature
Sick Bay	2 x maximum number of patients
Stratospheric Flight	5
HOSTILE ENVIRONMENT PROTECTION	
Desert	1
Extreme Heat	5
Extreme Cold	1
Pressure	2
High Pressure	5
Extreme Pressure	10
High Gravity	1
Vacuum	1
Radiation	Rating
All the above (except Rad)	10

Perks List Continued

PERK	COST
INFORMATION WARFARE DEVICES	
Decoy System	Rating (visual only)
	Rating (sensor only)
	Rating x Rating (visual and sensor)
ECM	ECM range (km) + Rating
ECCM	ECCM range (km) + Rating
Holofield	Rating x 2
Stealth	Rating x 3
REINFORCED SYSTEMS	
Ammo/Fuel	5
Backups	5
Chassis	5
Crew	5
Movement	5
SENSORS	
Cost =	(Base Range (km)/2) x Sensor Cost Multiplier

• Sensor Cost Multiplier

Rating	Multiplier	Rating	Multiplier
+5	10	-1	0.7
+4	7	-2	0.5
+3	5	-3	0.3
+2	3	-4	0.2
+1	2	-5	0.1
0	1		

Airborne Sensors	Free with Air Movement
Spaceborne Sensors	Free with Space Movement
Aquatic Sensors	Free with Submarine Movement
Counter-Battery	4 + Rating
Defective	-Rating
TELEPORTER DEVICES	
Teleport Self	2 x (Rating x Rating)
Teleport Others	5 x (Rating x Rating)
THOUGHT INTERFACE	
Base Cost =	10 + (Action x Action)
Invasive Interface	The cost of the interface is reduced by the PSYThreshold.
Mind Link	The cost of the interface is reduced by the WIL Threshold.
Unshielded	Half the normal point cost (round up).
Sentient	The cost of the interface is reduced by the WIL Threshold.
DIMENSIONAL TECH	
Dimensional Mass	Rating x Rating
Dimensional Storage	Rating

Flaws List

FLAW	COST
MOVEMENT FLAWS	
Cannot Glide	-5
Decreased Maneuver	-(Rating x 2)
External Power	-2
Maximum Ceiling	Rating x -1.5
Maximum Climbing Angle	Rating x -3
Muscle-powered	-5
No Engine	-2
Poor Off-Road Ability	-1
Poor Towing Capacity	-1
Requires Airstrip	-5
Unstable	-2
NEGATIVE FEATURES	
Difficult to Modify	-1 per subassembly -5 for the entire vehicle
Problem-prone	-1 per additional Lemon Die
Fuel Inefficient	-Rating
HEAT Vulnerable	-Rating
Highly Flammable	-5
Inefficient Controls	-10
Large Sensor Profile	-Rating x 2
Overheating	-5 (Light/3 rounds, Heavy/5 rounds) -10 (Light/2 rounds, Heavy/3 rounds)
Random Shutdown	-0.5 x Rating
Sensor Dependent	-5
Trackable Emissions	-Rating x 3
Vulnerable to Haywire Effects	-5
WEAKNESSES	
Exposed Auxiliaries	-5
Exposed Crew	-5 x (Crew Exposed / Total Crew) rounded off to nearest whole number
Exposed Systems	-5
Exposed Movement	-5
Fragile Chassis	-5
Hazardous Ammo/Fuel	-5
Weak Facing	-(Base Armor/4) per defensive arc
Weak Point	Rating/2, rounded down
Weak Underbelly	-(Base Armor/5)

Design Notes: Perks and Flaws

Perks and Flaws are the greatest pitfall for new vehicle designers in Silhouette. There are two ways to control Perk costs.

The first is to cherry-pick the Perks that are most important to the design and leave out minor improvements. It is always assumed that basic equipment, such as seatbelts and headlights are already included in the vehicle's design — no need to buy the Reinforced Crew or Searchlight Perks for thoses, for example.

The second method to control cost is to select appropriate Flaws to compensate for the chosen Perks. For example, the cost of a Satellite Uplink could be reduced by adding the Vulnerable to Haywire Flaw, representing the vehicle's sensitivity to massive electrical attacks.

4.1.9 Select Offensive and Defensive Systems

The weapons and defensive systems mounted on the vehicle are selected at this stage. For more detail about the different weapon systems and options, refer to the *Offensive and Defensive System Design* section (4.3).

Most vehicle crews are only capable of firing one or two weapons per combat round without incurring some nasty penalties. Linking two or more weapons provides a solution, but tends to be costly in ammunition.

Choosing a balanced amount of ammo is also very important. Vehicles often get disabled in battle; when that happens, all the points spent on extra ammo and guns are wasted. Better to assign a reasonable ammunition load and buy more vehicles than build a single gun-bristling monster that can be disabled by one lucky hit.

4.1.10 Generating the Numbers

The Threat Value and cost of a vehicle do not have to be figured out in order to use it. Just plugging in the desired stats and playing is a perfectly valid option if a Gamemaster is present to balance the forces in presence.

Threat Values are primarily a game balance tool. A single number is not the ultimate, perfect representation of a vehicle's worth, however. This is why a vehicle's Threat Value is further broken down into Offensive, Defensive and Miscellaneous Scores. These three "sub-values" point out the strengths and weaknesses of each vehicle design.

First, the Offensive TV, Defensive TV and Miscelleneous TV values of the vehicle must be figured out. These three ratings are then averaged together (all three added together, then divided by three) to determine the vehicle's total Threat Value. This allows some changes to equipment or values without having to recalculate the whole vehicle.

For simplicity, all Threat Values are rounded off.

Roots and Exponents

Although Silhouette is a fairly simple system, some math was bound to creep its way in. Fortunately, most calculators have both the root and exponent functions. If your calculator has just exponents, roots are still possible - just invert the exponent (see examples below).

The following format is used throughout: Squares are exponent 2 and Cubes are exponent 3. Higher levels of exponents are not used.

Exponent of number = number^exponent

examples: square of 2 = 2^2 = 2 x 2 = 4
cube of 2 = 2^3 = 2 x 2 x 2 = 8

Root of number = number^(1/root needed)

examples: square root of 16 = 16(1/2) = 4
cube root of 8 = 8(1/3) = 2

The Offensive Threat Value (OTV)

Vehicles with high Offensive are especially good at dishing out damage. On open terrain and in face-to-face confrontations, they are very likely to come out on top. The base Offensive TV is the total of the ratings of all the vehicle's systems and their ammunition.

Arc: If a system has either a Fixed Forward (FF) arc or is turret-mounted, its cost is altered. Weapons with FF arcs have a x0.6 multiplier, while weapons with T arcs have a x1.8 multiplier (this includes the cost of the turret). The turret may be deemed "slow" (ST): a 180 degrees arc must be chosen for it each turn; the cost multiplier is x1.5 instead.

Link: This allows multiple systems to be linked to a single trigger. The Accuracy and Base Range are equal to the worst ones among the link's systems. One action is required to fire a link. Each system attacks and is rolled for separately; as soon as one misses, all the others not yet used automatically miss/fail (but still use ammunition). When a link is triggered, *all* of the systems in the link are. However, the individual systems that make up the link may be triggered individually. Systems may be part of more than one link.

Sniper: This is a targeting device that allow a system to have better accuracy at long range. In game terms, it provides has a +1 modifier at Long and Extreme ranges.

Punch: This ability for all types of arms is entirely optional and must be paid for. Note that it is possible to have a lower punch Damage Multiplier than the rating of the arm — it just leads to more bookkeeping as a separate rating must be recorded. If a higher DM is desired, a melee weapon (or bigger arm) should be bought.

Calculating the Offensive Threat Value

SYSTEM ARCS AND SPECIAL SYSTEMS
Systems with F arc = Cost x 1
Systems with FF arc = Cost x 0.6
Systems with T arc = Cost x 1.8
Systems with ST arc = Cost x 1.5
System Link = Total cost of all systems in link x 0.1
Sniper = Total cost of all systems x 0.1
Punch Cost = (DM/2) x (DM/2)
The OFFENSIVE TV is equal to the sum of the following:
Costs for all Systems
Cost of Special System, if present (Link, Sniper)
Punch rating for each arm (if applicable)

The Defensive Threat Value (DTV)

Vehicles with high Defensive TVs are especially good at avoiding damage or surviving it. Their strong point is defending objectives and escaping enemy forces. The following formula produces the vehicle's Defense Threat Value.

Calculating the Defensive Threat Value

The Defensive TV is equal to the sum of the following:
(Armor x Armor)
(Top speed in MP) x (Top Speed in MP) (repeat for all movement types*)
*Subtract Stall Speed from Air Movement Points first
The Defensive TV is multiplied by the *Maneuver Multiplier* (see table next page).

Maneuver Multiplier

MANEUVER	MULTIPLIER
+3	9
+2	3
+1	1.5
0	1
-1	0.67
-2	0.5
-3	0.4
-4	0.33
-5	0.28
-6	0.25
-7	0.22
-8	0.2
-9	0.18
-10	0.16

The Miscellaneous Threat Value (MTV)

Specialist vehicles such as scout battlesuits or communication AFVs typically have high Miscellaneous Scores to reflect their unusual abilities.

The following formula produces the vehicle's Miscellaneous TV. The Perk/Flaw Totals refered to in the formula are the total point costs for all of the vehicle's Perks and Flaws, respectively.

Calculating the Miscellaneous Threat Value (MTV)

The Miscellaneous TV is equal to the sum of the following*:

(Actions x Actions x Actions)

(Dep. Range / 50) x (Dep. Range / 50)

(Burn Points / 100) x (Burn Points / 100)

(Perk Point Total) x (Perk Point Total)

- ((Flaw Point Total) x (Flaw Point Total))

*The Miscellaneous TV has a minimum value of zero.

4.1.11 Calculate Default Size and Cost

A basic Default Size and cost are determined. The Default Size of a vehicle is calculated using the following formula. The Default Size should be rounded to the nearest whole number.

Default Size and Cost

Default Size = Cube Root (Final Threat Value)

Default Cost (in Credits) = (Final Threat Value) x 1000

Calculate Pre-Production Cost

The vehicle does not have to be the size generated by the calculations. It may be as large as twice the Default Size score or as small as one-fifth the Default Size score. There is no Threat Value modifier involved in changing sizes because the advantages and disadvantages tend to cancel out. For example, a smaller vehicle will be easier to transport, but a larger one will cause more damage in physical attacks.

If the vehicle is to be made smaller, the Pre-production Cost of the vehicle is equal to the Default Cost multiplied by the old Size rating, divided by the new Size. If the vehicle is to be made larger, the Pre-Production cost is equal to the Default Cost.

Pre-Production Cost

Pre-Production Cost = Default Cost x (Default Size / Desired Size)

4.1.12 Select Production Type

Select the stage of production the vehicle is in. The Production Type will also define how much care is put into each unit build and how many units will be manufactured (the "# Available" column).

Along with production type comes Lemon Rolls, the only random part of vehicle design. If the Gamemaster is designing a vehicle, he should feel free to ignore Lemon rules or add Defects that he finds appropriate. If designing a vehicle that the player characters are building, the Lemon Rolls should be made and enforced.

Lemon Rolls

Not every vehicle is made the same, even if they are the same make, model and variant. Every once in a while, someone screws up and a lemon is produced. Just how many mistakes get made depends on what kind of model the vehicle is.

In addition to the base model Lemon dice, one die is added for every full five Perks assigned to the vehicle. The dice are rolled normally: for each point over five, a Defect occurs (Fumbles are disregarded). When a new model is produced, its model dice are rolled and the defects common to all vehicles of this model are determined. In addition, each individual vehicle gets a set number of lemon dice. Whenever a vehicle of this type is introduced into a game or campaign, its individual lemon dice should be rolled.

Due to the meticulous design and construction of Flight and Space vehicles, they tend to have fewer defects than other types of vehicles. In addition to the basic model Lemon dice, add one die for every ten (10) Perks the vehicle has, instead of 5. Roll once on the Lemon Defect table per defect. If multiple options are available, only one should be selected.

ACTION: GEAR KRIEG

Lemon Defect Table

DIE ROLL	DEFECT
1	Structural Weakness (-1 Maneuver *or* -10% to Armor, rounding up)
2	Electronic Glitch (-1 to a random Auxiliary System)
3	Movement System Defect (-1 Maneuver *or* -10% Top Speed (min. 1 MP))
4	Vehicle has one Annoyance
5	Vehicle has additional Flaws totalling -2 or less
6	Vehicle has additional Flaws totalling between -2 and -4

Production Types

MODEL TYPE	DEFINITION	# AVAILABLE	MODEL DICE	INDIVIDUAL DICE
Testbed Prototype	New Tech	1-3	12	2
Early Prototype	New Model	1-5	8	1
Late Prototype	New Model	1-10	4	1
Early Production	New Release	5-100	3	3
Limited Production	High End Model	5-500	1	2
Mass Production	Common Model	100+	2	3
Scratch-Build	Patchwork Mess	1	N/A	10

Sample Annoyances

NAME	GAME EFFECT
Cramped Crew Compartment	Limit on crew's BLD
False Alarm System	Gives false warning to crew
Instruments are hard to read	Crew has to concentrate harder
Loud Engine Noises	Engine makes worrisome noises
Small entry hatches	Takes one more turn to enter/exit
Stale Smell	Ventilation system creates strange odors
Uncomfortable Seats	Reduce crew skills after X hours

• Annoyance

Annoyances are the tiny little things that make vehicle crew scream in frustration. Any design can have something infuriatingly annoying about it. Small vehicles are typically cramped and uncomfortable. Vehicles packed with electronics often have some minor subsystem on the blink now and then. Vehicles with powerful engines can have noise problems.

These are too insignificant to have an effect on the game, but are interesting for roleplaying purposes. Annoyances also serve to individualize the various designs and they add significant "character" to the vehicle.

Crew Skill Multipliers

CREW SKILL LEVEL	MULTIPLIER
Rookie (1)	0.25
Qualified (2)	1
Veteran (3)	2.25
Elite (4)	4
Legendary (5)	6.25
Legendary (6)	9
Legendary (7)	12.25
Legendary (8)	16

4.1.13 Assign Crew

All vehicles come with a full crew complement at no point cost, unless the scenario says otherwise. All crew are assumed to be Qualified (level 2 in all relevant Skills). However, it is possible to assign a worse or better crew according to needs. Crew quality modifies both the vehicle's final Threat Value and its cost (extra training is expensive).

For standard vehicle crews, the Skill level listed in parentheses is used for the Piloting, Gunnery and Leadership Skills; the crew's Information Warfare Skill is one level lower. The crews of scout vehicles usually swap around their Gunnery and Information Warfare Skill levels.

ACTION: HEAVY GEAR

Computer Crew
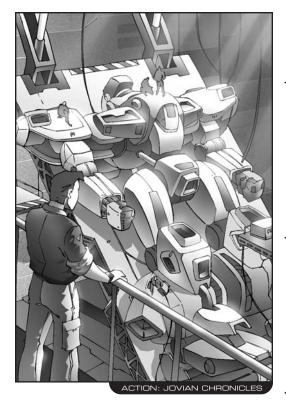
If the crew is computerised (automated, etc.), another set of multipliers is applied, just like for regular crew. Artificial "crew" is more expensive because they are immune to Crew hits and any characteristic that affects living being.

If the computer is "dumb," the vehicle can operate on its own, but with no self initiative. It must be given orders or programmed and obeys in a direct, unimaginative fashion. If Attributes are required for it (a recurrent character in the campaign), use the listed CP to generate CRE, INF, PER and KNO; otherwise, use +0 for the combat Skills.

If "sentient," the computer is capable of exercising (or simulating) self initiative and even creativity. For all intents and purposes, it cannot be distinguished from a living crewman. If Attributes are required for it (say, in a roleplaying situation — use +0 for all combat modifiers), use the listed CP to generate CRE, INF, PER, KNO, WIL and PSY; otherwise, use +0 for the combat Skills.

4.1.14 Calculate Final Cost

The Pre-Production Cost of the vehicle is multiplied by the Production Cost Multiplier to obtain the Final Cost of the vehicle. Fill out a vehicle record sheet for the new creation. Christen it with a good sounding name or identification code and, optionally, write down its history and description. The new vehicle is ready to be taken out to battle.

ACTION: JOVIAN CHRONICLES

Vehicle Final Cost

MODEL TYPE	COST MULTIPLIER
Testbed Prototype	x100
Early Prototype	x20
Late Prototype	x5
Early Production	x1
Limited Production	x2
Mass Production	x0.5
Scratch-Build	x0.2

Computer Skill Multipliers

SKILL LEVEL	MULTIPLIER (DUMB)	CPS (DUMB)	MULTIPLIER (SENTIENT)	CPS (SENTIENT)
Rookie (1)	0.25	-16	0.5	0
Qualified (2)	1	-4	2	4
Veteran (3)	2.25	0	4.5	16
Elite (4)	4	4	8	36
Legendary (5)	6.25	16	12.5	49
Legendary (6)	9	36	18	64
Legendary (7)	12.25	49	25	81
Legendary (8)	16	64	32	100

4.2 Systems Design

This section is titled *System Design* because it can be used to design not only weapons, but also some specialized equipment such as grapples and shields. Like the vehicle design system, the following rules let the designer choose the basic performance required, then modify it with special characteristics to represent virtually anything that can be imagined.

Though designed for the Vehicle scale, the various rules listed here can be used to build weapons and systems for any scale: see section 4.4 for Personal-scale and larger scale systems. Other than this, there is no practical limit to what can be done: it is all a matter of putting the right characteristics together.

It is possible to buy several different types of ammunition for a weapon, or multiple modes for a system, by making multiple versions with the desired stats. The more costly version is the system itself, the others are the other modes, each costing only one-tenth (round down) their calculated cost. It requires one action to switch modes or ammunition feed and only one can be used at a time. Damage to one mode affects all equally.

Hooks & Tips: Split Systems

Split systems are systems that only work when all components are present. These components do not need to be carried by the same vehicle. The "overall" system is designed as normal. The cost is then split between the carriers as desired. To use the system, all components must be in Melee range of one another and each must spend an action.

Components are damaged like normal systems and any damage affects the whole system (e.g., if three components had -1, -1 and -2 Acc damage, then the combined system would have -4 Acc). If any component is destroyed or does not combine with the others, the system cannot function.

Design Notes: Changes

These rules have seen some severe changes from previous versions to make them simpler. Whereas numerous multipliers and references used to be needed, now a system's stat block will hold all the information required.

4.2.1 Step One: Basic Attributes

Each system has four basic Attributes: Damage Multiplier, Base Range, Accuracy and Rate of Fire; these may be modified by Perks and Flaws bought later on. Chose the type of system that you are building; this will affect how it will be treated by the rules.

MATTER: This is used for most systems and for weapons that do damage by impact.

MISSILE: The system is a tube containing one (or more) warheads mounted on a rocket motor. Missile systems are always single-use, but are linked for free to all other missiles of the same type: any number can be launched at once at the same target at the cost of one action. The system can be defended against with Anti-Missile fire.

ENERGY: this is used for systems that work by applying energy (lasers, electric gun, etc.).

EXOTIC: this is for "weird" devices, such as psychic cannons, bio-etheric lasers, etc.

Select Damage Multiplier

The system's Damage Multiplier (DM) is first selected. This is the basic power or damage caused by the system. The effectiveness of Damage Multipliers increases exponentially, not linearly: a DM of 10 is not twice as effective as a DM of 5, it is four times as effective. For weapons, the Damage Multiplier, squared, is roughly equal to the average thickness of armor-grade steel penetrated, in millimeters, given optimum conditions.

The Damage Multiplier also serves as a measure of the basic effectiveness of a system such as a shield or a flare launcher. In these cases, a higher Damage Multiplier usually means a larger or tougher system. This is fully explained in the relevant characteristics later on.

Select Base Range

The system's Base Range (BR) is chosen next. Ranges are expressed in hexes — the real combat range is equal to 5 meters for characters, 50 meters per hex for land and naval attackers, 250 meters for air and 500 meters for space.

The Base Range is the limit of the system's Short Range. The Medium, Long and Extreme Ranges are equal to 2, 4 and 8 times the Base Range, respectively. It is possible to have a system with an Extreme Range shorter than 8: its Base Range will be 0 for cost purposes and the exact range values are established by the designer (for example, 0/1/2/3).

A system can be used five times as far as its Extreme Range, though with little chance of success. If used in space, only the difficulty of hitting at these long distances prevents true line-of-sight range.

Systems with no Base Range are considered to be "Melee" and are only useful in direct contact. They have their own costing formula to take this into account (see section 4.2.4).

Select Accuracy

The system's Accuracy (Acc) is the third basic Attribute. A system with standard Accuracy has a score of 0. High quality systems have positive values while inaccurate systems have negative ones. Accuracy cannot go lower than -5 or higher than +5; the reasonable range, cost- and game-wise, is -2 to +2.

Accuracy represents the system's quality, but also how wide the beam/spray/blade is, how easy it is to move the system around and use and a host of other factors that determine whether or not its use will be successful.

Select Rate of Fire

A Rate-of-Fire (ROF) rating indicates systems that are capable of quickly repeating action, such as sustained, wide area automatic fire. Negative ROF are possible, show the number of rounds required to recharge or reload the system.

Ammo consumption increases dramatically in automatic weapons, but makes special attacks possible (see *Burst Fire*, section 5.4.4). Weapons which fire only a short, tight burst (say, three bullets per shot) would not require a ROF bonus; the three rounds would be considered as one "shot" of ammunition, i.e., one firing of the weapon.

4.2.2 Step Two: System Perks

System Perks are what make a gun different from a missile launcher or a laser. They serve to make each system unique, much like Vehicle Perks and Flaws do. Applying the same characteristic several times does not improve the system more than once, except when explicitly noted otherwise.

Some Perks have an associated value listed besides their names as an exponent. Powerful Perks have higher values, meaning they count as multiple Perks for costing purposes. When costing out the weapon (section 4.2.3), the total number of System Perks multiply the basic cost; if only one Perk is selected, the cost is multiplied by 1.5.

Some of the characteristics cause no damage. This is obviously negated if another characteristic is taken that cancels this effect. For example, "Aerosol" alone causes no damage, but an Armor-Piercing Aerosol shell (while strange) certainly will.

System Perks

CHARACTERISTIC	Count as...
Adhesive	1
Anti-Infantry	1
Aerosol	1
Anti-Missile	1
Anti-Structure	1
Area Effect	
• Area Effect Radius	Perk Value
0	1
1	2
2	3*
*Add one for each additional hex of radius after 3.	
Armor-piercing	1
Armor-crushing	1
Attack/Target	(See page 244)
Biological	1
Chemical	1
Concealed	1, 2 if "pop-up"
Disintegrator	6
Energy-homing	1
Entangle	1
Fire-Fighting	1
Gravitic	2 if single mode, 3 if double-mode
Guided	2
Hand-held/Hardpoint	1
Haywire	2
Illumination	1
Incendiary	1
Indirect Fire	1
Knockback	1
Liquid	1
Location-specific	1
Mass Destruction	12
Minebuster	1
Paint	1
Parry	1
Shield	(See page 246)
Shield (Energy)	(See page 246)
Persistent	2
Redundant	1
Remote	1
Scatter	1
Seeking	(See page 246)
Smart	(See page 246)

System Perks

CHARACTERISTIC	Count as...
Smoke	1
Hot Smoke	(See page 247)
Stealth	1
Target Designator	1
Wide Angle	(See page 247)
• Angle (degrees)	Perk Value
10	1
60	2
180	5
360	10
Winch	1

4.2.3 Step Three: Flaws

System Flaws

CHARACTERISTIC	Count as...
Attenuating Damage	(See page 248)
Clumsy	-1
Defensive	-1
Flicker	-1/-2
HEAT	-1
Heavy	-1
Minimum Range	-1
Non-Lethal	-1
Power-hungry	- (See page 248)
Random	- (See page 248)
Recoil	- 1
Time Delay	-1
Unreliable	- (See page 248)
Overheating	- (See page 248)

4.2.4 Step Four: Cost

Each system has a base cost that is calculated using one of the following formulas and rounded to the nearest whole number. DM is Damage Multiplier, BR is the Base Range, ROF is the Rate of Fire (assign a cost only if ROF is greater than 0). The Accuracy is not used directly: check the *Accuracy Multiplier* table for the proper multiplier.

Cost Table

Ranged Base Cost =
[((DM+ROF)* x (DM+ROF)) + ((BR+ROF) x BR x BR)] x Accuracy Multiplier

Melee Base Cost =
[(DM/2 + ROF)* x (DM/2 + ROF)] x Accuracy Multiplier

*The sum of DM+ROF or DM/2+ ROF can never be smaller than 1, or negative. If it is, count it as 1.

Accuracy Multiplier Table

ACCURACY	MULTIPLIER	ACCURACY	MULTIPLIER
+5	180	-1	0.7
+4	36	-2	0.5
+3	9	-3	0.4
+2	3	-4	0.3
+1	1.5	-5	0.2
0	1		

Perks/Flaws Cost Modifiers

The Base Cost just calculated for the system will be modified by the number of Perks and Flaws chosen for it (if any). Some powerful Perks or Flaws have higher values, meaning they count as multiple Perks or Flaws for costing purposes (for example, Guided counts as two Perks).

Multiply the basic cost by the total number of Perks; if only one Perk is selected, the cost of the system is multiplied by 1.5.

When this is done, divide the modified cost by the total number of Flaws; if only one Flaw is selected, the cost is divided by 1.5.

Ammunition Cost

Point-wise, the rules do not differentiate between the various types of ammunition: projectile, shell, capacitor, etc. All that counts is the actual game effect: the system is used once. Check the table in the next column.

4. Chapter Four: Mechanical Design

Find where the desired "ammo" capacity falls and use the next higher entry (for example, a gun with 300 rounds would use the "600" line). Multiply the system's cost to get the final point total.

(The goal here is not to optimize systems to the last TV point but to provide a balanced view of their game usefulness.)

Ammo Cost

# OF USE	COST MULTIPLIER
1	0.1
2	0.2
4	0.3
9	0.5
16	0.7
25	0.9
50	1
150	2
600	3
2400	4
Unlimited (Ranged System)	5
Unlimited (Melee System)	2

Design Notes:
Hey, where's Minimum Size?

Previous versions of Silhouette had minimum Size requirements to mount a system due to mass, volume, recoil, energy requirements, etc. While this made sense, it also added to the complexity of the rules and brought little to the game aspect (the system acts the same, no matter who uses it). After all, a high-tech setting might mount a tank gun on a motorcycle; increasing its cost made little sense, since the motorcycle, while presumably nimbler, is also more fragile. The rule was thus removed, saving one calculation in the design process.

Here's the formula, if you want to use them to fact-check your design (if a HEAT-based system, multiply the result by 0.75):

Minimum Size = cube root (System Cost/2)

4.3 Special Cases

The Mechanical Design System is very complete: it allows the creation of any type of vehicles and objects, from a bicycle to a gun emplacement to a huge spaceship. However, since the scale of the system is somewhat large to accommodate all those vehicles' different sizes, the smaller and larger ones tend to suffer from a certain lack of detail. In addition, more specialized items require additional explanations and special case rules.

This section explains how to design small vehicles (anything between Size 1 and 5), large vehicles (above Size 30), very large vehicles (spaceship-sized), emplacements and robots. It also contains rules for "offbeat" systems, such as faster-than-light engines.

4.3.1 Small Vehicles

Small scale vehicles (Size 5 and smaller) are easy to define using the normal rules, with a change of perspective. By adding decimals to the statistics and using them in the design formulas, an accurate and more detailed pattern will emerge just like the other, larger, vehicle types.

Size

The main adjustment lies in the Final Size decided upon. The standard Size values have been subdivided into smaller ranges for convenience. The Size value provided by that table is used in the TV calculations as usual, complete with the decimals.

Battlesuits and Powered Armors: If the vehicle is designed as a suit of armor worn by a character, the vehicle cannot be smaller than the pilot. In addition, entry 6 ("Roll Twice") on the System Damage Table is replaced by a duplicate Crew entry.

SMALL SCALE SIZE-TO-MASS CHART

Size	Mass in Kg	Size	Mass in Kg	Size	Mass in Kg
0.1	0-8	2.1	301-380	4.1	2401-2600
0.2	9-16	2.2	381-460	4.2	2601-2800
0.3	17-24	2.3	461-540	4.3	2801-3000
0.4	25-32	2.4	541-620	4.4	3001-3200
0.5	33-40	2.5	621-700	4.5	3201-3400
0.6	41-48	2.6	701-780	4.6	3401-3600
0.7	49-56	2.7	781-860	4.7	3601-3800
0.8	57-64	2.8	861-940	4.8	3801-4000
0.9	65-72	2.9	941-1020	4.9	4001-4200
1.0	73-80	3.0	1021-1100	5.0	4201-4400
1.1	81-102	3.1	1101-1230		
1.2	103-124	3.2	1231-1360		
1.3	125-146	3.3	1361-1490		
1.4	147-168	3.4	1491-1620		
1.5	169-190	3.5	1621-1750		
1.6	191-212	3.6	1751-1880		
1.7	213-234	3.7	1881-2010		
1.8	235-256	3.8	2011-2140		
1.9	257-278	3.9	2141-2270		
2.0	279-300	4.0	2271-2400		

Movement and Maneuver

Small vehicles use the standard movement types with no modification to cost or capabilities. Man-worn suits always use the Walker movement system. Speed is expressed in kilometers per hour, just like all other vehicles. To get the speed in meters per roleplaying turn (6 seconds), the speed in kilometers per hour is multiplied by 1.65, rounding to the nearest whole number.

Small vehicles are generally more nimble than larger ones. Generally, small vehicles will not have a Maneuver of less than -3.

Armor

Small vehicles may have Armor ratings based on the Personal scale rather than the Vehicle scale. When this is the case, the Personal-scale Armor rating is divided by ten for Threat Value (TV) calculation. If facing a normal-sized vehicle, it is also divided by ten, but is rounded

to the nearest whole number. For example, a powered battlesuit could have an Armor rating of 45 on the Personal scale. This would translate to an Armor rating of 4.5 for calculation purposes and 5 for vehicular battles.

Small Scale Weapons

Small scale weapons can also be designed using the standard formulas. Again, decimal values are used for extra detail. Vehicular weaponry causes ten points of Personal-scale damage per point of Vehicle scale damage.

For example, a machinegun carried by a mechasuit could have a Damage Multiplier of x22 in Personal scale. This will translate in the as a vehicle Damage Multiplier of 2.2 (22 divided by ten). The minimum vehicular damage caused by a weapon is always equal to one — it is not possible to design a vehicle-mounted weapon causing less damage than ten points on the personal scale.

4.3.2 Large Vehicles

Just like small vehicles, large vehicles can be built with specialized rules to better represent their capabilities and peculiarities. This section explains how to design large vehicles (anything above Size 30).

Large vehicles can be built as one large structure, but they are sometimes broken down into smaller parts to facilitate construction, reduce costs and increase their survivability. In Silhouette terms, this means that the vehicle is composed of a main hull, which has the primary movement system(s), plus a number of superstructures and components that perform certain function and are "towed" by the main hull. Examples of this include weapon turrets, communication towers, booster units, etc. For the sake of simplicity, these are referred to as "sections" in the text.

A section is considered fixed in place. If the design calls for a turret, the weapon is bought with the Turret fire arc as normal.

Size

The main adjustment for large vehicles lies in the Final Size. Movement systems are generally designed into the main hull, which is then used to "tow" the rest of the vehicle. The true Size of the overall vehicle (for collisions, physical attacks and transport) is thus the total of the mass of the main hull *plus* the mass of the sections added to it. This must be remembered if the vehicle is to tow or carry anything.

Crew

Each section requires at least one crewmember, human or computer. Actions are determined separately for each part of the vehicle, including the main hull. Crew casualties are likewise applied to each separate section as damage is received.

Crew may be reassigned to other sections. A number of crewmembers equal to the Size of the smallest section involved in the exchange may be transferred each turn. Transferred crewmembers do not count for action purposes in the round during which they are transferring.

Maneuver

Large vehicles are generally slower than small ones and their Maneuver rating should reflect this. Generally, large vehicles will not have a Maneuver of more than -3. All sections must have the same Maneuver rating as the main hull. They use the same movement modifiers in combat (e.g. if the main hull is moving at Combat speed, each section will be treated as moving at Combat speed).

Sections ignore any Maneuver-related damage result, but still lose Armor points as usual (1 for Light damage, 2 for Heavy damage). They are affected by any Maneuver damage suffered by the main hull.

Movement

Only the main hull (and additional motive sections, if present) needs movement system(s). Other sections do not need movement systems but still have connections to the main hull to benefit from its movement — they may not take the "No Engine" Flaw or any other movement-related Perk or Flaw. Sections ignore any Movement-related damage result, but still lose Armor points as usual.

The exception to this is additional motive sections. These contribute motive power by adding their total mass to define a common "towing capacity." This is then used to tow the rest of the vehicle (the main hull simply adds its own MPs). Obviously, all motive sections must use the same movement type. If a motive section is Overkilled or can no longer supply *any* motive power, the speed drops according to the regular towing rules.

Armor

Armor is placed as normal on the main hull and components. Each section has its own Armor rating and takes damage separately. Should a section be Overkilled, any remaining damage is applied to the Armor of the main hull to see if additional damage is suffered.

For example, a turret section with an Overkill value of 72 takes a glancing blow from an powerful laser beam and suffers 110 points of damage as a result. The Overkill result automatically destroys the turret, while 38 points of damage are transferred to the hull.

If the main hull is Overkilled, the whole vehicle breaks up. Each section still has power for a number of turns equal to its Size, after which they lose all power and become inactive.

Very Large Vehicles

Some vehicles are so large, they cannot be adequately described by the normal rules. We thus apply the reverse of the small vehicle rules and change the scale: the Very Large Scale.

Each point of Size, Armor, Base Range and DM is ten times as big as a standard vehicle's. Design the very large vehicle using the normal rules and use its stats "as is" versus other vehicles of the same category. When attacking a smaller target, apply a -2 modifier, but multiply the BR and DM by ten. For example, a battleship's x15 Very Large gun would cause x150 damage to the unfortunate vehicular target struck (and x1500 to characters, though they are unlikely to hit at -4).

Very Large vehicles cause massive collateral damage when firing weapons or using their onboard equipments. They add one point of Area Effect (+1 if the system used already has an AE).

Gigantic Vehicles

Gigantic vehicles are so large, they usually can only exist in space. They are the size of big buildings, or even asteroids. These rules can also be used to design space stations or space docks.

Each point of Size, Armor, Base Range and DM is a thousand times as big as a standard vehicle's. Design the gigantic vehicle using the normal rules and use its stats versus other vehicles of the same category. When attacking a Very Large target, apply a -2 modifier, but multiply the BR and DM by one hundred. For example, a mega space battleship's x15 Gigantic gun would cause x1500 damage to the unfortunate target struck (and, absurdly, x15,000 to characters, if they can be hit).

Gigantic vehicles cause truly massive collateral damage when firing weapons or using their onboard equipments. They add five point of Area Effect (+5 if the system used already has an AE).

using robots in a roleplaying environment is generally not a problem. The mental Attributes of their own-board computer "brain" (Creativity and Knowledge — plus Willpower and Psyche if applicable) are also directly equivalent to human Attributes.

Scale Comparison

Scale*	Size/Armor/DM/BR
Personal	x1/10
Vehicle	x1
Very Large	x10
Gigantic	x1000

*Each scale is at -2 to hit the previous one.

Human/Robots Equivalencies

Robotic Attribute/Rating	Human Attribute/Rating
Threat Value	Character Points
Size	Build
Movement Type(s)	All humans are Walkers
Combat Speed	Jogging Speed
Top Speed	Sprinting Speed
Maneuver	Agility
Sensors	Perception
Communication System	N/A
Fire Control	Agility/Perception
Armor	Stamina
Deployment Range	Fitness
Computer Attributes	Mental Attributes
Modules	Skills

4.3.3 Emplacements

Buildings and general structures such as roads and bridges are assigned Damage Point Capacities rather than an Armor rating (see *Urban Terrain*, Section 5.6). These structures take damage by ablation rather than by Light or Heavy damage effects. It is possible to mount systems and weapons on these basic structures to give them additional capabilities: these are referred to as emplacements.

Emplacements are designed using the same system as vehicles, with a few limitations. They have a maximum Size rating equal to the damage point total of the structure to which they are mounted. Their movement is always equal to zero and their Maneuver is -5 for calculation purposes. Their defense is always equal to zero (they don't dodge); likewise, they always benefit from the Stationary attack modifier (+2). The Deployment Range shows how many hours of power is stored in their internal reserves.

Gun emplacements ignore any Movement or Maneuver-related damage result, but still lose Armor points as usual (1 for Light Damage, 2 for Heavy Damage).

4.3.4 Robots

The Mechanical Design System can also be used to create any kind of robots or mechanical life form the game requires. It can even be used to design robotic characters.

Robots can be built into any form one might think of. Just like a vehicle, they have Armor, Maneuver, Speed, etc. Most of these numbers correspond directly to a human Attribute, so

Threat Value

The total Threat Value of the robot indicates how many Character Points it is worth, allowing balance with various other characters. Robots will tend to be more powerful than humans, but less flexible.

TV points have no direct conversion to Character Points because the physical performance variation between two humans are generally too small to register on the vehicle scale. As a rule of thumb, 30 TV points will result in a humanoid robot that is roughly equal to an average human in terms of physical capabilities.

Size

Robots can be built to any size, but most of them will weigh in at less than a ton (Size 3 or less). The use of the Small Vehicle rules is recommended. By cross-indexing the Size-derived weight with the Build table, one can determine the Build Attribute of the robot if it is required.

Movement and Maneuver

Humanoid robots automatically use the Walker movement type, but robots can use practically any movement type the designer chooses. Multiple movement systems are also possible.

The Maneuver Attribute covers the robot's natural agility and response speed. It is roughly equivalent to the human Agility Attribute and is used in the same way.

Electronics

The Sensor Perk of the robot is the equivalent of the human Perception Attribute and is used the same way. Robots often have a built-in communication system, although it is not mandatory. Obviously, there is no human equivalent to this Attribute.

Armor

Robots use Armor instead of Stamina. Their Armor ratings are normally based on the Personal scale rather than the Vehicle scale: the Personal-scale Armor ratings are divided by ten for Threat Value (TV) calculation. In vehicle battles, it is also divided by ten, but rounded to the nearest whole number.

Deployment Range

The Deployment Range's closest human Attribute would be the Fitness Attribute. Machines do not tire, however, so they do not have a Fitness rating. Robots have a Deployment Range which represents the maximum distance they can cover before

needing a recharge or other maintenance. To determine the operating time in hours rather than distance, divide the Deployment Range (in km) by the Combat Speed of the robot. Immobile robots use the Deployment Range directly.

Computer Attributes

Robotic brains are built using the Computer Crew rules. It's possible for a robot to be designed with an Artificial Intelligence, gaining Willpower and Psyche Attributes just like human characters. Refer to the *Computers* section (4.1.13).

4.3.5 Bio-Constructs

Bio-constructs are vehicles, machines and robots made of living flesh rather than mechanical components. They may be engineered or naturally bred and their characteristics may vary wildly. They are somewhat rare, since most applications are easily done by more resilient machines.

For game simplicity, bio-constructs are build just like any other vehicles or machines. In this case, "Crew" indicates not only any onboard crew (if applicable) but also the state of the creature's nervous system (pain and damage will cause actions to be lost). Especially tough or resilient creatures might well have several levels of the Perk "Reinforced: Crew" (in this case, it would read as "Tough Nervous System"). Most living beings will also have Self-Repair Systems (see section 4.3.9) to simulate their ability to heal naturally.

4.3.6 Combiner Vehicles

Combiners are vehicles that are fully operable on their own but also possess the ability to merge — "combine" — with other specially-designed machines to form a greater and usually more powerful vehicle.

The combiner and the combined machines are designed separately. They need not have the same form, armament or additional system; for

example, two minitanks could combine to become a large hovervehicle. The weight of the combined machine should be equal to the total weights of the vehicles that constitute its body, however. Crew must be accounted for in both combiners and combined form, that is, any combiner crew that is not used in the combined machine must be given passenger seating or be dropped off before combining.

Each combiner vehicle must be assigned to one of the five following locations on the larger combined unit: Crew, Structure, Movement, Fire Control and Movement. Each location must be assigned at least one combiner (combiner vehicles can be part of more than one location). Whenever one of these locations takes Light damage, one point of Armor is removed from the vehicle assigned to that section (in case of Heavy damage, two points). If more than one combiner vehicle is available, the damage is assigned randomly. If the combined vehicle receives an Overkill result, it "decombines" into its constituent vehicles.

The Threat Value cost is equal to the one of the combined machine or the total TV cost of all component machines, whichever is greater.

4.3.7 Transformables

Transformables are vehicles that can modify their outer shape and structure to respond to multiple environmental and mission requirements. They are extremely versatile machines, but pay for this by their increased complexity, cost and vulnerability to battle damage.

A transformable vehicle is, for game purposes, two (or more) vehicles that can "swap places" during a battle. Doing things this way allows to create very different forms, each with its own strengths and weaknesses. Fantastic campaigns can even allow the vehicle's modes to be of different sizes.

Each mode is designed as if it was a separate vehicle. All modes should have the same Size rating. All other ratings and values can change — deployed antennae can boost the Comm

range, wings can unfold to give Flight movement, etc. The total cost of the vehicle is equal to the full price of the *most* expensive form (called the primary form), plus half of the second most expensive form (the secondary form), plus a quarter of the cost of *each* subsequent form.

In each combat turn, the vehicle can transform once at no cost. Extra transformations are possible but cost one action each. Damage to systems is carried over if the Attribute or system affected is present on both forms. Armor damage and crew casualties are always carried over, no matter what.

Cost = full price for primary form + half for second + quarter for all others

One-Way Transformation

On some designs, the transformation of the vehicle can only be done one way, for example jettisoning an outer armor suit, or ejecting a built-in booster system. It cannot transform back to its prior form without getting repaired or retrofitted by technicians.

Cost = full price for primary form + quarter for second

ACTION: SPACE RANGER OUROBOROS

4.3.8 Faster-Than-Light Drives

Faster-Than-Light drives make the exploration and colonization of the galaxy possible. Practically any space-worthy vehicle can be equipped with a FTL drive, provided the scientific background of its setting of origin allows it. Some technologies allow only kilometer-long ships to travel between the stars; others enable even the smallest one-man fighter to leap across light-years with disconcerting ease.

To get around this problem, the Threat Value and cost of the vehicle are modified solely according to the speed and range of the FTL drive, regardless of the vehicle's physical size and attributes. For example, a Size 6 fighter and a Size 45 warship will both have the same multiplier if they have the same FTL speed and range.

The FTL speeds are expressed here in C, whereas C is the speed of light. The range multiplier is expressed in Light Year (LY). For simplicity, only a certain set of speed and range are listed. If the vehicle falls in between two values, the closest value is used, rounding up. The Activation Delay is the time required for the system's activation to occur once the controls are set; during that time, the vehicle can do nothing.

Cost = vehicle's Final TV and cost x Multiplier(s)

Dimension Jumping

Dimension Jumping is very similar to Faster-Than-Light flight, game-wise, but instead of going to other star systems, the vehicle hops across parallel dimensions.

Practically any vehicle can be equipped with a Dimension Jump drive, provided the scientific background of the alternate campaign allows it. The Threat Value of the vehicle is modified solely according to the versatility of the drive, regardless of the vehicle's physical size. For simplicity, only a certain set of speed and range are listed. If the vehicle falls in between two values, use the closest value, rounding up. The Activation Delay is the time required for the system's activation to occur once the controls are set; during that time, the vehicle can do nothing.

Cost = vehicle's Final TV and cost x Multiplier(s)

FTL Multipliers

Speed	Multiplier	Range	Multiplier	Act. Delay	Multiplier
1C	x2	1 LY	x1	6 seconds	x2
10 C	x4	10 LY	x2	30 seconds	x1
100 C	x16	100 LY	x4	1 minute	x0.9
1000 C	x64	1000 LY	x8	10 minutes	x0.75
10,000 C	x256	10,000 LY	x16	1 hour	x0.5
100,000 C	x1024	100,000 LY	x32	1 day	x0.2
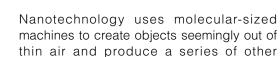
Dimensional Multipliers

# of Accessible Dimensions	Multiplier	Act. Delay	Multiplier
1	x1	6 seconds	x2
10	x2	30 seconds	x1
100	x4	1 minute	x0.9
1000	x8	10 minutes	x0.75
10,000	x16	1 hour	x0.5
100,000	x32	1 day	x0.2

4.3.9 Nanotechnology

Nanotechnology uses molecular-sized machines to create objects seemingly out of thin air and produce a series of other impressive tricks.
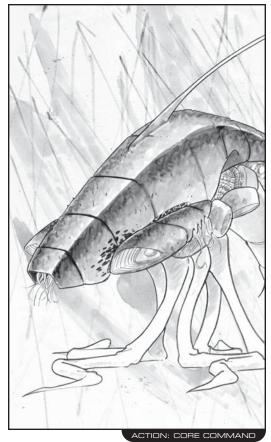
Material Absorption: Specialized nanomachines are injected into any material that the vehicle happens to touch. They then modify its structure and attach it to the vehicle, shaping it to a useful form. This allows the vehicle to gain mass or equipment that it would not normally have.

The system can absorb up to the rating (in percentage) of the vehicle's weight every round, spending one actions to do so. Any mechanical or electronic system can be used as is if undamaged once completely absorbed. The cost is equal to the base TV, multiplied by (1 + rating/100).

Morphable Material: Many millions of nanomachines hold together to create a seemingly solid surface. By moving around, the material is capable of altering its shape like putty, shifting to take on new shapes almost at will. The machine may spread its Size points across great distance, as long as there is at least one point per 50 meters. The machine can even split into two or more parts (using the Combiner rules).

ACTION: CORE COMMAND

ACTION: CORE COMMAND

Morphable vehicles are effectively a "super-transformable," in that they can take many shapes. All forms must have the same Size rating and mass, but all other characteristics may be different. When calculating the TV costs, use the highest possible Armor, overall speed (disregard movement systems), Maneuver and Perks. The resulting high cost is compensated by the machine's versatility and its ability to shrug off system damage.

When a morphable machine is damaged, only lost Armor points and crew casualties (if applicable) are carried over between forms. One action is required to change shape (or, morph to the same shape to repair the damage). If the vehicle cannot reproduce complex moving parts (wheels or guns, for example), its total TV cost is halved (rounded up).

Damage Effect Modifier
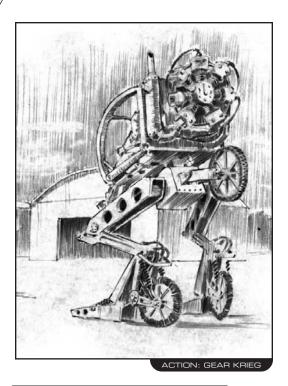
DAMAGE EFFECT	REPAIR POINT MODIFIER
Armor Rating Loss	+1 per point
MP Loss	+1 per MP
Maneuver Loss	+2 per point
System Accuracy Loss	+1 per point/system
System Destroyed	+5
Power Transfer Failure	+5
Crew Compartment Failure	+10
Complete Structural Failure	+vehicle Size
Auxiliary System	+Perk cost

Repair Threshold

DAMAGE EFFECT	SKILL THRESHOLD
Armor Rating Loss	1 per point
MP Loss	1+1 per MP
Maneuverability Loss	2+2 per point
System Accuracy Loss	2+1 per point/weapon
System Destroyed	5
Power Transfer Failure	5
Crew Compartment Failure	7
Complete Structural Failure	8
Auxiliary Systems Perk	3+ 10% of Perk cost (round down)

ACTION: JOVIAN CHRONICLES

ACTION: GEAR KRIEG

Self-Repair Systems

Either because it is alive or it is equipped with an automatic nanotech repair system, the vehicle can "heal" itself and perform its own maintenance. Any and all systems can be healed if given sufficient time and building material. When combined with the No Fuel Required perk, the vehicle practically never needs to stop! Multiply the vehicle's TV and cost by (Rating +1) to get its final cost and TV.

Each self-repair system generates (Rating x 5) Repair Points per round. Each attempt to repair a damage effect requires a number of Repair Points equal to the vehicle's Size plus a modifier from the Damage Effect Modifier Table. To successfully repair a damage effect, enough Repair Points must be assigned to cover the cost; then system must succeed a Skill test, using its rating as its Skill level. The Thresholds for the various types of repairs are found in the *Repair Threshold* table. Failed or draw results just waste the Repair Points; Fumble results produce a Light damage in addition to failing to produce any repair.

4.3.10 Extras

Extras are all those little features that make a vehicle so much more useful to its crew. These features have absolutely no tactical game effect and so they do not modify the vehicle's Threat Value. They do, however, have a price tag attached. Their price is added to the vehicle's cost if bought later on.

Access Lift: All vehicles are assumed to be equipped with some way to get aboard: handholds or footsteps, for example. An access lift is a bit better. It lifts the crew, passengers and any luggage to the crew area rapidly and in comfort. Cost: 10 Cr per kg of lifting ability, maximum 1000 kg

Cockpit Decorations: Furry dice, full color pin-ups, plastic dolls or good luck tokens — no matter how cheesy, you too can have one! Great for morale. Cost: 2 Cr per item

Funny Horn: Why be satisfied with the boring standard "honk" noise? Make your own customized horn to reflect your personality! This system emits one (or more) very loud noises from hidden speakers on the vehicle. Cost: 50 Cr per sound

Hi-Fi Stereo: Sure, you've got a multi-channel military communication array, but what good is it to listen to the latest neon rock CD? This audio system is fully digital and can serve as a radio receiver (-5 Comm) or play back standard datadisks. It also includes large speakers capable of high decibel output. Cost: 1000 Cr

Plush seat(s): To fight battles in the best comfort possible. A variety of different coverings is available in a wide range of color. Cost: 200 Cr per seat
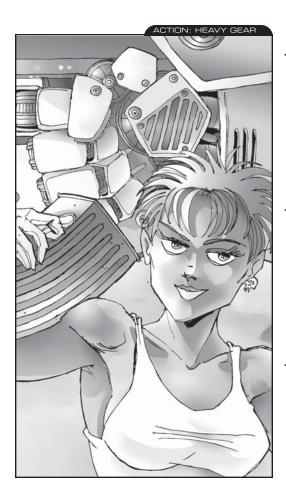
Refrigerator: A must for keeping your lunch cool for that after-battle rest. Also come in freezer variants, if you have a taste for ice cream. Cost: 150 Cr per cubic foot

Security System: All vehicles are assumed to be at least equipped with a key lock on their starter. Even bicycles will come with a chain and padlock. Sometimes, however, a simple mechanical lock just won't do.

Security systems prevent thieves (or disgruntled ex-lovers, or young siblings) from getting away with your precious machine. The rating of the system must be beaten with a Technical Skill test, else the system doesn't allow access. On a Fumble, the alarm goes off. Cost: (rating x rating) x 100 Cr

Wet Bar: Perfect for celebrating your final victory. The wet bar contains several drinks, a water dispenser and an ice-maker to mix any cocktails you can imagine. The Wet Bar contains a number of liters of drink equal to its rating and as many different flavors as chosen. Cost: (rating)2 x 200 Cr

ACTION: HEAVY GEAR

Core Concepts: Vehicle & System Design

The followings are examples and further explanations of the core concepts introduced in Chapter Four.

Step 1: Concept

Kurt wants to design a walking mecha for the world of Terra Nova (the primary world setting in Heavy Gear — see Chapter Seven). He thinks that both infantry and tanks will still be prominent in his world and the mecha should fill a role somewhere between the two. Kurt figures the vehicle should be about four meters tall, fairly nimble, and carry a wide variety of weapons, all in handheld or hardpoint mounts to maximize the flexibility of the vehicle. Now that he's got a fairly good idea of what he wants, it's time to start building the vehicle.

Step 2: Basic Stats

Having decided what he wants to build, Kurt now choses the basic stats of his design.

Target Size

See Select Target Size, section 4.1.2. Kurt needs to figure out what size he wants the vehicle to be. He thinks that the vehicle should be about 6500 kg, or Size 6 ((cube root of 6500) / 3 -0.5 = 5.72)).

Armor Rating

See Select Armor Rating, section 4.1.3. Kurt wants the mecha to be moderately armored, and gives it an Armor rating of (2.5 x 6 =) 15.

Crew

See Select Crew, section 4.1.4. Now Kurt has to figure out the crew and passengers. He sees it as a one-person vehicle, and so writes down "Living 1" for crew. There are no passengers or computer crew.

Movement System

See Select Movement Systems, section 4.1.5.

Kurt envisions the mecha being able to run fairly fast, probably around 60 km/h at top speed on highway. Keeping in mind that on-road speeds for walkers and ground vehicles are 150% standard off-road speeds (see section 5.6.4, Man Made Structures), he settles on 42 km/h for off road speed, which works out to be a Top speed of 7 MPs in Walker movement. Even with the bonus movement for highways, that isn't going to let the mecha keep up with a convoy, so Kurt adds a secondary movement system (powered wheels on the feet). He figures that 72 km/h or (72 / 6 =) 12 MPs off-road should be good. This works out to be 108 km/h on road, more than enough to keep up.

Maneuver

See Select Maneuver, section 4.1.6. Kurt checks the "Maneuver Values" chart, and sees "nimble mecha" is a rating 0. This sounds about right, so he writes it down.

Deployment Range

See Select Deployment Range, section 4.1.7. Kurt wants the vehicle to be fairly long range, capable of going at least 200 km and returning. He chooses 500 km as the deployment range, to allow for extended patrols and detours.

Perks and Flaws

See Select Perks and Flaws, section 4.1.8. The mecha has two manipulator arms. He wants the mecha to be able to climb, so he sets the rating for both at 6. They should also be able to be used as weapons, so Kurt makes a note for later. Kurt thinks that the Communications and Sensors should be average, but have decent range. He chooses Comms (0/10km) and Sensors (0/2km). Since Terra Nova is primarily a desert planet, Kurt adds Hostile Environment Protection: Desert. As the design

has evolved, Kurt sees it as being the baseline vehicle for the army he's building, and so adds all of the Easy to Modify perks, to represent the familiarity technicians would have with the vehicle.

Systems

See System Design, section 4.2. Kurt has a clear idea of what weapons he wants for his vehicle. All of them Hardpoint-mounted or Hand-held to allow easy field swapping:

- A 20mm Assault rifle-type gun, with about 60 shots, average accuracy.

> (F Arc, ACC 0, x8 DM, BR 2, ROF +2, Hand Held, 60 shots) He then plugs the values into the System cost Formula on page 93 to get (((8 + 2) x (8 + 2)) + ((2 + 2) x 2 x 2) x 1 (ACC modifier) x 1.5 (for 1 Perk) x 2 (for 60 shots) = 348

- A Shoulder-mounted Rocket Pack with a heavy punch. Not very accurate, but with a "multiple launch" option.

> (F Arc, ACC -1, x12 DM, BR 1, ROF +3, Hardpoint, Indirect Fire, 24 shots) = 289

- Some "hand grenades." Only good up close, not accurate, but good in urban settings.

> (F Arc, ACC -1, x15 DM, BR 0, ROF 0, Hand Held, 1 shot) = 32 each, 96 total.

- An Anti-personnel grenade launcher with a few shots. Probably with a limited arc of fire.

> (FF Arc, ACC -1, x3 DM, BR 1, ROF 0, Anti-Infantry, Area Effect 0, Hardpoint, Indirect Fire, 6 shots) = 14

- A Vibroblade to hand to hand combat or for cutting through obstructions.

> (F Arc, ACC 0, x8 DM, BR 0, ROF 0, Hand Held, Melee, Unlimited shots) = 48 This uses the melee formula.

- And, of course, the arms can punch.

Figure Threat Value

Kurt now must figure out the Offensive Threat Value. Using the formula on page 85, Kurt adds together all of the system costs, modified by arc, and add the punch cost for both manipulator arms for a total OTV of (384 + 289 + (14 x 0.6) + 96 + 48 + (6 / 2) + (6 / 2)) = 807

The Defensive Threat Value formula is found on page 85. Kurt Adds together the squares of armor rating, top Walker speed, and top Ground speed, and then multiplies by the maneuver modifier for a total of (((15 x 15) + (7 x 7) + (14 x 14)) x 1) = 470

Now Kurt must figure out the Miscellaneous Threat Value. He consults the formula on page 86. He adds together the values and gets ((2 x 2 x 2) + ((500 /50) x (500 / 50)) +(19 x 19)) = 469

Kurt can now figure out the Threat Value of the vehicle. He averages the three values to get ((807 + 470 + 469) / 3) = 582

The default size for the vehicle is the cube root of the Threat Value. Using a Scientific Calculator, Kurt come up with 8.32, rounded off to 8. This is larger than Kurt was wanting, but it can still be made size 6 a bit later.

The Default Cost is the Threat Value multiplied by 1000, or 582,000. To get the actual pre-production cost, Kurt multiplies by the Default Size divided by the Actual Size, in this case 8 / 6. This gives him a pre-production cost of 776,000, and an actual size of 6.

Since this is to be the basis of the Northern Forces, Kurt decides that the mecha should be mass-produced. This means that the model will have 2 Lemon Dice and each individual vehicle will get 3 Lemon Dice once produced. Kurt rolls the Model Lemon Dice and gets a result of 4, no defects! Kurt breathes a sigh of relief. Since the vehicle is a Mass Production model, the pre-production cost is multiplied by 0.5, for a final cost of 388,000. Not too bad for a military machine.

Kurt now has to do the hardest thing, come up with a name. After pondering the name Ranger, he decides Hunter seems right. He adds a suitably arcane production code, and he's ready for action.

Introduction

This chapter covers the rules that govern the interactions of the vehicles and other high-tech items used in the game. Pre-generated equipment and vehicles are provided in the various Silhouette settings, or you may build your own with Chapter Four.

This chapter contains the required rules for unit movement, detection and action, plus the effect of damage on vehicles and items. They can be used from everything, from a bicycle race to a battle involving an armada of gigantic ships. Though the basic rules use an hex map to define position and range, it doesn't have to be used — the appendix of Chapter 7 covers all the required changes to use them in a purely roleplaying format, without the need to break out maps and counters. Apart from the map, both use the exact same rules.

ACTION: HEAVY GEAR

ACTION: GEAR KRIEG

One thing that will quickly be noted: most of the rules are similar to the ones used for characters and man-sized objects. This is intentional, since it facilitates the integration of vehicle combat and chases in a roleplaying setting.

Always remember that these rules exist to make your life easier. If they truly get in the way, you can alter or discard them as you see fit, provided all the players are made aware of the change(s). Of course, Gamemasters should be the final arbiters of the rules and make sure that everything is fair for the players and their characters.

5.1 Basic Rules

The Silhouette tactical combat simulator is played using counters that represent combat units and a hexagon-covered map that represents the battlefield. Record sheets are used to track damage and six-sided dice are used to determine success or failure. The game system can also be played free-form, without the use of a hex map (see Chapter 7).

5.1.1 Definitions

The standard **unit**, represented on the map by a counter, is a single vehicle, item or squad of infantry. Vehicles generally operate into groups of two or more vehicles; for simplicity, such groups of fighting units are referred to as **combat groups** for game purposes.

Counters can be made very cheaply by using a small piece of paper with the name of the vehicle on it, along with an arrow to show facing. A number written down in a corner will help differentiate units of the same type. Enterprising players can even color their machines to their own specifications.

Miniature models are even better. Though they require a larger base investment and a bit more work to prepare, they are visually very appealing. Space considerations preclude an in-depth examination of modeling techniques, but there are plenty of documentation already on the market. Most hobby stores will have at least one painter or modeler on staff that will gladly help out any newcomer.

Time Frame

To keep speed and ranges manageable, vehicle-only battles are fought on 30-second long rounds. Events are abstracted somewhat — it is implied that not all small movement across the terrain is plotted out, and that the crew are careful not to expose themselves and conserve their ammunition, and thus attack less often.

► 5. Chapter Five: Mechanical Action

If the battle requires a strong roleplaying elements (for example, characters on foot facing a tank), it is possible to bring back the battle to the roleplaying time frame (6-second rounds). Divide all movement rates by five (rounded up). In some cases, this provides additional opportunities to act (for example, the pilot of a stalling or diving plane will have five more chances to catch up before hitting the ground).

Mapboards

The battlefield is represented by a hex-covered map. For rule purposes, the terrain of the entire hex is considered to be the terrain type which surrounds the dot in the center. Each increase in elevation levels represents an increase in height equal to the size of the hex in the chosen game scale (smaller altitude variations are not significant enough to be represented).

For a more realistic appearance, one can also use a hexless map where only the center points are printed. In such a case, the dots (sometimes represented by six-branched stars) are used to determine movement and facing.

Game Scales

Vehicles can be found in any type of environment, from the deep interplanetary space to the high in the atmosphere of a planet, to the ground. To accommodate them all, it is necessary to make some adjustments to the scale of the game surface. The specific rules, along with interface rules, are detailed in the relevant sections (5.2 to 5.4).

Air and ground battles use the same combat rules but different sized hexes. Each land hex represents a 50-meter wide area of terrain. Air hexes are five times as large — 250 meters — to accommodate the greater speed of flying vehicles. The rules to interface the two can be found in section 5.2.

Space is a completely different battlefield. There is no atmosphere or gravity, meaning that different rules apply to movement and combat. Space hexes are 500 meters wide. Rather than use speed values, spaceworthy vehicles use acceleration, and are able to coast without thrust using their momentum.

As mentioned in section 4.3, a number of different vehicle scales are possible; the scale used for the encounter should be the average scale of all the units present. The same rules apply to all of them (for example, two Gigantic scale spacecraft will fight it out normally — they are just much bigger and tougher).

Actions

A vehicle's actions are limited by the total number of crewmen. Some or all of these additional actions are lost when crew casualties occur. The table below lists the lowest crew sizes required to obtain additional actions. The minimum crew requirement to gain more actions is doubled for each additional action.

A vehicle's crew can get more actions by penalizing **all** their action test rolls by one (1) for each additional action taken. For example, a single crewman could fire twice and activate a system, with a -1 to all these die rolls, or fire four times with a -2 to all attacks. These additional actions **must** be declared at the beginning of a round.

Some systems are completely automated, but these normally get their own actions to function (see *Perk: Smart*, section 4.2.2).

Crew And Actions

MIN. CREW SIZE	TOTAL ACTIONS
1	2
2	3
4	4
8	5
16	6
32	7
64	8
128	9
256	10
etc...	

Typical Actions

An action is defined as anything that requires at least one crewman's complete attention.

> use one system;

> use one set of linked systems;

> embark/disembark one (1) crewman;

> perform a physical attack (ramming, kicking, punching, etc...);

Command Points

Command Points represent the commander of a group reacting to or anticipating the enemy's actions. There are two types of Command points: Tactical Command Points are available throughout the game but cannot be regained once spent. Leadership Command Points are generated by the commander, but can be refreshed each round. Other than this, there is no difference between the two. Two dice of different color can be used to keep track of Command point totals.

Command Points may be used by any unit with a functional Communications system. They can be used as an additional regular action, incurring no die penalty. They can be used to buy a +2 modifier to a single Defense roll. Finally, they can be used to activate a unit out of its turn sequence — to get out of harm's

way, for example. In the latter case, the unit must not have been activated (i.e., moved) previously and it cannot be moved again when its combat group is activated (though it may act if it has any action left). A commander can assign as many CPs to a unit per turn as the commander's Skill level.

5.1.2 The Action Round

A battle always begins with the Set-up phase. It takes place before the first round of the combat and occurs only once. An overall commander must be chosen for each side. His identity can remain secret, but must be noted down for future references. If he's put out of action, another character with the Leadership Skill may replace him; otherwise, no more CPs can be generated.

A Combat Sense Skill test is made by each side based upon the Skill level of the commander (disregard Fumbles). The winner chooses which player will place a combat group first upon the map. Reroll ties. Players alternate, each placing one combat group at a time on the mapboard. After placing a unit on the mapboard, the player must declare what speed (stationary, Combat, or Top Speed) or velocity (for space combat) it is moving at.

If, during the first round, a unit is attacked before it has been moved, it is treated as if it was moving at the maximum number of hexes possible for its speed (or acceleration, in space) for the purpose of defense rolls.

Each point of the commander's Combat Sense's Cpx provides one Tactical Command Point that can be played at any time.

Encounters are subdivided into combat rounds that simulate approximately 30 seconds of real life events. During each combat round, the following steps occur in order:

Step One: Declaration Phase

Both sides declare any extra actions and individual maneuvers for the round, such as ECM and ECCM uses (these are rolled right away — see section 5.3.3, *Information Warfare*).

It may be useful to make use of counters or tokens to represent extra actions and ECM/ECCM levels. This token can be placed either near the playing piece or on the record sheet, whichever is more suitable to the player.

Step Two: Initiative Phase

Initiative decides which side has the advantage during the present round. An Opposed action test is made based on the commander's Leadership Skill; if only two units are facing each other, the Piloting Skill is used instead. The highest result wins. Draws are separated by Cpx (highest wins); if equal, reroll.

At the beginning of any round, the commander may spend one standard action to roll his Leadership Skill versus a Threshold of 1. The MoS is the number of Leadership Command Points generated. Leadership Command Points have the same effect as Tactical Command Points, but the leader must give them out (with an active Comms system). The leader may not use Leadership Command Points, but may use Tactical Command Points.

The side with the least number of combat groups decides which side will play first. If both side have the same number of combat groups, the winner of the Leadership test makes the decision.

Step Three: Activation Phase

The side whose turn it is to play may move any or all units in one of their combat groups. Units which shift speeds (Combat to Top and vice-versa) must declare so immediately after movement. Actions, such as firing or activating a system, may be resolved at any time before, during or after the movement. Attack penalties are based on the unit's total movement: for example, if Half-Combat Speed is announced, the unit cannot spend more than half its Combat MPs.

Each unit moves and takes its actions before an another unit is activated. If a unit does not move or act when its combat group is activated, it cannot do so at a later point in the round.

Once every unit in the combat group has moved and acted (or forfeited its chance to do either), the other side activates one of his own combat groups, who may move and take action. This exchange goes back and forth until all groups have moved and acted.

A combat group may only move once per combat round. If one player no longer has any combat groups left to use, the opponent activate his remaining combat groups one by one until they all have been moved.

Interrupt: At any time during this movement, any opposing unit may use one (or more) of its actions to fire or perform a task against the moving unit (and only against the moving unit). Attacks may be directed at any point along the moving unit's path, but the unit's full movement counts for its Defense roll. The total MP allocation of the target is used to determine the defense speed modifier, even though the actual displacement may be shorter. The defender must spend at least one MP or end its movement before each of the attacker's actions, if more than one action is used. Forward observers must always act before the firing unit(s).

Step Four:
Miscellaneous Events Phase

During this phase, any unusual events, such as long-range artillery and off-board bombing attacks, are resolved. Initiative Command points go back to zero. Any action not spent at this point is lost.

Repeat steps 1 to 4 until the encounter is resolved or pre-planned objectives are met. A combat group may only move once per combat round.

5.2 Movement

Movement is a critical part of the vehicle rules; after all, moving things and people about are the basic purpose of most vehicle design. The rules are divided into four general areas: ground, naval, air and space. Each entry also contains the required rules for going from one to another. This section is completed by the chase rules.

If no hex map is used to advocate movement, refer to the *Abstract Vehicle Rules*, section 5.6.

5.2.1 Ground/Naval Movement

For the purpose of the rules, "ground" refers to any place that has gravity, be it a moon, the interior of a space colony, or a planet. The effects of the local gravity level and other environmental conditions are detailed further on. "Naval" refers to movement on or below the surface of any liquid.

The record sheet of a vehicle contains values for Combat Speed and Top Speed. These are indicated in Movement Points (MP); the land speed in kilometers per hour is six times the MP. A MP equals movement across one clear mapboard hex (50 meters wide), or about 6 kph across clear terrain (but not a road). Every turn, a vehicle can spend as many MPs as its current speed (Combat or Top).

Stacking

"Stacking" refers to how many units can reside in a single 50-meter hex: up to 30 Size points of vehicle and other units. Each group of five or less people count as Size 3.

If a vehicle is bigger than Size 30, it will occupy more than one hex. For example, a Size 61 vehicle will occupy three hexes (61 / 30 = 2.03, rounded up to 3). How many points of Size are assigned to each hex is determined by the designer, and may be less than 30 per hex (though all Size points must be allocated).

Combat Speed

A vehicle normally receives a number of MPs equal to its Combat Speed. If the vehicle expends none of these, it is considered stationary; otherwise, the vehicle is moving at Combat Speed. Vehicles moving at half their Combat Speed or less gain an additional +1 to their attack rolls (see *Defense Modifiers*, section 5.4).

Reverse: A vehicle moving at up to half Combat Speed can opt to move backward instead of forward. Reverse movement is not possible at higher speeds.

Aquatic Movement: Vehicles with the Naval and Submarine movement types expend 1 MP per Water hex or Liquefied Gases hex. Certain unusual vehicles lack these movement types but are sealed against underwater environments. These "bottom-crawlers" pay their normal MP cost for the surface at the bottom, plus one (the Clear surface of a lake would cost 2 MP per hex to walk on, for example). See the *Underwater Movement* entry for additional rules.

Gravity Effects: The speed and acceleration of a vehicle are not much affected by gravity, since they relate to mass (which doesn't change) more than weight. It is harder to maneuver in low-g environments because of reduced ground pressure. If the local gravity is lower than Earth's, apply a -1 Maneuver penalty to all tests; if higher, apply a +1 bonus per additional gee (or part thereof).

Top Speed

A vehicle which expended its full Combat Speed MP can shift to Top Speed in the next round. This shift must be declared **immediately** after moving the unit. The vehicle is considered to be at Top Speed for attack and defense purposes for the rest of the round.

In subsequent rounds, the vehicle receives movement points equal to its Top Speed value. The vehicle **must** expend a number of movement points greater than its Combat Speed while moving at Top Speed. A vehicle may return to Combat Speed after any number of rounds of Top Speed movement. The player declares the return to Combat Speed **immediately** after moving the unit.

Put chits or markers of some sort on the vehicles moving at Top Speed. This helps prevents disputes and confusion.

Multiple Movement Systems

Vehicles with multiple movement systems may switch between them while at Combat Speed. A vehicle may switch movement types only once per round.

During the switch, the initial movement type is used to determine the available MP. The vehicle expends MP as its initial movement type until the switch is declared. The remaining MP are expended at the terrain costs of the new movement type.

Terrain Effects

Various terrain types affect locomotion. The *Terrain Cost* chart lists the MP cost to traverse different types of terrain. Each hex requires the listed number of MPs to be entered.

Certain types of terrain also reduce visibility. This is represented by Obscurement (see section 5.3).

Note that some terrains are found only in space, such as Moon Dust and Liquid Gases. Unless there is a tangible atmosphere (0.8 atm and more) present, as on Titan, hovercraft and vehicles without the proper environmental protection will not be able to function there.

Terrain Costs

TERRAIN TYPE	WALKER	GROUND	HOVER	OBSCUREMENT
Clear	1	1	1	-
Rough	1	2	1	-
Sand, Moon Dust	2	2	1	-
Woodland	1	2	2	1
Jungle	2	3	n/a	2
Swamp	3	4	1	1
Water, Liquefied Gases	*	*	1	**
Deep Water, Liquefied Gases	*	*	1	**
Snow, Frozen Gases	2	2	1	-
Deep Snow	3	4	1	1
Ice	2	3	1	-
+1 elevation	add 2	add 2	add 4	-
-1 elevation	add 1	-	-	-

*Vehicles will flood and automatically be put out of action. Vehicles with alternate Naval movement cannot enter or exit this type of terrain while moving at Top Speed.

** These only produces Obscurement if the defender is in the hex and is not a hovercraft. In this case, they produce 2 points of Obscurement, 4 for Deep Hexes.

Turning

A vehicle spends zero movement points to turn a single hex facing (60 degrees). Turning two or more hex facings (120 degrees) costs one MP; thus, single hex turn is free, while anything up to 360 degrees (full spin) is 1 point. Multiple turns can be performed along a vehicle's movement, but each turn must be followed by at least one hex of forward movement before another can be performed.

Turning more than three hex facings (180+ degrees) while moving at Top Speed requires a Piloting test versus (3 + terrain MP cost). If the roll succeeds, the turn occurs without complications. If the roll fails, the vehicle skids forward one hex (if something is already in the hex, treat as a ram). If the roll Fumbles, the vehicle crashes: this immediately ends the movement. Roll one die: this gives Light (1 to 3) or Heavy (4 to 6) damage (see *Damage*, section 5.5).

Jumping

The distances covered while jumping depends on the angle of the jump and the speed of the vehicle. If an obstacle or gap isn't cleared, the vehicle collides with it (see *Rams*). Walker vehicles may pick any jump angle, even when using other movement types. Others will need a ramp of some sort.

If not in a one-gravity environment, divide the result by the gravitation of the body on which the vehicle is, in gee. If the vehicle has the Space movement system, it may subtract some thrust (in gee) from the local gravity (vehicles expending more than the local gravity fly instead).

Towing Capacity

Ground and naval vehicles are capable of towing objects. Unless modified by a Perk, the towing capacity (in kilograms) is equal to the vehicle's mass. This assumes that the item is easily towed (a trailer or another ground/naval vehicle, for example). Items which were not designed to be towed, such as a disabled mecha, are considered to weight double their usual mass for towing purposes.

Vehicles can tow up to half their maximum towing weight without a reduction in speed. Vehicles towing between half and three-fourth of their capacity are limited to Combat speed. Loads from three-fourth to full capacity reduce the speed to half Combat speed.

Jumping Distance

ANGLE OF JUMP	PILOTING THRESHOLD	MAX. DISTANCE (M)
15 degrees	1	(Jump Speed* x Jump Speed)/19
30 degrees	2	(Jump Speed x Jump Speed)/11
45 degrees	3	(Jump Speed x Jump Speed)/9

*Jump speed is the sum of Movement Points expanded in the round, plus the Margin of Success of the Piloting test.

Underwater Movement

Deep waters are divided into a series of depth bands, each of which represents 50 meters, starting at Depth Level 0 (the surface). For example, an area of water 200 meters deep would have 5 depth levels — Depth 0 (surface), Depth 1 (1-50 meters), Depth 2 (51-100 meters), Depth 3 (101-150 meters) and Depth 4 (151-200 meters). Naval vessels are always at Depth 0, while other units operate at varying depths depending on their capabilities and environmental conditions. "Bottom-crawlers" in a Deep Water hex are on the seabed (Depth 4 in the above example).

Units with the Submarine movement mode may increase or decrease their depth at a cost of 2 MP per level. They can do an emergency surfacing maneuver by flushing their buoyancy tanks, rising inexorably at 3 depth levels/round. Once done, the vessel cannot dive until the system is reset (two minutes on the surface per Size point).

Crush Depths: Characters using diving gear may dive to Depth 2; advanced diving gear can journey down to Depth 5 without ill effect. Vehicles may likewise dive a number of meters equal to their Crush Depth (in Depth levels this is Crush Depth/50, rounding fractions up).

Every round in which a unit exceeds its safe/crush depth, the unit is "attacked" by the pressure: uses 1d6 for every depth level beyond the safe/crush limit, and a Threshold of 4. If successful, damage is equal to (MoS x Depth), resolved normally (see section 5.5). Multi-section vehicles (section 4.4) must make this test for *each* section.

Hovering and Turning: Units with the Submarine movement system may spend 0 MPs and remain in place, in effect "hovering" in the water. A stationary Submarine unit cannot make a free 60-degree turn — each hexside change requires 1 MP to power the appropriate thrusters. Furthermore, a Submarine may not spend more MP turning than its Inertia (see below).

Inertia: Submarines have difficulty accelerating, compared to surface units. They have an Inertia which is equal to (100-Size)/20, with fractions rounded up. For multi-section vessels, add the mass of each section (and its cargo, if any) to the main hull's to find the Size of the entire vessel. This is the maximum by which a Submarine can accelerate per round. (For example, a Size 65 submarine has an Inertia of 2, allowing it to change its speed by a maximum of 2 MP/round. if it spent 6 MPs in the previous round, it could spend between 4 and 8 MPs in the current round.) A Submarine may attempt a "crash-braking" maneuver, allowing it to spend up to double its Inertia Rating on braking; this reduces its Concealment by 1 for every MP spent beyond its Inertia Rating.

Deep Water Terrain

	BOTTOM-CRAWLER	SUBMARINE	NOTES
Clear	2	N/A	A solid sea bed
Mud	3	N/A	A sea bed where surface movement churns up mud, sand, etc
Deep Water	N/A	1*	Only accessible by units with the Submarine movement mode
Kelp Forest	3	2	Kelp fronds may extend 1d3 depth levels above the sea bed
Thermal Vents	2**	2	The water jets from hot-water vents extend 1d6 depth levels above the vent.

*Vehicles without aquatic sensors treat Deep Water as having an Obscurement of 4.

**Bottom-Crawler units entering a Thermal Vent hex must have the HEP: Heat Perk or suffer a 3d6 attack (Damage = MoS x 10).

5.2.2 Air Movement

Aerial movement follow the same basic rules as ground movement, with the addition of altitude levels. They can optionally be used for space combat if the style of the campaign is more cinematic than realistic.

Since air hexes are not only larger (250 meters) but also have a vertical dimension, there is a lot more room in them: up to 150 Size points may stack in one hex.

Altitude

One altitude level is equal to one "hex" of elevation (250 m). Always record a vehicle's current altitude after moving it (on a piece of scrap paper, on the record sheet, or mark it with 10- or 20-sided dice placed next to the unit).

Climbing one level costs 3 MP; dropping one level of altitude cost 1 MP. Aircraft can climb straight up if they want (unless they have the Maximum Angle of Attack Flaw), spending all their MPs in a single hex.

Aircraft must stay at one level of altitude above the ground or crash (automatic Heavy Damage if at Combat Speed, Overkill if at Top Speed). The terrain effects of the hexes below them are irrelevant — all hexes cost one MP to move through.

Terrain effects are ignored unless attacking ground targets: the Obscurement (see section 5.3) of the target counts. Some high ground, such as mountains, may also obstructs the line of sight between two aircraft.

Maneuvering

Aircraft use the same rules as ground vehicles, with one exception: only VTOL craft (Stall Speed = 0) can change their facing more than one hexside per hex moved. Non-VTOL aircraft with negative maneuver bonuses must travel straight ahead one more hex per negative Maneuver point before turning one hexside. The number of hexes needed to be traveled before turning is called "turn radius."

For example, Aircraft A has a Maneuver of -1: it must travel two hexes forward before changing its facing (up to one hexside); it has a turn radius of 2. Aircraft B has a Maneuver of -4: it has a turn radius of 3, which means it has to travel three hexes before turning by one hexside.

Aircraft moving at speeds below 6 have their turn radius reduced by one. If the turn radius is equal to 0, treat the aircraft as a VTOL for maneuvers. Aircraft moving at speeds greater than 20 have their turn radius increased by one.

Tight Turns: Aircraft can try to make tighter turns, but must make a Piloting test against a Threshold of 3 plus the difference between attempted and actual turn radius. A failure means one roll on the *Control Loss* table. The crew must also make a FIT test against the same Threshold to avoid blacking out (lose one Action). A fumbled FIT test means the pilot loses consciousness for the round.

Sideslip: The aircraft moves to an hex situated forward and 60 degrees to the right or left, without changing headings. Sidesliping costs

1 MP per hex. If more than five sideslips are performed in the same round, the aircraft loses one Altitude Level.

Diving: An aircraft dives when it spends a number of MPs equal or greater than half its Combat Speed to lower its altitude. At the end of the movement, pulling out requires a Piloting test vs. 4, modified by Maneuver. A failed test means that the aircraft cannot pull out and Stalls: it loses additional altitude levels equals to the MPs it originally spent, until the pilot pulls out (Piloting vs. 6). If the aircraft's altitude level goes under the ground on that hex, the vehicle is completely destroyed. A Fumble adds a roll on the Control Loss table.

The pilot pulling out of a dive can choose any facing; see the section on Stalling. The speed of the aircraft is equal to the amount of altitude levels dropped in the last round of the dive.

Falling and Stalling

Aircraft have a Stall Speed which dictates the *minimum* speed at which they must fly to avoid losing altitude. At the end of any turn, if the aircraft is moving below this speed, it will begin to stall and fall. Any aircraft that is reduced to zero MP *because of Structure damage* (loss of lifting surfaces) automatically falls. Every round the craft stalls or falls, it loses 21 altitude levels (in roleplaying rounds, the aircraft loses 1 level the first round, 2 the second, then 4, 6 and 8 — and 8 thereafter, if it hasn't reached the ground by then).

As soon as the altitude levels lost are equal or higher than the Stall Speed, a Piloting test against 6 is made. If the pilot's Margin of Success is of 2 or higher, he can select his craft's heading when he pulls out of a stall; on a MoS of 1, determine it randomly. If the test doesn't succeed, the pilot may try again once the required altitude levels have been lost again.

If the aircraft reaches the ground, it suffers damage equals to (two dice x Size x Number of Altitude Level Fallen).

Gliding

Each round an aircraft glides, it loses 2 points of speed or altitude levels (any combination). Should the aircraft's speed fall below its Stall Speed, it will immediately stall and lose altitude levels accordingly. Gliding aircraft can use the diving maneuver to gain speed.

Supersonic aircraft (Top Speeds of 35+) are not very good at gliding. it loses 3 points of speed or altitude levels (any combination), with a minimum altitude level loss of one. Planes with the Glider Perk, on the other hand, only have to lose one point of altitude level or speed per round. Supersonic gliders, such as a shuttle, use the basic Gliding rules.

Loss of Control

Whenever a pilot fails a maneuver, or *Fumbles any Piloting tes*, roll one die on the Control Loss table. Specific maneuvers may give bonuses or penalties. If the result given is redundant or contradictory, it is disregarded.

Control Loss

1D6 + MOF	EFFECT
1	A good scare... Pilot loses 1 action
2	Aircraft Sideslips (1-3 left, 4-6 right), as per maneuver
3	Aircraft Skids (1-3 left, 4-6 right)
4	Aircraft suffers Light damage (Structure)
5	Aircraft loses 1d6 altitude levels
6-7	Aircraft Stalls — see Stalling rules.
8-9	Aircraft suffers Light damage (Structure) and Stalls
10	Aircraft suffers Heavy damage (Structure)
11	Aircraft suffers Heavy damage (Structure) and Stalls
12+	Aircraft pulls into an uncontrollable spin**

*Skid: turns one hexside but keeps going in the same direction for a number of hexes equal to the roll of one die. If the aircraft runs out of MPs, it must begin its next movement completing the skid.

Spin**: suffers Heavy damage (Structure) and will crash unless the pilot makes a Piloting roll vs. 10 to regain control.

Towing Capacity (Air)

Unless modified by a Perk, an aircraft's maximum lifting capacity (in kilograms) is equal to half the vehicle's mass. Cargo must fit within the vehicle, though VTOLs can also use underslung cargo nets. Towed items must be able to fly (a glider or another air vehicle, for example).

Vehicles can lift/tow up to half their maximum capacity without a reduction in speed. Vehicles towing or lifting between half and three-fourth of their capacity are limited to Combat speed and suffer a -1 modifier to all Piloting tests. Loads from three-fourth to full towing capacity reduce the speed to half Combat speed and give a -2 modifier to all Piloting tests.

Flying with Space Movement

If the vehicle is equipped with a Space movement system that develops more thrust than the local gravity, the vehicle can fly, gaining one MP of Air movement per MP of Space movement not used to cancel gravity. Reaction Mass is expanded as normal.

This MP bonus can be added to the speed of another movement system, but if the resulting speed is greater than one and a half the normal speed, the vehicle suffers a -1 penalty to Maneuver.

Ground/Air Interface

For clarity, it's best to use two maps: one for ground forces and one for aircraft, which includes a miniature version of the ground map. In effect, the two maps represent roughly the same battlefield (though the Air map covers a larger area). Individual Air hexes correspond to the ground hexes in clusters of nineteen.

Another way of combining both aircraft and ground units is to multiply the aircraft's Combat and Top Speed values, as well as their Turn Radiuses (see below), by a factor of five (5). VTOLs are considered as having a Turn Radius equal to the absolute value of their Maneuver,

with a minimum of one (hence a -3 Maneuver VTOL would move three tactical hexes before turning).

Air/Ground Attacks: Combat units have to contend with very short attack windows and extremely different ranges. Ground attacks versus aircraft suffers a -2 penalty, but use the Air weapon ranges against anything that flies above NOE altitude.

Air-to-ground attacks has a -2 penalty and must use the ground weapon ranges. The exception to this is any indirect fire or freefall weapon, which can be "lobbed" from further away and thus use the regular Air ranges.

Landing/Take-Off: Aircraft must stay at one altitude level above the ground or crash. When a vehicle lands, it must end its movement at Combat Speed, on terrain with a Ground MP cost of 1 (rougher terrain will result in crash-landing). On the following round, the vehicle switches to its Ground movement mode, if any — otherwise, it must remain stationary.

Some vehicles have Hover or Naval landing gear, but the procedure remains the same. Vehicles may be equipped with extra-heavy landing gears (Improved Movement System Perk). These can land in any terrain that has a MP cost of 2 or less.

Crash-landing: Whenever an aircraft is forced to land on inadequate terrain or no longer has a landing gear (its Movement System destroyed), it is said to be crash-landing. Treat as a fall, replacing the number of elevation levels fallen by half the speed (in MPs — usually the Stall speed; round up) of the aircraft as it lands.

A Piloting test (modified by Maneuver) can be made against a Threshold equal to the Ground MP cost of the surface landed on. The Margin of Success is subtracted from the die roll used to determine damage.

5.2.3 Space Movement

Because of the absence of friction and gravity, space combat is very different. The most common situation is when two (or more) hostile groups wish to engage each other, and all match velocities in order to make combat manageable. In "lightning strike" combat, one of the antagonists doesn't wish to match velocities, causing the opponents to streak past each other at mind-boggling speeds, with only a few split seconds to attack the other while in range.

Space combat hexes are 500 meters across. Unlike ground and air vehicles, spacecraft have "Thrust" and "Overthrust" MP values. Both are equivalent to Combat and Top Speed, except that they represent acceleration; movement of previous round will affect the current round's movement.

This section details the differences between matched-velocities space combat and standard ground and aerial combat. Even though it includes more than movement, lightning strike combat is detailed at the end of the section for simplicity.

Vectors

Each vehicle is considered to have velocity vectors. In an hex, these are labeled X (diagonal upper left to lower right), Y (top of mapboard to bottom of mapboard), Z (diagonal upper right to lower left). Movement along one direction will add or subtract from one of these vectors.

For example, if a vehicle moves 3 hexes in the Y direction, it is considered to have a +3Y vector. If that vehicle then apply thrust to move 4 hexes in the -X direction, the vehicle now has a -4X +3Y vector. Simply put, the vehicle will move four hexes in the -X direction and three hexes in the +Y direction. The vehicle kept the +3Y from the previous round of movement.

If the same vehicle thrusts to move 5 hexes in a +X direction, it will have a vector of +1X +3Y,

not +5X +3Y. The first four MP of thrust reduce the X vector to 0, while the final point brings it up to +1X. The old +3Y was never neutralized, so it stays in effect. If no further thrust is applied, the vehicle will move up one hex diagonally to the upper left and three hexes towards the north of the mapboard, every turn.

Design Notes: What, no 3D?

While space is three-dimensional, the confusion of actual 3D battles can seriously slow down a game. The six-faced hexes on the map dictate the use of a 3-vector configuration, which might be slightly confusing at first for anyone used to the usual "X,Y" perpendicular vector model. While you may add a fourth vertical vector, the simpler "flat" version is strongly recommended.

Thrust

One Space MP is roughly equal to 0.1 gee of thrust (one gee — also noted simply as "g" — is equal to the surface gravity of the Earth). It costs one MP to add or subtract one point from any of a vehicle's vectors.

Overthrust MPs work the same, there is just more of them to work with. It's the space equivalent of the Top speed rating. Overthrusting is very costly in reaction mass, however (see *Reaction Mass* on the next page).

Some vehicles are so underpowered or massive, their thrust is less than 0.1 gees. They must "accumulate" at least one-tenth of a gee to change one vector by one point. For example, a ponderous cargo with a 0.01 gee acceleration can modify one of its vectors by one point every ten turns (0.01 gee x 10 turns = 0.1 gee, or one MP).

Facing: It is possible to adjust the facing by spending MPs, depending on the spacecraft's Maneuver, as detailed on the *Facing Change Cost* table.

Facing Change Cost

MANEUVER	1 SIDE	2 SIDES	3 SIDES
+1 AND UP	0	1	1
-1 TO 0	0	1	2
-4 TO -2	1	2	4
-7 TO -5	2	4	8
-8 AND LESS	3	6	12
MANEUVER is the vehicle's Maneuver bonus.			
1 SIDE, 2 SIDES, 3 SIDES is the number of hexsides by which the ship changes facing.			

Reaction Mass: When changing vector, each MP of Thrust spent removes one Burn Point (BP) from the vehicle's Reaction Mass. Overthrust is not as efficient and use two BPs per MP spent. When the vehicle reaches zero Reaction Mass, it can no longer change its vector.

Design Notes: Mass vs. Acceleration

To speed up game play, the reduction in reaction mass does not increase the acceleration. Purists may wish to recalculate performances at various Reaction Mass levels to realistically portray the behavior of a rocket; see *Space Towing Capacity*.

Celestial Bodies' Effect: Because the acceleration required to change a vector by one point is relatively high, the gravitational effects of large bodies of mass is negligible at the map scale used, even when vehicles are fighting in orbit around a planet. For simplicity, they have no effects upon game movement.

Lightning Strike

Lightning strike combat occurs when two opposing groups of spacecraft are streaking past each other at speeds that are measured in thousands of kilometers per second. If the combined, total velocity vectors of the combat units are greater than the number of hexes on a reasonable size map, the vehicles enter and exit in a single turn, enough for only one attack.

As they hurtle in, both factions try to change their vectors to be at an advantageous distance when they pass each other. An Opposed Navigation (Space) Skill test is made; the side with the higher thrust rating adds +1. Both sides also add the minimum Defense Modifier (see section 5.4) of the thrust rating used. The winner chooses the range (in hexes) at which the vehicles will engage. Split any ties with the Cpx rating; if still equal, reroll.

Targets are selected by all; they may not be changed in mid-attack. Attacks are then made normally. Any and all systems in range may be used once and only once. ROF points may not be used for Walking Fire.

Defense rolls are Piloting Skill tests, modified by Maneuver and thrust. All attacks are simultaneous: both sides get to make *all* their attack and defense rolls *before* any damage is allocated. Whether or not either side is destroyed, the confrontation is now over as the two forces streak away from each other.

Space Towing Capacity

All types of space vehicles are assumed to be capable of towing or pushing objects. A vehicle's maximum towing capacity is dependent on its thrust output.

The acceleration diminishes as the total mass increases. The mass of the vehicle (in kg) is multiplied by the Space MPs to get the raw thrust. The mass of any cargo or towed items is then added to the mass of the vehicle; the raw thrust is then divided by the new total mass to get the acceleration. This is rounded down to the nearest whole MP value.

Reaching Orbit

SQUARE ROOT OF (ORBITAL VELOCITY / ACCELERATION) = TIME TO ORBIT (ROUND)

Orbital Velocity is equal to (Escape Velocity / 1.4), in meters/second.

Design Notes: Realistic Rockets

Players wanting a more realistic representation of space movement may use this method to recalculate the new performances of their vehicle when fuel is consumed and extra mass, such as rocket stages, is dropped. Divide the climb in increment of 10% and work from there. Just subtract the mass dropped from the mass of the vehicle and recalculate the acceleration.

Reaching Orbit

To reach orbit, a vehicles must be capable of reaching orbital velocity by itself. Required Velocity is equal to the planet's orbital velocity minus the vehicle's starting velocity (generally zero, but can be positive — a flying aircraft, for example). If the vehicle starts from the equatorial region and uses the planet's rotation to boost itself, the required velocity is reduced by ten percent.

Acceleration is the vehicle's acceleration in meters/second. Vehicles without the Flying movement system must subtract the planet's gravity from their acceleration before entering it in the formula. Flying vehicles can start from a higher altitude and only use half the planet's gravity.

Time to Orbit shows how long the engine must operate to reach orbit, in rounds (divide by two to get the number of minutes). The vehicle must carry enough Reaction Mass to allow the thrusters to operate that long at the required thrust level.

Re-entry

A vehicle only need thrust to come out of orbit, not for the re-entry proper. For game purposes, re-entry is assumed to last ten minutes, or 20 rounds. The vehicle must be equipped with the Re-entry Perk. If such a system is not present, the vehicle suffer a Fire attack every turn during the descent with an Intensity equal to the velocity (in hexes) of the vehicle times 20. Once the re-entry is finished, the vehicle is considered to be at Altitude Level 12 and must have some other way of stopping its fall, either a flight system, extra reaction mass for its thrusters or a parachute.

ACTION: JOVIAN CHRONICLES

5.3 Detection

It is a requirement for a unit to "see" its target to affect it. This is called, for simplicity, having a Line of Sight (LOS). This does not necessarily implies that the target is within human visual sight, merely that it can be acquired and locked on by the sensors available to the detecting unit. Units are considered to have a LOS to their target unless one of the following conditions exist.

Line of Sight

There is no Line of Sight if...

• The target is beyond the detecting unit's Sensor range.

• Any terrain between the two units is one or more elevation levels higher than both the units.

• Either unit is within the dead zone of an intervening elevation level. A unit is within a dead zone if it is adjacent to an interceding elevation increase.

• The Concealment value between the vehicle and the target is greater than the vehicle's Detection.

5.3.1 Concealment

The Concealment value of a target represents how hard it is to see or detect. It's equal to the total Obscurement of all terrain directly between the two units, plus the Obscurement of the terrain the target is in. If one of the two units is on a higher elevation level than the other, only the terrain at the higher elevation level and the terrain of the target's hex are counted for Concealment purposes.

See the Terrain table in section 5.2 for the Obscurement value of each type of terrain. In addition to making a target more difficult to detect, Obscurement penalties are applied to the attacker's roll in combat.

Space Obscurement: As a rule, there is little Obscurement to be found in space. Clouds of dust absorb light and reduce visibility, causing one point of Obscurement per hex. The most common form of "dust" in space is ice crystals forming out of the atmosphere or tankage of a leaking space vessel.

Debris are bigger, but have similar effects to dust. They cause two point of Obscurement per hex. Debris hexes can be used to represent a recently pulverized asteroid, the core of a planetary ring, or the remains of an unlucky spaceship.

In space, the shadows of planets and other celestial bodies are extremely dark, because there is usually nothing nearby to reflect light into them. Anything located in them gets an automatic base Concealment of 4.

Design Notes: Concealment and Obscurement

Though Obscurement is used to determine Concealment, the two are not the same! Concealment represents how hard to spot the target is (smoke, obstacle, etc.), while Obscurement deals solely with physical obstacles (walls, vegetation) that affect attacks.

Detection Rating

All units, including infantry, get a base Detection rating of 4 in daylight or 2 at night from unassisted vision. The vehicle's Sensor rating (if any) is added to its crew's Information Warfare Skill level to produce the vehicle's passive sensor rating. The highest value of the two is the vehicle's Detection rating.

The range at which a unit can be detected passively is based on its Size. Each range band measures a number of hexes equal to the Size of the target (x2 for non-prone Walker vehicles). Each range band after the first adds one point of Concealment (i.e., there is no modifier to Concealment for targets which are closer in hexes than their Size rating).

5.3.2 Sensors

Sensors can be used to obtain a Line-of-Sight (LOS) on an enemy even when visual or passive detection is impossible — this is called active detection. An Information Warfare Skill test is made, modified by the Sensor rating. The Threshold is the target's Concealment, minus the defender penalties (see *Detection Threshold Modifiers* table).

A success gives the detecting unit a Line-of-Sight to the defender; a draw, failure, or Fumble does not. Vehicles with no sensors cannot perform active sensor detection. Active sensor sweeps, unlike passive or visual detection, require a full action to complete.

Increased Sensor Range: The range of sensor and communication system can be augmented by increasing power: this emits a larger signature and makes it harder to hide, however. The Base Range of the system is the passive one; using active sensors in that range gives no penalty. Each doubling of the Base Range requires an action (which may be stockpiled through multiple rounds), gives a -1 to detect, and provides a bonus to enemy detection.

On a planetary surface, unless using a relay station or friendly vehicle as a spotter, the maximum sensor range is equal to the distance to the horizon. This distance will increase if the unit is placed on a high vantage point, such as a mountain or other high ground, and decrease if the vehicle is on low ground (valley, canyon). Similarly, the horizon will be much closer on a smaller body, such as a moon or an asteroid.

Large Vehicles: These usually have massive detection arrays, gaining a significant sensivity advantage. Units can spend an action to receive a +1 to Sensors for each full 30 points of Size. Spending additional actions increase this bonus thus: (+1 = 1 action, +2 = 3 actions, +3 = 6 actions, etc.).

Towed Sensor Array: Vehicles may deploy a towed sensor array behind them. This option is available only to Naval, Submarine, Air and Space vehicles.

The array increases the vessel's sensor range by an amount equal to its length. The maximum length of a towed array is equal to the sensors' Base Range for water and space vehicles, and one kilometer for air vehicles. For example, a submarine with 5 km range aquatic sensors trailing a 5 km towed array can attack targets up to 10 km away, and detect other submarines 100 km away (see *Underwater Sensors)*.

The towed array is severed and lost if the vehicle moves at Top Speed or Overthrust, reverses, or turns more than 60-degrees. Release and retrieval of the towed array requires ten minutes per kilometer deployed.

Detection Threshold Modifiers

APPLIED TO ATTACKER'S ROLL	
Sensor Rating	variable
Range Modifier	-1 per extra range band (if applicable)
Target Sensor Profile	variable, by default 0
Target Signature*	+2 per extra range band*
APPLIED TO DEFENDER'S CONCEALMENT	
Stealth Rating	variable, by default 0
Movement Penalty	-1 per hex moved
Space Movement Penalty	-1 per Thrust Point applied
Combat Penalty	-1 per weapon fired

*Applicable only if target boosted its Sensor or Comm range this round.

Stealth

During daytime, the rating of a Stealth Perk is added to the Concealment total only when there is Obscurement between the attacker and the defender (Stealth does not confer invisibility). Stealth systems are always added to the defender's Concealment at night.

Stealth aircraft are designed to escape long range sensors and don't cause much visual disturbance. Flying Stealth units apply a -1 modifier for every five (5) Air hexes traveled instead of the usual movement modifier.

Space units are hard to detect against the background of deep space, but engine exhaust and rapid movement make it impossible to conceal a "burn" when changing vectors.

Underwater Sensors

Optical conditions in the oceans are extremely poor and as a result, visual spotting range is around twenty meters (Point Blank Range) in clear waters, rapidly approaching zero in less than ideal conditions. At Depths 0-3, night and day conditions vary in conjunction with the time of day. At Depth 4 and deeper, it is perpetually night.

Submerged vehicles using aquatic sensors have a Base Detection rating of their vehicle's Sensor Rating added to the crew's Information Warfare Skill, with a minimum value of 2. Stealth always adds to the Concealment beyond Point Blank Range.

Enhanced Range: Water is a superb conductor of sound energy; this can be used to spot the presence of another unit. This detection range is (BR x BR); e.g., aquatic sensors with BR 5 km can track (approximate range and heading) another unit up to 25 km away. Only targets within the Base Range can be tracked sufficiently well to be attacked, however.

5.3.3 Information Warfare

Electronic Counter Measures (ECM) and Electronic Counter Counter Measures (ECCM) are used to affect communication and sensor transmissions. Each has several uses, all of which cost one action to activate; each system can use only one effect per round (though multiple systems may be bought). ECM and ECCM are activated and paid for at the beginning of the round, when actions are announced; their effects last only for the round.
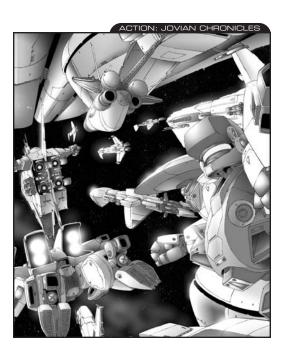
ECM — Jam Communications: When the system is activated, make an Information Warfare Skill test and add the rating. This is the Threshold to beat for any communication attempted within or originating from the ECM's range (the emitter rolls Information Warfare + Comm rating). If failed or Fumbled, the communication doesn't go through. Transferring Command Points through ECM requires this Comm test; if failed, the CP is lost.

ECM — Degrade Sensors: When the system is activated, make an Information Warfare Skill test and add the rating. This is the Threshold to beat for any active sensor test attempted within or originating from the ECM's range (the detecting unit rolls Information Warfare + Sensors rating). If failed or fumbled, add the MoF to the Concealment of the target of Active Sensors (potentially breaking the LoS).

ECM — Spoof Attack: When attacked by Missile or Guided systems, make an Information Warfare Skill test and add the rating of the system. This acts as a second Defense roll; if either Defense roll is successful, the attack fails.

ECCM — Counteract ECM: When the system is activated, make an Opposed Information Warfare Skill test and add the rating of the system. Compare to one active ECM system in range — if beat, subtract the MoS from the ECM Threshold.

ECCM — Degrade ECM Range: When the system is activated, make an Opposed Information Warfare Skill test and add the rating of the system. Compare to one active ECM system in range — if beat, subtract the MoS (in km) from the ECM's range.

ACTION: JOVIAN CHRONICLES

5.4 Actions

If a unit has a LOS to a target within its systems' firing arc and range, it can affect that unit (usually by attacking it). When an attack occurs, an Opposed Skill test is required: the attacker uses his unit's Gunnery Skill and the defender uses his unit's Piloting Skill.

If the attacker wins the skill test, the attack succeeds. If the defender wins or if a draw occurs, the attack misses.

Attack & Defense Modifiers

ATTACK ROLL MODIFIERS:	
	Accuracy
	Range Band Modifier
	Attacker "Speed" Modifier
	Obscurement Penalty
DEFENSE ROLL MODIFIERS:	
	Maneuver Rating
	Defender Movement Modifier
	Arc Of Attack Modifier
	Multiple Attacker Penalty
POSSIBLE OUTCOMES	
If Attackers total is above Defender's	HIT
If Attacker's total is equal to or below Defender's	MISS

5.4.1 Attacker Modifiers

Life is not a firing range, and tasks are always harder under certain conditions, easier under others. Apart from the accuracy of the system, three other factors apply: the range, Obscurement (or cover) between the attacker and defender, and the attacker's own movement.

Range: Every ranged system is rated by a value known as Base Range. It is expended into four range groups, each doubling the distance of the last. An additional range, Point Blank, is available for close combat within the same map hex. Although there is no theoretical limit on certain weapons' ranges, such as lasers, the following ranges are practical targeting limits.

Obscurement: Various terrain types, such as swamp and wooded areas, obscure a target and make it difficult to hit. The Concealment value of the defender (see *Line of Sight*, section 5.3) is subtracted from the attacker's roll to represent the lack of accuracy and the damage absorbed by intervening cover.

Indirect fire is an exception to this. Since the attack is arcing through the air above the intervening terrain, only the Obscurement of the defender's hex counts for the attack roll.

Attacker Movement : A moving platform has a higher chance of missing than a stationary one. In space, applying sudden bursts of thrust tends to throw the aim of the gunner; the less thrust applied by the unit during the round, the easier the shot is.

Attacker Modifiers

Range Modifiers		
Point Blank	+1	Special range (same hex)
Short	0	(from 1 hex to Base Range)
Medium	-1	(from previous to two (2) times Base Range)
Long	-2	(from previous to four (4) times Base Range)
Extreme	-3	(from previous to eight (8) times Base Range)
OBSCUREMENT MODIFIERS		
Obscurement total of the target (if direct fire)		
Obscurement of the hex of the target (if indirect fire)		
MOVEMENT MODIFIERS		
Stationary		+2
Half Combat Speed/Thrust or less		+1
Combat Speed/Thrust		+0
Top Speed/Overthrust		-3

5.4.2 Defender Modifiers

In general, the only defense of ungainly vehicles is speed, as their poor Maneuver rating will often hamper their defense. Attacks coming from the rear are also much more dangerous, both because the armor is thinner there and the crew's attention is focused on the front.

Maneuver Value: Each vehicle has a Maneuver value by design.

Target Speed: An enemy's speed affects how easy it is to hit. If the target has not moved yet in the round, its last recorded movement is used to determine its modifier.

In space combat, use the number of Movement Points spent by the target instead of the number of hexes moved.

Defense Arc: The arc from which the attack comes from can reduce the defender's chances of success, either because of inattention or thinner armor. Front is a 180 degrees arc, Rear Flank is the 60 degrees arc on either side to the rear, and Rear is the backward-facing 60 degrees.

Multiple Attackers: When many units are attacking the same target in one round, it gets penalties to its Defense rolls. The defender suffers a -1 penalty to defend against a second attacker, -2 against a third attacker, and -3 against any additional attackers. Attackers that don't hit don't count as attackers for penalty purposes. A single attacker who takes multiple actions doesn't count as two attackers.

Optional Rules: Capped Modifiers

The rules, as standing, penalize armored but slow units, and make agile units hard to damage. If all players agree, do not compound Movement and Maneuver modifiers when rolling a Defense. Instead, take the best positive modifier and the worst negative modifier. If all modifiers are negative, take only the best one.

For example, a unit (+1 Maneuver) moving Top speed (14 hexes) would gain a bonus of +2, the better of Movement (+2) and Maneuver (+1). Half Combat speed (3) would net a 0 (Movement -1 and Maneuver +1). Combat speed and Evasive, the bonus would be +3 (best of Movement +1, Maneuver +1, and Evasive +3).

Another example, a unit (-3 Maneuver) moving Top speed (4 hexes) would have a -1 modifier, the better of Movement (-1) and Maneuver (-3). If it dropped to Combat speed (2), the modifier would be -2.

Defender Modifiers

TARGET SPEED MODIFIERS	
Hexes Moved	Defense Modifier
0	-3
1-2	-2
3-4	-1
5-6	+0
7-9	+1
10-19	+2
20-99	+3
100-999	+4
DEFENSE ARC MODIFIER	
If attack is in the defender's Front	0
If attack is from defender's Rear Flank	-1
If attack is from defender's Rear	-2

5.4.3 Physical Attacks

There are few vehicles that can make effective physical attacks. All vehicles are capable of ramming; humanoid mecha can punch, kick, or stomp. All physical attacks use the attacker's Piloting Skill instead of his Gunnery Skill.

Ramming

Ramming is an Opposed Skill test. In air and space combat, both vehicles must be at the same altitude level for a ram to occur. Ramming inflicts damage on both the attacker and the defender.

First determine impact speed: head-on collisions add the speeds (or velocities, in space) of the attacker and defender. Side impacts take only the attacker speed, and rear collisions take the difference between the two speeds.

Then, a damage modifier is determined on the *Impact Speed Modifiers* table. This is added to the Size of each vehicle to determine the Damage Multiplier used against the *other* vehicle. Each vehicle will take an amount of damage equal to the Margin of Success of the attack multiplied by its opponent's impact Damage Multiplier (see *Damage*, section 5.5).

Punching, Kicking, Stomping

A Manipulator Arm or an equivalent appendage (Tool or Battle Arm) is required to punch. The Damage Multiplier of a vehicle's punch is listed under its weapons.

Kicking vehicles and stomping infantry are both valid attacks for Walker vehicles. Kicking or stomping requires a Piloting test vs. the defender's Piloting, (or Defense Skill, for characters), and the Damage Multiplier is equal to the Size of the vehicle.

Throwing

Throwing is the attack used to hurl items, such as rocks or grenades. At least one arm is required for throwing. Battle and Tool Arms may not be used to throw objects, unless they have been specifically designed to do so. They may not be used for another function, and the Battle Arm cannot pick up the projectile by itself.

The Base Range (in meters) of the arm is equal to 2 x (arm rating - Size of object). If the object being thrown is larger than half the Size of the throwing vehicle, half the rating of another arm can be added to the effort. Weapons' and systems' Sizes are equal to the square root of (cost/2), rounded down, for throwing purposes. This Base Range is doubled for each range band, as for any other weapon.

A Gunnery Skill test, modified as normal, is made. If equal or higher than the Defense roll, the object thrown lands right on target. If failed, the shot will deviate from its intended destination by a number of meters equal to twice the Margin of Failure. One die is rolled for the direction of the deviation. When using hexes, the deviated projectile is placed in the nearest possible hex, considering the target point as the center of the target hex. If it hits anything, consider the MoS to be 1 for damage purposes.

5.4.4 Special Attacks

There are a number of specialized attack forms and maneuver available. Some are available to all, others require a system with a specific characteristic.

Anti-missile Fire

Any ranged system can be used to defend against a Missile attack. This is a wild attack, and as such does not use up actions and may be rolled versus every incoming Missile or Missile swarm.

Burst fire (using RoF) can be used to add to the to hit roll, or to split attacks against multiple

Impact Speed Modifiers

IMPACT SPEED (HEX)	GROUND DAMAGE MODIFIER	AIR/SPACE DAMAGE MODIFIER
1-2	-2	0
3-4	-1	+1
5-6	+0	+2
7-9	+1	+3
10-19	+2	+4
20-99	+3	+5
100-999	+4	+6

swarms. Systems without the Anti-Missile perk suffer a -6 penalty to hit, and often use their RoF to cancel this penalty.

AM fire destroys the missile when used successfully against a single shot attack. Against multiple missiles (RoF attack), burst fire must be used. Each point of MoS reduces the incoming RoF by one. If the RoF bonus reaches zero, the incoming attack is destroyed.

Ammunition cost for AM fire is equal to five minus the MoS (minimum 1). If RoF was used multiply this by five, two for missiles (minimum 5 and 2, respectively.)

Area Effect

Area effect systems affect everything in their radius, indiscriminant of friend or foe. They are rated in Area Effect (AE), followed by the radius of hexes (radius 0 means only one hex is affected). A single Attack roll is made, with each and every vehicle and squad (allies included) in the area affected rolling their Defense rolls against it separately. Even if the blast is completely defended against (MoS of 0 or lower), any unit in the zone still takes concussion damage equal to (DM in atmosphere, DM/2 in space).

Burst Fire

Any weapon with an Rate of Fire (ROF) bonus of 1 or greater is capable of burst fire. If used, the ROF is added to the Damage Multiplier when the weapon is used against vehicles. A successful burst fire attack versus character adds the ROF bonus to the Margin of Success instead of the damage rating.

For every point of ROF bonus used, five rounds of ammunition are expended. Note that to conserve ammo, a player may elect not to use the weapon's entire ROF bonus. Burst fire has the effect, however, of lowering the weapon's effective damage because many rounds will simply not connect. If the effective ROF bonus is zero, only one round of ammunition is expended.

Missile ROF: Systems with the Missile characteristic can be launched together. The effective ROF is determined by the number of missiles or rockets used: ROF +1 = 2 missiles, ROF +2 = 4 missiles, ROF +3 = 8 missiles, ROF +4 = 16 missiles, and so on.

Walking Fire: Weapons capable of burst fire can be used to attack multiple targets in a single action by walking the burst across them. A number of targets equal to the weapon's ROF plus one may be attacked. For each extra target, the weapon's ROF is reduced by one for damage purposes (but not for ammo expenditure). All targets must be within the weapon's firing arc and in adjacent hexes (empty hexes count as targets). Each attack is rolled separately. Each individual target may not be attacked more than once per round by the same weapon (no extra attacks against one target).

Saturation Fire: A burst fire weapon can be used to saturate a mapboard hex. Every unit that is in the hex or enters the hex later in the round suffers an attack automatically. The attacker chooses a target hex and rolls his attack normally, except that the weapon's ROF is added to the result. Any unit in the hex or that enters the hex later in the round must surpass this number or be damaged (total damage = Margin of Failure x Damage Multiplier of weapon). The ROF does not otherwise increase the Damage Multiplier or Margin of Success of the attack.

There are two limitations to this type of fire: the saturation zone cannot be further than the medium range of the weapon, and the weapon uses 10 shots (or 8 missiles) per ROF point used. If the weapon does not have this much ammo left, the result still stand (although the ammo magazine is emptied). A least 10 rounds of ammunition (or 4 rockets) are required to saturate a hex.

Called Shots

A gunner may elect to perform a called shot versus a specific component of a vehicle. Possible targets are Fire Control, Structure, Crew Compartments, Movement Systems, and Auxiliary Systems. Called shots reduce the Skill level of the gunner by one dice; if the called shot hits, the specific component is the one damaged (see *Damage*, section 5.5).

High precision shots versus tiny targets (headlights, for example) are possible. The shot must be aimed, as above, and a Margin of Success of at least 3 is required to hit. If the MoS is lower then 3 but above 0, the attack hits the targeted location but not the tiny target.

Evasive Maneuvers

Evasive maneuvers allow the crew to avoid incoming attacks. This counts as a full-round action and must be declared at the beginning of the round. Performing evasive actions adds a +3 bonus to all defense rolls for the round, but prevents the vehicle from taking actions. Multiple "evasive actions" cannot be performed to accumulate defensive bonuses.

Indirect Fire

Only systems that are specifically designed the "Indirect" characteristic may use this form of attack. Indirect fire may not be used in the air or space, and suffers a -1 penalty in environment with gravity of 0.5 gees or less, and -1 for each gee above one.

To fire indirectly, an allied unit must serve as forward observer, with a LOS to the target (or the attacker must use its own sensors to pinpoint the target). Being a forward observer requires one action. However, a single forward observer can relay the firing coordinates to multiple indirect fire units. The attack receives the forward observer's Obscurement modifier instead of his own. Indirect attacks can be performed over obstacles, including interfering elevation levels.

If no forward observer is present, or the attacker is firing blind, the attack automatically and randomly deviates a distance of one die (in hexes), centered on the target. If the distance is 1, roll again — if another 1 result occurs, the attack is resolved normally. Else, apply the attacker's roll to anything the shot falls on.

ACTION: HEAVY GEAR

5.5 Damage

Damage increases with the Margin of Success of an attack. It is thus rated as a multiplier to the Margin of Success; the better the marksman, the better the damage.

> Total Damage = Margin of Success x Damage Multiplier

This final damage is compared to the general armor of the target platform. The following are the possible outcomes. Only the most severe effect applies. For example, if a vehicle suffers Heavy Damage because it took damage exceeding twice its base armor value, it does not suffer Light Damage even though it obviously took damage in excess of its base Armor rating.

5.5.1 Systems Damage

If the vehicle is damaged, and a specific location was not targeted, the attacker rolls 1d6 to find the location of the hit on the main *System Damage Table*.

Auxiliary Systems include Sensors, Communications and any other Perks labeled as an auxiliary systems. If any turret is present, it is counted as an Auxiliary system and may be disabled like the rest (turrets are not affected by "-1" results). A disabled turret is frozen in place and any weapon mounted in it become fixed in the arc where they last fired. Some Perks are part of the vehicle's structure and are not auxiliary systems.

Crewmembers that become casualties are not necessarily dead, but they are unconscious, pinned, wounded or otherwise unable to contribute. Once the fight ends, roll one die for each casualty: if the result is 3 or less, the crewmember is dead. If the result is 4 or more, the crewmember was only wounded. For vehicles with large crews (e.g. warships), simply assume that half of the casualties were fatalities and that half were wounded.

Multiple Targets: When multiple possibilities exist for a given damage result, a single die is rolled. If the result is an odd number, the defender chooses which system in the category is damaged. If the result is an even number, the attacker chooses which system is damaged.

Damage vs. Armor

VEHICLE BASE ARMOR = Ω		
DAMAGE TO ARMOR	OUTCOME	WHAT TO DO
Damage smaller than Ω	No Effect	Nothing; Damage bounces off
Damage larger or equal to but smaller than 2 x Ω	Light Damage	Roll on Systems Damage Table, Light
Damage larger or equal to 2 x but smaller than 3 x Ω	Heavy Damage	Roll on Systems Damage Table, Heavy
Damage larger or equal to 3 x Ω	Overkill	Vehicle Destroyed

Systems Damage Table

DIE ROLL	DAMAGED SYSTEM	LIGHT DAMAGE	HEAVY DAMAGE
1	Fire Control	Roll on SubTable A	Roll on SubTable A, add +1
2	Structure	Roll on SubTable B	Roll on SubTable B, add +1
3	Crew	Crew stunned*	10% casualties, min. 1
4	Movement	-1 MP	1/2 remaining MP (round down) & -2 maneuver
5	Auxiliary Systems	-1 to 1d6 Auxiliary systems	1d6 Auxiliary system destroyed
6	Roll Twice on this table		
*Lose 1 action; if already activated, pay for it next round.			
If the attack was a successful called shot, the attacker hits his target location (as effects 1 to 5 on table, depending on target).			

Subtable A: Fire Control Damage

DIE ROLL	EFFECT
1	-1 to a single system
2	-2 to a single system
3	-1 to all systems
4	Single system destroyed
5	1d6 system destroyed
6	Roll twice on this table
7	Ammunition/Fuel Hit (roll 1d6)
1-3	Ammo Bin/Fuel Tank Ruptured (cannot move or fire systems)
4-6	Chain Reaction! (destroyed and all crew killed)

Subtable B: Structural Damage

DIE ROLL	EFFECT
1	-1 MP*
2	1/2 remaining MP (round down)*
3	-1 to Maneuver
4	-2 to Maneuver
5	Power transfer failure**
6	Catastrophic crew compartment failure, 75% casualties, min. 1
7	Complete structural failure; vehicle is destroyed; crew survives

*One Movement Type only

**Lose one Movement Type

5.5.2 Additional Damage Effects

Damage to Armor: Armor and structures lose their effectiveness when damaged due to cracking and material fatigue. When a vehicle receives Light Damage, it loses 1 point of base Armor permanently in addition to any system damage. Heavy Damage causes a vehicle to lose 2 points of base Armor permanently in addition to any system damage.

Each point of base Armor lost reduces the amount needed to inflict Heavy Damage by 2 and the amount need to produce Overkill by 3. Some weapon characteristics, Perks or Flaws can change the amount of Armor points loss.

Damage to Arms: Arms are considered Auxiliary Systems for damage purposes. Any accuracy penalty to the arm is also applied to the use of any "Hand-Held" system being carried in that arm (though the system itself is not damaged).

Minus caused by damage are applied to all functions of the arm: hand-held weapon fire, punching, manipulation, etc. If an arm's cumulative penalties reach -5, the arm is destroyed.

Crew Injuries: Whenever a vehicle takes a Light Damage "Crew" result, each character aboard must make a Knockout test versus a Threshold of 4. If failed, he lapses into unconsciousness and is not counted when determining how many actions can be spent.

If the vehicle receives a Heavy Damage "Crew" result, each character must make a Health test versus the Margin of Success of the attack. If failed by 1 or 2 points, he takes one Flesh wound; if failed by 3 or more, he takes a Deep Wound. All crewmembers must also test for Knockout, just as for Light Damage.

Overkilling a vehicle generally means some messy damage to the crew compartment, even if it is not the part being hit. Each crewmember must test for ejection, even if not actually ejecting (see *Ejection*). Emergency Dice and some Genre Points mitigate this effect (see sections 2.6 and 6.4).

Reaction Mass Leaks: When a Movement or Maneuver result is rolled on the System Damage table, either player has the option of testing for leaks. Use the multiple system method; the winner decides if the damage is applied to movement or to the Reaction Mass. If the latter option is chosen, -1 and -2 Maneuver damage results remove 10% and 20% of the remaining Burn Points, respectively; "half" and "no movement damage" transfer to an equivalent loss of tankage. If at least 250 points of Reaction Mass is lost, the current hex of the vehicle will become a Dust cloud.

Flooding: Any aquatic vehicle that sustains Heavy Damage risks flooding — roll one die for the vehicle or section. On a result of 2 or less, flooding begins and takes a number of rounds equal to the result of one die to flood completely. While flooding, it suffers -1 Maneuver. When a vehicle is fully flooded, it will sink to the seabed, destroyed. If multiple sections are present, each forces the vehicle to descend one Depth level each turn. Movement Points can be used to offset this (2 MP per level), or the emergency surfacing maneuver.

Vehicles with the Ammo/Fuel Containment System, Reinforced Chassis, Reinforced Crew Compartment and Rugged Movement Systems Perk(s) may ignore the first Heavy Damage hit on the respectively protected system, after which that safety measure is lost.

5.5.3 Ejection and Escape

When a vehicle suffers an Overkill result, there is a slim chance that the crewman will escape unharmed (roll 6 on one die). The chance of escape improves on vehicle designs that have an ejection mechanism built into the cockpit.

The crew rolls a single die. On a result of 1, the ejection system did not respond in time and they perish. On a 2 or more, they eject, landing 1d6 hexes behind the vehicle. Crewmen ejecting in space are assumed to be wearing space suits or using emergency pods. They have a velocity and vector equal to their vehicle, minus 4 for velocity.

A crewmember may also be voluntarily ejected from a vehicle with an ejection system. This requires one action.

5.5.4 Repairs

Damage suffered by a vehicle is usually easy to spot and repair, but the cause can remain unpredictable until a technician looks at the problem. In many campaigns, characters will have the opportunity to repair vehicles that survived previous battles.

Each tech has (Technical Skill level + Cpx) x 5 Labor Points to repair vehicles. Each tech gets his Labor Points every day if equipped with abundant spare parts and tools. If either parts or tools are lacking, halve the Labor Points (quarter them if both are inadequate).

Each attempt to repair a damage effect requires a number of Labor Points equal to the vehicle's Size plus modifiers from the *Damage Effect Modifier* table. Enough technicians must supply the required Labor Points; if double the points are available, the job takes half as long, etc.

Once the required points are expended, the technicians must succeed a Technical or Tinker Skill test for each repair. If differing Skill levels are used to repair a vehicle, the effective Skill level is the average (rounding up). The Thresholds for the various types of repairs are found in the Repair Threshold table. Failed or draw results fail to complete the repair; keep note of the dice result, and add future repairs' die results until the Threshold is met. Fumble results produce a Light damage result in addition to failing to produce any repairs.

Damage Effect Modifier

DAMAGE EFFECT	LABOR POINT MODIFIER
Armor Loss	+1 per point
MP Loss	+1 per MP
Maneuver Loss	+2 per point
Accuracy Loss	+1 per point/weapon
System Destroyed	+5
Power Transfer Failure	+5
Crew Compartment Failure	+10
Complete Structural Failure	+Size
Auxiliary System	+Perk cost

Repair Threshold Table

DAMAGE EFFECT	TECH SKILL THRESHOLD
Armor Rating Loss	1 per point
MP Loss	1+1 per MP
Maneuver Loss	2+2 per point
Accuracy Loss	2+1 per point/system
System Destroyed	5
Power Transfer Failure	5
Crew Compartment Failure	7
Complete Structural Failure	8
Auxiliary Systems Perk	3+ 10% of Perk cost (round down)

5.6 Advanced Rules

The following optional rules cover additional environments and options. Most are special case rules that apply only to specific situations, may slow down play a little.

5.6.1 Airdropping and Airlifting

Airdropping: Items can be dropped with parachutes from any height between 250 to 10,000 meters (altitude levels 2 to 40) from aircraft with speeds no greater than 20. After landing, vehicles are operational in a number of rounds equal to twice their Size (but equal to just Size for vehicles with Walker movement).

Cargo can also be dropped using Very Low Altitude Extraction, in which the delivery vehicle flies at altitude level 1 and simply drops the cargo from its rear ramp. The cargo is yanked away by a 'drogue' chute, which slows it down and lessens the impact. The aircraft's flying speed must not exceed 8, and the Size of the dropped cargo cannot be greater than 10.

Airlifting: VTOL with the Airlift Capable Perk can pick up personnel and equipment without having to land. The vehicle must remain stationary over the hex where the person/items to be picked up are situated.

5.6.2 Firestarting

Incendiary weapons can be used to start fires. To ignite a hex, a total of 100 points of Intensity must be fired into it. No attack roll is necessary. Persistent Incendiaries add their Intensity times two. Once the hex is ignited, it is considered to be a fire of Intensity 10. At the end of every round thereafter, its Intensity is increased by one until it reaches 20. Once it reaches 20, every adjoining hex ignites as an Intensity 10 fire. Fire will only spread downwind.

Vehicles crossing a burning hex must pass a Piloting Skill test versus a Threshold equal to half the hex's Intensity. If failed, treat as an Incendiary attack versus the vehicle, with a Margin of Success equal to the Margin of Failure. Treat fumbles as if the Incendiary attack's Margin of Success is equal to the test Threshold.

Only Woodlands and Jungle hexes can be ignited. Rough and Clear terrains can be grasslands or scrub and thus can be ignited. Sand, Swamp and Water hexes cannot ignite, unless they are covered with oil or a similar flammable substance.

5.6.3 Hull-Down Positions

Hull-down refers to a battlefield position where only the weapons are exposed to enemy fire, the hull itself being protected by a natural or man-made obstacle. This reduces the chances of being hit while not impeding the attacker's own fire. Aircraft cannot use Hull-Down positions, VTOLs (with Stall Speed of zero) and vehicles with Nap-of-Earth Flight Perk excepted.

Because of the ground scale, useful land feature are not readily apparent on the map. Instead, an abstracted system is used: by spending additional MPs than the terrain type requires, a vehicle can entrench itself behind hard cover almost anywhere. It is assumed that there are suitable terrain features in the hex.

The MP cost (see Hull-Down Table, below) represents the fact that the unit must move out of its way, find suitable cover, slow down and park itself into the hull-down position. Some terrain types offer less defensive positions than others, and this is reflected in the MP cost.

Units that go Hull Down gain +1 Obscurement and can still use direct fire weapons and systems. If the unit chose to go fully Hull Down and maximize the available cover, it gains +2 Obscurement, but can only use indirect fire weapons and systems.

Any vehicle with the Walker movement may chose to "hit the dirt" in order to gain the Hull Down benefits. This reduces the Hull Down maneuver's MP cost by 1, but requires 1 MP to get back up.

Hull-Down MP Costs

TERRAIN TYPE	MP COST
Clear	n/a
Rough, Woodland	+2
Sand, Moon Dust	+3
Jungle	+1
Swamp	+1
Water, Liquid Gases*	+3
Snow, Frozen Gases	+2
Ice	+3
Urban	+2
Dense Urban	+1
Elevation change**	+1

* These only protect if the unit is capable of immersing itself completely.

**It is assumed that the unit is located at the edge of the elevation level.

5.6.4 Man-made Structures

Man-made structures include habitations, buildings, bridges, roads and other large immobile constructs. They accumulate damage points instead of receiving Light/Heavy Damage effects. Each structure has a Damage Point Capacity; if it takes more damage points than this, the structure is reduced to rubble. When hit by ROF weapons or systems, the ROF bonus is added to the MoS before calculating the total damage points received.

Bridges: Bridges span narrow bodies of water, such as rivers and straits, or chasms, such as canyons and gullies. Movement across bridges has the same MP cost as Clear terrain. Each Bridge hex is rated on three Attributes: Damage Point Capacity, elevation level, and Size capacity.

The Size capacity of a bridge hex is the maximum Size that it can safely support. If a vehicle of larger Size attempts to cross, one die is rolled. If the die roll is equal to or less than the difference between the vehicle's Size and the bridge's Size capacity, the bridge loses one tenth of its original Damage Point Capacity per point of Size difference. The die roll is repeated until the bridge does not take damage (at which point you stop rolling) or until it collapses. If a vehicle is six or more Size points greater than the bridge's capacity, the bridge will immediately collapse. If this happens, one die is rolled: if the result is 3 or less, the adjoining bridge hex collapses as well. Everything on a collapsing bridge takes falling damage based upon the number of elevation levels fallen.

Roads: These have 100 Damage Point Capacity per land hex. Any Ground vehicle traveling on a road for its entire movement gains additional MPs equal to half its current speed (Combat or Top), rounded down. Additionally, if a vehicle (of any type) follows the path of a road, it pays the MP cost of Clear terrain instead of whatever terrain the road crosses.

Roads can be built over bridges. These use the bridge's Damage Point Capacity but still confer movement bonus to vehicles. Urban terrains (see below) are assumed to have small streets, but they do not receive the road movement bonus due to obstructions in urban settings (speed bumps, parked vehicles, pedestrians, etc.). Any major streets or highways are represented by roads through Urban terrain.

Railroads: A railroad is the same as a road, game-wise. An hex can be designed as either a Road, a Rail, or both. Railroads and roads

work exactly the same way, except that only vehicles with the Railroad movement type can derive a MP bonus from a Rail (they also multiply their towing capacity by 10). Vehicles using Railroad movement must follow the rail at all times, unless they switch to another movement mode. They can change direction only when the rail changes direction, and they can switch rail lines only at a junction.

Urban Terrain: A land hex can easily hold several buildings since it is 50 meters across. Any hex containing under seven buildings is considered to be Urban terrain. Any hex containing seven or more buildings is a Dense Urban terrain. Both types favor Ground vehicles, offering poor traction for Walkers and restricted maneuver space for Hoverers.

Terrain Costs

Terrain	Walker	Ground	Hover	Obscurement
Urban*	2	1	2	1
Dense Urban*	3	2	3	2

*Damage Point Capacity: 80 per hex (assuming generic buildings) for Urban, 100 per hex for Dense Urban.

5.6.5 Night Operations

Nighttime functions as daytime, except that the Night Detection score of a vehicle is used instead of its daytime Detection. Characters without nightvision equipment and vehicles without sensors will move only at half speed and have a -1 modifier applied to weapon fire.

Some units are equipped with powerful searchlights (see Perks). Searchlights can be turned on or off at the beginning of each round. Any sensor inquiry or weapon fire directed at the vehicle is also treated as if it were in daylight, regardless of the arc of the searchlight. Enemy fire can target the searchlight(s) by performing an aimed shot. If successful, the searchlight is automatically taken out.
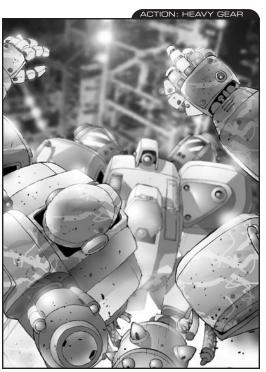
Units are more easily detected by sound at night (obviously, only on planets with a atmosphere sufficiently thick to propagate sound). Vehicles can be heard up to two kilometers away, characters only 300 meters. Naval units will be detected up to one kilometer away, unless they keep their speed below two MPs. Stealth vehicles are detected at a distance equal to the above, divided by their Rating. For example, a stealth tank with a Rating of 4 will be heard at a distance of (2000 / 4 =) 500 meters away.

5.6.6 Walkers Knockdown

Whenever a vehicle using the Walker movement type takes large amount of damage, it may be knocked down. If the total damage received in one attack is equal to or higher than twice the vehicle's Size, the pilot must pass a Piloting test against a Threshold equal to (attack MoS + 1). If failed, the walker falls down. If Fumbled, the walker falls down hard, taking Light damage. Walkers must spend one MP to stand up before they can spend MPs on movement.

ACTION: HEAVY GEAR

Core Concepts: Chapter Five

The followings are examples and further explanations of the core concepts introduced in Chapter Five.

Examples: Movement

See Movement, section 5.2, for basic movement rules.

A vehicle with a Combat Speed of 4 receives 4 Movement Points, which may be spent for moving, turning, or any combination thereof. If the pilot choose not to spend any MPs, the vehicle is considered to be stationary. It can still defend against attacks and adjust it's hex facing by one side (see Turning, Section 5.2.1)— But as long as no MPs are spent, it is stationary for game purposes. If the same vehicle spent 1 or 2 MPs, it would be considered half Combat Speed, and the player may claim the +1 bonus to attack (see Actions, section 5.4).

A vehicle is moving at Combat Speed (6 MPs). It may spend between 0 and 6 MPs. If it spends zero, it is considered to have stopped moving. If it spends the full 6 MPs, it has the option to shift to Top speed. The vehicle's Player opts to do this, and declares the change in speeds immediately. To make record keeping easier, the Player puts a "Top Speed" marker (in this case a penny) down next to the vehicle to indicate it's at Top Speed. On the next turn, the Player has the vehicle's full Top Speed movement points available to him (12 MPs). He must spend at least 7 MPs (one greater than Combat Speed). After a few turns at Top Speed, the Player decides that he should slow the vehicle down so he can shoot more effectively. After moving the vehicle, he declares that it is returning to Combat Speed, and removes the "Top Speed" counter.

The Pilot of a walking vehicle wishes to switch from its ground movement mode to its walker movement mode. The vehicle has 7 (Ground) movement points at Combat Speed. The player

spends 4 MPs on Ground movement, and then declares the vehicle is switching to walker mode. 3 MPs remain to be used for walker movement, even though the vehicle only has a walking Combat Speed of 5. Assuming the vehicle switches back to ground movement next turn, it would only have 5 MPs to spend, as it started off in Walker movement. If the vehicle was at Top Speed, it could not switch movement modes at all.

Examples: Concealment and Detection

See Detection, section 5.3, for basic detection rules.

Vehicle A has a Detection Rating of 4 during the day. There are 4 full hexes of woodland terrain between vehicle A and Vehicle B and Vehicle B is inside a woodland hex. Vehicle A is unable to detect Vehicle B without using active sensors, because there would be 4 points of obscurement between them. If Vehicle A moved so there was only 1 hex of woodland terrain between them, plus the hex Vehicle B is in, Vehicle A would suffer a -2 penalty to attack Vehicle B.

Vehicle A is on a flat plain with no obscurement and is size 6. Vehicle B between 1 and 6 hexes away can detect the walker passively without penalty. Between 7 and 12 hexes, there would be 1 point of obscurement. Between 13 and 18 hexes, there would be 2 points of obscurement, and so on. Once the obscurement exceeds the Vehicle B's Detection Rating, the vehicle B may no longer passively detect Vehicle A. If Vehicle A was a Walker, each range band would be doubled (1-12, 13-24, 25-36, etc.).

Example: Sensors

See Sensors, section 5.3.2, for basic sensor rules.

Vehicle A cannot currently detect Vehicle B due to there being 5 points of obscurement between them. However, Vehicle B is within

sensor range, so the pilot of Vehicle A spends an action and attempts to get a lock-on with sensors. Vehicle A's pilot rolls his Electronic Warfare skill, modified by his vehicle's sensor rating (0). Vehicle B is within base sensor range, has not boosted its Sensors or Comms and does not have a large profile, so there are not other modifiers. Vehicle A's roll must beat a Threshold equal to the concealment (5) plus modifiers. Vehicle B has moved 3 hexes and fired one weapon, giving a total of -4 to the Threshold. The Threshold is now 1. Vehicle A easily beats the Threshold, and now has Line-of-Sight to Vehicle B.

Examples: Attacking, Defending and Damage

See Actions, section 5.4 and Damage, section 5.5, for rules.

Vehicle A is attempting to attack Vehicle B. Vehicle A rolls its Gunnery skill (2) and applies modifiers. It's moving at combat speed (no modifier), vehicle B is at medium range (-1). Vehicle B is also behind 2 hexes of woods (-2). This gives a total modifier of (-1 - 2 =) -3. At the same time, vehicle B rolls its Piloting Skill (2) with modifiers to defend. Vehicle B has moved 2 hexes (-2) and the attack is coming from the front so the total modifier is -2. Vehicle A rolls a 4, modified to a 1, and Vehicle B rolls a 3, also modified by a 1. Vehicle A has just barely missed Vehicle B. Vehicle A decides to take its second action to fire a second time and misses again.

Vehicle B decides to slow to a stop and fires on Vehicle A. Vehicle A is at medium range (-1), and behind 2 hexes of Woodland terrain (-2). Since Vehicle B has stopped, it gains the stationary bonus to firing (+2). It also is firing a weapon with an Accuracy of +1, for a total modifier of (-1 - 2 + 2 +1=) 0. Vehicle A has moved 3 hexes, and the attack is coming from the front arc, so its total modifier is -1. Both sides roll, and Vehicle B beats Vehicle A by 2. The Damage Multiplier is x10 so Vehicle b inflicts 20 points of damage to Vehicle A. Vehicle A's Armor Rating is 15. Since this is

equal to or greater than 15, but less than 30, Vehicle A takes a Light Damage, and loses 1 point of Armor. Vehicle B's player rolls on the Systems Damage chart and gets a Crew Stunned result. Vehicle A loses 1 Action next round. Vehicle B fires again, beating Vehicle A by 5 (Vehicle A Fumbled). Vehicle A takes 50 damage, enough for an Overkill result. Vehicle A is destroyed.

Example: Repairing a Vehicle

See Repairs, section 5.5.4, for basic repair rules.

Jackie has Tech Sciences (Mechanical) of 3 with a Complexity of 2. Assuming she has all of the required equipment, she has ((3+2) x 5 =) 25 Labor Points to repair vehicles with today. She is attempting to repair a beat-up Hunter Heavy Gear with 5 points of Armor loss (5 Labor Points), 4 Movement Points lost (4 Labor Points), 2 points of Maneuver Loss (4 Labor Points), and a Power Transfer Failure (5 Labor Points) to this we also add the size of the vehicle (6 Labor Points). This adds up to a total of (5 + 4 + 4 + 5 + 6 =) 24 Labor Points. She can repair this in one (long) day.

The Armor Loss has a Threshold 5 to repair, as are the Movement Point Loss and the Power Transfer Failure. The Maneuver Loss has a Threshold of 6. Jackie rolls to repair the Armor Loss, and gets a 3. This is not enough to repair the Armor, so she notes down the result, and rolls again. This time she gets a 4, which added to the 3 that she got previously, beats the Threshold of 5. The Armor has been repaired. The Movement Point Loss and the Maneuver loss are repaired without problems, but Jackie botches her roll when trying to repair the Power Transfer Failure. She doesn't get any work done, and notices that the drive train is cracked and must be repaired (Light Damage, roll of 4). She has to repair the equivalent of 1 MP Loss, and 1 Armor Loss on top of having to repair the Power Transfer Failure. This means she not only has to pay the Labor Points to try and repair the Power Transfer Failure again, she also must pay Labor Points for the other damage. This pushes Jackie over the 25 Labor Points she has today, so she has to come back tomorrow to fix the remaining problems.

SECTION 4

ADVANCED

SILHOUETTE™ CORE

6.1 Animals and Creatures

The following rules are used for all kinds of non-sentient animal and animated vegetal creatures. In other words, any intelligent being is either a PC or a NPC, while semi- or non-intelligent beings are considered "creatures." Like characters, creatures have primary and secondary Attributes, as well as Skills, natural weapons and armor.

6.1.1 Attributes

Non-sentient creatures have only six Attributes: Agility (AGI), Build (BLD), Fitness (FIT), Instinct (INS), Perception (PER) and Willpower (WIL). All Attributes save for Instinct are identical to those used for characters.

Instinct is used to describe the creature's natural ability to get itself out of danger, to find ways to get enough food, and other logistical efforts related to the survival of the individual and its species. Creatures with high Instinct are hard to catch and will be able to figure out clever ways of escaping predators, as well as catching or finding food. Whenever an animal faces a situation where it must use its wits, have it make an Instinct test against a Threshold related to the difficulty of the task. Most simple tasks have difficulty ratings of 3 to 5; tasks which involve the use of a tool or control have difficulties of at least 7 (if not 8 or 9), and require the creature to have hand-like limbs or other ways of manipulating the tool.

Expanded BLD Range

BLD RATING	EQUIVALENT*
+15	55-79.9 tons
+14	35-54.9 tons
+13	20-34.9 tons
+12	10-19.9 tons
+11	5-9.9 tons
+10	3-4.9 tons
+9	1-2.9 tons
+8	600-999.9 kg
+7	400-599.9 kg
+6	250-399.9 kg
+5	180-249.9 kg
+4	140-179.9 kg
+3	115-139.9 kg
+2	95-114.9 kg
+1	80-94.9 kg
0	70-79.9 kg
-1	60-69.9 kg
-2	50-59.9 kg
-3	40-49.9 kg
-4	25-39.9 kg
-5	10-24.9 kg
-6	5-9.9 kg
-7	1-4.9 kg
-8	0.1-1 kg
-9	0.01-0.1 kg
-10	less than 0.01 kg (10 g)

*This is a set of suggested weights. Pick one according to the creature's appearance and density.

Size Comparison

BULK	BUI	VEHICLE SIZE	EXAMPLE
Fine	-10	0	Small insect
Diminutive	-8	0	Rodent
Tiny	-6	0	Cat
Small	-4	0	Large Dog
Medium	+0	1	Human
Large	+6	1	Horse
Huge	+10	2	Dinosaur
Gargantuan	+15	8	Largest Dinosaur
Colossal	+16	10	Alien Giant

6.1.2 Secondary Traits

Creatures have the same Secondary Traits as characters: Strength (STR), Health (HEA), Stamina (STA), Unarmed Damage (UD). Since non-sentient creatures don't use tools, they have not been given an Armed Damage (AD) rating.

The Secondary Traits are calculated in the same ways as for characters, except that Health is obtained by adding together Fitness, Willpower and Instinct and dividing the total by three, rounding to the closest integer. Unarmed Damage is the sum of STR, BLD, Hand-to-Hand Skill Level; add the Damage Multiplier of the creature's natural weapons (if any). The minimum rating for Unarmed Damage is 1. Stamina still has a minimum value of 1. Damage Thresholds and System Shock ratings work the same as for characters.

6.1.3 Skills

Most creatures possess natural abilities that closely resemble Character Skills.

Combat Sense: All animals but the dumbest of domesticated herbivores will have at least one level of Combat Sense, if only to flee from potential enemies.

Defense: Predators commonly have a Skill of 1; they are not attacked very often. Prey animals fall into two broad categories: those who flee and those who freeze. Creatures who flee have Defense Skill 2 or (rarely) 3. Animals who freeze (usually creatures with high rates of reproduction) have Skill 0. Creatures with very low BLD scores get a +1 bonus for every point of BLD under -5; large creatures get a -1 to their Defense for every point of BLD over +6.

Hand-to-Hand: This Skill, which could alternatively be called "Claw and Tooth," is possessed by nearly all creatures, save perhaps for the shyest of farm animals. Note that no creature will use this Skill to parry an attack, even those with high Skill levels.

Other Skills: Particular animals have other Skills relevant to their nature. Cats and rats, for example, might get a level or two in Athletics; many predators will have the Stealth Skill. Survival and Camouflage (for animals that hide their lair or young) are also common. Instinct replaces KNO or CRE whenever called for.

Riding Animals

Each riding animal can have a basic Riding Modifier. This affects the result of any Riding Skill test, to reflect the amount of training the creature has had, ranging from -3 (horse that has not been broken in) to +3 (show stallions). An average mount has a +0 modifier.

6.1.4 Other Statistics

Movement: the creature's movement type can be calculated using the following formula: 25 + (5 times the sum of FIT, AGI, BLD and Athletics Skill, if any); minimum of 1. This gives the Running speed; for walking, divide by three. Special movement, such as flying, will be indicated on a case-by-case basis; use the same speed formula as above.

Natural Weapons: The most common of all natural weapons is the bite; if available, its DM will be listed with the rest of the stats. Other possible attack forms include claws, tusks and hooves. Trample attacks are calculated with a Damage Multiplier equal to twice the animal's BLD Attribute.

Armor: Most animals have no natural armor. Tougher or plated animals may have "Armor" ratings which are used just like normal armor (the rating is added to the Wound Thresholds).

6.1.5 Swarms

Very small animals, such as insects and small mammals, cannot be adequately played using the same system as other animals: they are simply too small. But while these animals are relatively harmless when alone, they can become very deadly when in swarms or colonies.

► 6. Chapter Six: Specialized Rules

The rules below use two terms, "Swarm" and "Horde," which are not synonymous. A Swarm represents the basic unit out of which Hordes are made: for example, a large Horde could be made out of a dozen Swarms. For the characters, though, this game distinction is rather meaningless: all they need to know is that a very large number of critters is coming their way!

● Swarm Characteristics

Swarms of small creatures have the following statistics: Aggressiveness, Damage/Round, Damage Threshold, Random Horde Size and Basic Swarm Size. These determine how much damage the swarm will do each turn, as well as how much damage it will take to disperse/destroy it.

A swarm's Aggressiveness is a measure of how combative the swarm is as a whole. It's the number of dice rolled for the swarm(s)' attack every round. Multiply the result by the Damage/Round rating to obtain the total damage caused. Divide the total damage evenly among all those that are inside the swarm, and check for wounds, as for any other attack. The attack cannot be dodged or parried; sealed armor will guard against all damage if it covers the entire body, otherwise it protects with its normal rating. Non-sealed armor protects with only half of its value for three rounds; it is useless after that, as critters get caught underneath.

Sometimes a swarm is particularly big and is called a horde. Roll as many dice as specified by the Random Horde Size rating, adding the results together: this the number of swarms in the horde. No more than three swarms can attack any given human-size target during the same round; their damages are added, then divided up among the victim(s). The Basic Swarm Size gives an average number of individual insects in each swarm, for visual representations (it doesn't affect gameplay).

● Fighting Swarms

Although swarms are by definition very hard to kill, they can be driven off by specific amounts of damage, depending on the type. Fire, electricity and poison gas are the best ways to disperse most swarms; they cause full damage. Concussion, Hand-to-Hand and Melee attacks do only half their normal damage, and firearms do only one quarter. To disperse a swarm, more damage than its Damage Threshold must be caused in one single attack. A horde needs to be dispersed swarm by swarm, except if a single attack does more damage (using the restrictions above) than the Damage Threshold multiplied by the number of swarms. In such cases the whole horde will disperse at once.

Swarms of Common Critters

SPECIES	AGGR.	DAM/ROUND	DAM. THR.	RDM HORDE	SWARM SIZE
Army Ants (Jungle)	2	2	15	6d6	500
Rats	2	4	20	1d6	10
Wasps	3	3	25	2d6	15

Horse/Pack Animal

ATTRIBUTES							
AGI	+1	BLD	+7	FIT	+1	INS	+1	PER	0
WIL	+1	STR	+4	HEA	+1	STA	65	UD	14*

SKILLS: Athletics 1/1, Combat Sense 1/1, Defense 1/1

SPECIAL ABILITIES: *Kick (x9 damage)

6.2 Aliens and Modified Humans

The process for designing non- (or not quite) human characters is the same as for human characters. The main difference is the various Attributes and Skills limits, which can vary from the human norm, sometimes immensely. These represent the various morphologies that can be found in the races of the world or galaxy; for example, members of a race know for its keen eyesight will tend to have better PER than human beings, and thus their Attribute range, instead of being the usual -5/+5, will be shifted upward to perhaps -3/+8. This does not automatically give them better eyes, it just means that on average they will tend to have them, and can see much better than even the most eagle-eye human.

Each alien race receives a "template:" this is the pattern of modified Attributes and special abilities that guide the creation of a character of that race. A template shows which Attributes can be raised (or lowered) outside human limits, and lists any mandatory Skill(s), Perk(s) and Flaw(s). If the latter, a point cost will be listed, which comes out of the Character Points pool before the character is designed.

6.2.1 Basic Template

Shifting Ranges: when designing a new alien race template, first decide how different it is from the human base range. Every Attribute can be the same, better or worse; if better or worse, adjust the Attribute range by one in the proper direction. For each positive adjustment, remove 10 points from the Skill Point pool and add them to the Character Points pool. For each negative adjustment, remove 10 points from the Character Point pool and add them to the Skill Points pool. If the Attribute is Build, see section 6.1 for an expanded BLD table.

Social or Physical Characteristics: certain alien races will have powers or advantage of some sort. This is most easily represented by appropriate Perks and Flaws. Select those that are needed and total the CP cost: the result is applied to the template cost.

6.2.2 Special Abilities

Special Abilities are characteristics or aptitudes that are outside the human average (or the human realm, period). They cost some Character Points and may be mixed with one another, unless contradictory.

Movement: It is assumed that all sentient beings walk at about the same rate as a human being. If this is not the case, consult the table below and apply the appropriate cost. For example, a "birdman" alien template, humanoid with wings, would cost 10 CPs and fly at the same a human can walk, in addition to walking.

Special Powers: if the alien creature has some kind of offensive or defensive power, build it as a system (see section 4.3). Cost in CPs is equal to the point cost of the system.

Increased Physical Abilities

ABILITY	SPEED MULTIPLIER	COST
Immobile (require transport)	n/a	-10 CPs
Slower than Human	x0.5	-5 CPs
Faster than Human	x2	5 CPs
Much faster than Human	x4	10 CPs
Extra Movement Mode (Swim, Fly, Burrow)	x1	10 CPs
Extra Manipulator Limb	n/a	10 CPs
Half reach than Human	n/a	-5 CPs
Double reach than Human	n/a	5 CPs
270-degrees vision*	n/a	5 CPs
360-degrees vision**	n/a	10 CPs
Morphing***	n/a	10 CPs
*+0 in Rear Flank, -1 in Rear for Defense		
**No Defense penalty for arc; give -1 penalty to be surprised		
***Gives +2 to Disguise attempts; cannot change mass.		

6.2 Hazards

This section contains advanced character-related rules for topics ranging from addiction to zero-gee movement. These are new or more detailed versions of the basic rules and should be used only when additional detail are required. Gamemasters should feel free to disregard them if they feel their use would slow down play too much, or if detailed effects are simply not needed. This is especially true for Cinematic-style games (see *Reality Distorsion Factors*, section 6.4.1).

6.2.1 Atmosphere

The gas contents and pressure of the atmosphere are crucial to human survival. If the air supply is compromised, characters suffer as their body tries to make do with insufficient resources. Some characters or creatures with the proper Special Abilities can ignore these rules. Likewise, replace "oxygen" with the proper medium for strange creatures or alien beings; a fantasy setting, for example, could feature magical beings that "choke" when taken out of a magic-rich region.

Oxygen

There can be several causes to oxygen deficiency: an excess of carbon dioxide in the atmosphere, defective air reserve, or decompression. If the atmosphere degrades, characters will suffer from physical and mental penalties, starting ten minutes after oxygen is last supplied.

Characters receive a -1 penalty to all mental Attributes (CRE, INF, KNO, PER, PSY, WIL) as their concentration decreases due to lack of oxygen. All mental Attributes drop at a rate of -1 per two minutes. All characters in the location must make a Fitness test, adding the mental Attribute penalty, against a Threshold of 4 to avoid unconsciousness.

Twenty minutes after oxygen is last introduced, the characters automatically lose consciousness. A random mental Attribute drops by one every turn. If any of them reaches -5, the character dies from oxygen starvation.

This rule assumes a normal oxygen content of 20% and a standard-sized room. If the oxygen content of the air is higher or lower, or the volume bigger or smaller, the durations are multiplied accordingly (e.g. twice as much oxygen or a hangar with twice the volume means Attributes drop every four minutes instead of every two).

Pressure

A loss of pressure means that although the atmosphere has the proper oxygen content, there is not enough of it or not enough pressure to force oxygen into the bloodstream. Loss of pressure can come from several sources, from a faulty diving regulator to a leak or hole in the hull of a spacecraft.

The *Atmosphere Loss* table shows the average amount of time it takes for the pressure to completely degrade. At each stage of decompression (three-quarter pressure, half, quarter) all characters present must make a Fitness test to avoid unconsciousness, with a penalty of -1 per level of degradation. They also suffer from the effect of lack of oxygen (-1 to all Mental Attributes per stage).

If the pressure drops to a quarter normal or less, the character suffers the same effects as if there were no oxygen, according to the *Oxygen* section.

Losing Pressure

There are two ways to lose pressure: slowly, through a leak, and all at once, through explosive decompression. The latter is much more dangerous as the body does not have time to adjust and often reacts very badly (see *Exposure to Vacuum*, below).

The table gives Armor ratings (in Personal Damage Scale) and volumes for typical locations; these can be modified by the Gamemaster by up to 50%. If the Armor of a wall or door is exceeded by the damage received, a one-centimeter hole is made (for simplicity, assume the hole is square-shaped). The dimension increases by one centimeter for every additional time the Armor is exceeded by (for example, 35 points of damage, applied to an Armor 10 wall, will cause a 3 centimeters wide hole, or 9 cm^2).

Exposure to Vacuum

Exposure to the vacuum of space does not kill instantly. An unprotected human being can survive up to three minutes before his brain dies from oxygen starvation, though there are some severe side effects from other sources.

First, lack of pressure on the body will cause any internal gases to try and escape. Capillaries close to the skin will burst, resulting in giant bruises. If the person tries to hold his breath, severe damage will result to the lung and inner body (automatic Deep Wound). It is better to try and hyperventilate to charge the blood with oxygen, then exhale as vacuum is entered.

The second major side effect comes from temperature. Space is cold, except where a celestial body provides heat. A person exposed to vacuum will thus be roasted on the sun-facing side and freeze on the other. A Flesh wound is the result of more than one minute of direct space exposure.

A character can remain conscious for a number of 6-second rounds equal to twelve plus his Fitness Attribute. After this, the character automatically loses consciousness. A random mental Attribute drops by one every round; if any of them reaches -5, the character dies. In Cinematic campaigns, the player can chose to use the character's WIL if it is higher than FIT.

6.2.2 Drugs and Toxins

Drugs and toxins are rated with three main Attributes: their Potency, their Effect and their Onset Time. The Potency is the Threshold for the victim's Health test to resist the effects. The Effect is the symptoms that a character who fails to resist will exhibit. The Onset Time is the longest period the toxin will require to take effect; the actual time until the effect occurs is equal to the Onset Time divided by the Margin of Failure of the Health test. Fumbled Health tests produce an onset time equal to one-tenth the normal value.

Pressurized Area Information

LOCATION	WALL ARMOR	DOOR ARMOR	BULKHEAD ARMOR	VOLUME (M^3)
Airlock	15	15	20	20
Room	15	10	25	200
Hangar	20	20	40	5000
Station	500	350	1000	4 x 10^11

Atmosphere Loss

HOLE/LOCATION	AIRLOCK	ROOM	HANGAR	COLONY
Leak-Sized (1 cm^2)	1 day	4 days	12 days	300 years
Fist-Sized (100 cm^2)	2 turns	8 turns	24 turns	100 years
Man-Sized (1 m^2)	1 turn	4 turns	12 turns	20 years
Vehicle-Sized (100 m^2)	Instant	2 turns	8 turns	1 day
Ship-Sized (1000 m^2)	Instant	Instant	1 turn	1 hour

HOLE is the approximate size of the air evacuation duct or hole; LOCATION is the approximate comparative volume of the pressurized area.

Fatal toxins inflict a number of damage points equal to their Potency times the Margin of Failure of the victim's Health test. Fatal toxins usually range between Potency 7 to 20 and often have Onset Times that are under one minute. Fumbled Health tests lead to a coma.

Sedatives induce drowsiness and unconsciousness. A Health test's Margin of Failure between 1 and 4 will cause an equal negative action modifier (same as injuries). The modifier will decrease by one per hour until it is gone. This modifier does not count in determining death by trauma, wound degeneration or stabilizing injuries, but it does affect Health rolls for knock-outs.

A Margin of Failure between 5 and 9 will cause unconsciousness for a number of minutes equal to the Potency times the MoF. Once the character awakens, he suffers the same effects as a victim who failed the roll by 4 or less.

A Health test failed by 10 points or more will cause an overdose, with the same effect as a fatal toxin of a Potency five points below the tranquilizer's. Character who fumble their Health test overdose with a MoF of 10.

Hallucinogenic toxins cause altered perceptions which are often accompanied by strange emotional states. Their effects are similar to tranquilizers, except that the action penalties incurred are due to distorted perceptions. Hallucinogens are harder to overdose on: a Health test failed by 5 to 14 will incapacitate the victim with massive hallucinogenic experiences for a duration similar to the unconsciousness induced by tranquilizers.

A Health test failed by 15 of more points will induce a fatal effect like a tranquilizer. The damage inflicted is equal to the hallucinogen's Potency minus ten, multiplied by the MoF. A fumbled Health test counts as failed by 14 points.

Euphorics induce a feeling of well-being and contentment. They produce identical game effects as hallucinogens, but are different in roleplaying terms. A euphoric character is simply very, very happy — too much, in fact, to concentrate on anything, hence the action penalty or incapacitation.

Stimulants cause a feeling of excitation and anxiety. Anyone whose Margin of Failure is between 1 and 4 will gain a bonus to initiative equal to the Margin of Failure. The modifier will decrease by one per hour until it is gone. The character will have difficulty falling asleep.

A Margin of Failure between 5 and 9 will provide an initiative bonus of (10 - MoF). The modifier will increase by one per hour until it reaches 5, after which it will decrease at a rate on one per hour until it is gone. Falling asleep is impossible until the drug's effects have worn off.

A character failing or Fumbling his Health test by 10 or more will overdose and take damage as if affected by a fatal toxin of a Potency five points below the Potency of the stimulant.

Analgesic drugs numb pain. For every point of Margin of Failure to resist the effects, one point of action penalty can be ignored. This effect decreases by one per hour until it is gone. A Fumbled Health test indicates that the analgesic failed to help reduce the pain. If the Margin of Failure is greater than twice the character's System Shock, the character goes unconscious for a number of hours equal to the roll of one die.

Multiple Effects and Doses

Many drugs have multiple effects. They have just one Potency and Onset Time, and only one Health test is needed. The effects of each drug type are applied to the user according the Margin of Failure (if any).

The rules assume that the victim was given a single dose. For each extra dose, add 10% to the Potency of the toxin (round down). Divide the Onset Time by the number of doses administered.

Sample Drugs and Toxins
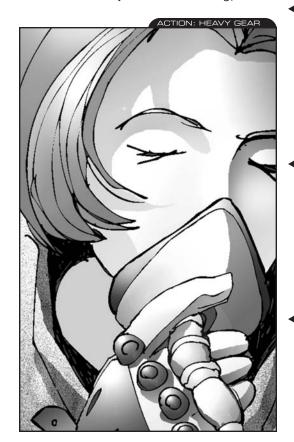
NAME	POTENCY	EFFECTS	ONSET TIME
Alcohol	6	Sedative/Euphoric/ Analgesic	15 mns
PCP	12	Hallucinogen/Stimulant/ Analgesic	30 mns
Cannabis	6	Euphoric	2 mns
Barbiturates	10	Sedative/Euphoric	20 mns

more, the penalty is -3. Treat a Fumble as a failure of 10+. The penalty decreases by 1 per hour, though the craving will remain: if the drug is once again presented, the character must make another WIL test, and so on.

If, in going cold turkey, a character succeeds a number of consecutive WIL rolls equal to the drug's Dependence, he's partially cured: he gets a +3 bonus for all subsequent WIL rolls, *until* he fails. Failure means the character has fallen back into the habit, and must start the process again. Treat a Fumble as a *temporary* relapse: the character goes on a binge, then makes a WIL test afterwards; a failure means the character has become dependent again, otherwise he still keeps his +3 bonus.

True liberation from psychological dependence is left to the GM's discretion (at least a full year of abstinence before a character is totally free from the drug).

6.2.3 Addiction Rules

The main negative side effect of drugs (recreational or medical) is the dependency it often creates in frequent users. This dependency can greatly affect one's quality of life, social relationship and health.

The medical field divides drug addictions in two broad categories: psychological *dependence* and physiological *addiction.* For matters of simplicity, these rules use the terms "dependence" and "addiction" to represent the psychological and physiological aspects of drug addiction, respectively.

Dependence

Dependency exists when a character is compelled to take a drug to satisfy a mental and/or emotional craving. While primarily psychological, dependency is not necessarily easier to get rid of, for it is often more insidious, based on regular habit and social conditions.

Whenever the dependent character is presented with an opportunity to take the drug, he must make a WIL test against the Dependence rating of the drug in order to pass up. If the character fails, but decides to pass up anyway, the mental stress will create an action penalty: for a Margin of Failure of 1 to 4, the penalty is -1; MoF of 5 to 9, -2; for 10 or

ACTION: HEAVY GEAR

• Addiction

Addiction (physiological dependence) exists when one must continue to use the drug in order to avoid withdrawal illness, physiological disorders caused by cutting the drug intake. Drugs that cause physiological addiction usually create psychological dependence, though not always.

Whenever a character misses a daily dose, he must make a Health test vs. the drug's Addiction rating. If successful, the character experiences few side effects, but must test again the next day, and so on, until he's succeeded in a number of consecutive rolls equal to the Addiction rating, and is no longer considered as "addicted" to the drug, though he can still be "dependent" on it.

A Margin of Failure between 1 an 4 will give a corresponding action penalty (-1 to -4) due to the shakes, fever, nausea, etc. The penalty decreases by 1 for each day of rest. These symptoms disappear if the drug is taken, though this reset the withdrawal period. A Margin of Failure of 5 to 8 incapacitates for a number of days equal to the MoF minus 4, then see previous. A failure by 9 or more (or a Fumble) causes life-threatening fevers or convulsions for a number of days equal to the MoF minus 8 (1 day for a Fumble), then see previous.

A character that survives gains a +1 bonus in resisting further effects of withdrawal. The bonus is cumulative, so repeated attempts will free the character from addiction (but not dependence).

• Becoming Dependent or Addicted

A drug's description can give the addiction's "onset time" (called interval), from a few doses to a few years of continual use. "Continual use" means at least once every day, intoxicated; "occasional use" means at least once a week, intoxicated. Fatal Toxins never have addictive qualities.

A Threshold is listed for a PSY or HEA test. Roll periodically, every time the interval comes up. Failure means the character is dependent/addicted.

• Medically-assisted Withdrawal

Medical institutions give a bonus of +1 to +4 (depending on the technology level of both setting and individual institution) on the HEA tests. Counseling groups, psychological treatment and the like can help characters get rid of dependence, but the highest bonus they can usually give is +2.

Hooks & Tips: Effects

The severity and nature of withdrawal symptoms varies from drug to drug. Withdrawal from sedatives and euphoriants can cause tremors, fever, convulsion, vomiting, cramps, diarrhea and severe pain; going cold turkey on stimulants might provoke excess fatigue, disorientation, pathological irritability and severe depression.

Sample Drugs and Toxins

Name	Dep. Rating	Dep. Interval*	PSY Thr.	Add. Rating	Add. Interval*	HEA Thr.
Alcohol	5	2-4 weeks/2-4 years	3	8	3-6 weeks/3-6 years	3
PCP	3	5 to 10 uses	3	7	10 to 20 uses	5
Cannabis	4	3-6 weeks/2-4 years	4	n/a	n/a	n/a
Barbiturates	6	1-2 weeks/4-8 months	5	7	2-4 weeks/4-8 months	7
*Interval: continual use/occasional use						

6.2.4 Disease

Diseases and illnesses are rated by Contagiousness, Onset Time, Virulence, and Effect. The Contagiousness of an illness is the Threshold of the Health test when the character comes into contact (modified to represent good or poor hygienic conditions, between -3 and +3). A successful roll means that the character does not contract the illness. A failed roll indicates that the character contracts the illness; the Margin of Failure is added to the illness' Virulence for that character. A Fumbled test results in the character contracting the illness at double the normal Virulence.

The Onset Time represents the longest incubation period. The actual time until the disease takes effect is equal to the Onset Time divided by the Margin of Failure of the contagion Health test. Fumbled contagion tests produce an Onset Time equal to one tenth the normal value.

Once a character contracts an illness and the Onset Time has expired, he must make a second Health test against the illness' Virulence (as modified by the first test). A successful Health test indicates that the character rides it out with minimal effects. A failed test indicates dangerous complications, according to each illness' description.

6.2.5 Electricity

Electricity is perhaps the most fickle, deadly force harnessed by mankind. Its effects on the human body are partially unpredictable. People can die from 110 volt household current, but one man in Virginia has been struck by lightning seven times and lived to tell the tale. Electrical sources are rated by Intensities.

Sample Illness: Mutant Influenza

Contagion: 9   Onset Time: One Week   Virulence: 9

Airborne illness that enters via open respiratory tract. On a successful Health test, the victim suffers from minor sniffles and discomfort. These symptoms lasts for 4 - MoS days.

Margin of Failure of 1 to 4: coughing, congestion, aches for one day times the MoF, with action penalty equal to MoF; reduces by one per day.

Margin of Failure of 5 to 8: incapacitated for number of days equal to (MoF - 4). Afterwards, treat as Margin of Failure of 4.

Margin of Failure of 9+, or Fumble: life-threatening fever for number of days equal to (MoF -8), or a week for a Fumble. Without proper medical attention, the character has a 1 in 6 chance of dying every day (without any attention at all, 2 in 6 chance). The character is incapacitated while the fever lasts. Once the fever breaks, apply effects of MoF 8 and below.

Sample Electrical Intensities

Intensity	Electrical Source
1	licking a 9 volt battery
3	car battery
5	110 volt domestic current (North America)
7	220 volt domestic current (Europe)
10	local power lines, industrial lines
20	power mains
25	minor lightning strike
50	large lightning discharges
100	hydroelectric dam generator

ACTION: HEAVY GEAR

Wound Effects

If a character is exposed to electricity for a full round, he receives damage equal to the Intensity rating multiplied by the result of a die (two dice if the reality level of the campaign is Gritty). If the exposure is less than one round, halve the Intensity (round down), unless the shock is from an electricity-based attack (e.g. a taser). A Fumbled roll does no damage.

Electricity not only does raw physical damage, but also messes up a victim's nerves and muscles. Any character who receives a Flesh wound will suffer from neuromuscular paralysis: muscles clench up and twitch oddly. This prevents people from letting go of electrical fences and live wires; the paralysis will continue until the electrical shock is removed. Any character who receives a Deep Wound due to electrical damage also suffers from paralysis and may suffer a heart attack.

The character must pass a Health test against the Intensity. A successful or tied test indicates no additional effects beyond damage. A test failed by 1 to 4 indicates that the character is knocked unconscious from the shock. A test failed by 5 or more will cause a coma (both knock-outs and comas are described in *Injuries*, section 3.5). A Fumbled roll results in an instant death as the character's neurons fry and he enters cardiac arrest.

Igniting Fires

To see if an electrical discharge ignites an object, roll for ignition as if a fire of one-fifth (round down) the discharge's Intensity was being used to ignite it (see *Fire*).

6.2.6 Fire

Fire is one of the most powerful and destructive tools of humanity. A fire is rated by an Intensity rating which combines both its size and temperature.

Fire Intensity

Intensity	Source of Flame
1	candle, lighter, or match
2	gas light, oil lamp, kindling
3	torch, gas range
5	campfire, bunsen burner, flare, acetylene torch
7	bonfire, napalm, incendiary grenade
10	inferno, chemical fire
20	periphery of nuclear strike*, fuel-air grenade
100	near a nuclear strike*, reactor meltdown*
1000	ground zero of a nuclear strike*

* These are ratings of heat intensity and do not include concussive and radiation effects.

Wound Effects

If a character is exposed to fire for a full round, he will receive damage equal to the Intensity rating multiplied by the highest of two dice. If the time of exposure is less than one round, the Intensity is halved (round down) unless the fire is from a flame-based weapon. A Fumbled roll halves the Intensity rating.

If a character receives a Deep Wound from a flame-based attack, the character is incapacitated due to searing pain for a number of rounds equal to one die. During this time, he can do little more than run about randomly or thrash in agony.

ACTION: HEAVY GEAR

Adhesive Incendiaries

Some flammable agents like napalm or petroleum fuels tend to coat whatever they strike and burn for extended periods. These are rated with a Burn Duration value; this is the number of combat rounds they will burn unless dowsed prematurely.

Igniting Fires

Every item can be assigned a Flammability rating. To see if a flame ignites an object, two dice are rolled and the fire's Intensity added (the Intensity is halved if exposure is less than one round). If this value equals or surpasses the object's Flammability, it will ignite. Fumbled rolls never result in ignition. Check every round of exposure, unless it is obvious the item will burn (lighting a match in a propane-filled atmosphere *will* ignite it).

The Gamemaster can assign Intensities to the new fires. Light clothes burn at Intensity 4, medium clothes at Intensity 5, heavy clothes at Intensity 6, human hair at Intensity 5, and animal fur at Intensity 6. These items have Burn Durations equal to their Intensity times the roll of one die if no attempts are made to extinguish the flames.

If attempts are made to extinguish the flames (e.g. rolling on the ground), this will take a number of rounds equal to the roll of one die. Strong attempts (e.g. jumping in water, dowsing with fire-retarding foam, exposure to vacuum) will immediately extinguish the fire.

Vehicles and Fire

Vehicles crossing burning terrain must pass a Piloting test versus half the fire's Intensity to pass safely. If the test fails, the result is treated as a successful incendiary attack, with the Margin of Failure of the Skill test being used to calculate the damage.

Sample Flammability Ratings

FLAMMABILITY	OBJECT TYPE
1	propane, natural gas, hydrogen gas, methane
3	gasoline vapors
4	paper, pitch, crude oil
6	normal clothing, rugs, upholstered furniture
7	dry firewood
8	hair, fur
9	fresh cut or treated wood, most plastics, leather
12	magnesium flares
15	fire retarding clothing
50-200	most "non-flammable" objects like steel and concrete

6.2.7 Gravity

Gravity is a constant acceleration applied by the gravitational field of a large mass. There is no practical difference between the acceleration provided by a gravity field and other types of accelerations; gravity is easily simulated in space by firing thrusters or rotating a living section.

The following rules apply to zero-gee conditions, which should more accurately be called free-fall. Indeed, all objects in a solar system are subject to the gravitic pull of the sun, and only the orbital speed prevents them from falling on the star. Everything is, in effect, perpetually falling.

Space Adaptation Syndrome (SAS)

The first astronauts reported the presence of a strange kind of sickness that affected them when they reached orbit. More than half the people going into space suffer from Space Adaptation Syndrome: the inability of the body to conciliate the various sensory signals received.

When the character first enter micro-gravity conditions, two die are rolled. If he has received either motion drugs or training, add +1 to the roll (+2 if both are used). On a five or more, the character is completely immune to the SAS effects. Otherwise, the character suffers from an action penalty equal to five minus the roll of the dice. A HEA roll vs. 5 is made at the end of every day to see if the character recovers. Once recovered, the character is fine and gains a +1 to the roll the next time he enters microgravity.

Moving in Low and High Gravity

Movement under low gravity (between 1 and 0.1 gee) is similar to standard movement. The exception is that the person will have a harder time due to reduced traction: a penalty of -1 is applied to all movement-related Agility tests. Movement under high gravity (more than 1 gee) receives a penalty of -1 per full additional gee, applied to all movement-related Agility tests.

Movement rates are always divided by the local gravity (in gee). Falling damage is multiplied by the local gravity (in gee).

Thus, an average person (FIT 0, no Athletic Skill) would be able to jog up to (10 / 0.16 =) 62.5 meters per round on the Moon, in great bounding leaps and with trouble controlling his direction. Should he fall, though, he would receive only one sixth of the normal falling damage.

Movement in Free Fall

Masses in space keep their inertia, meaning that no effort need be expended to move except when changing direction or velocity. Inertia also has unfortunate side effects, such as the impossibility to change direction in mid-air without pushing against something. Action equals reaction of equal value: if pushing off another person, one will also float away.

The speed that can be reached by a person is directly related to strength: the stronger, the greater the initial impulsion. Obviously, characters can chose to move slower. If pushing objects, or carrying them, multiply speed by basic body mass, then divide by new total mass.

Free Fall Movement Speed

Maximum Speed (m/s) = (Mstr/Mbld) x (Mstr/Mbld)

Mstr is four time the maximum mass lifted by the character (see section 2.1).

Mbld is the character's body mass (see section 2.1).

Collisions

Since there is no way to change direction or velocity without some kind of reaction, inexperienced freefallers often collide with objects in their path, powerless to prevent the collision. Two dice are rolled and the result multiplied by the speed (in meter/second): this is the damage taken. If the floating person impacts head first, add ten to the die roll.

A conscious person may attempt to soften the reception by making a Zero-G Skill test. The result is subtracted from the speed for damage. If the result is equal or greater than the speed, the person "lands" unharmed. If the roll Fumbles, the person tumbles and hits head first. If the character does not manage to land, he will rebound and float away at half his pre-collision speed.

Base damage assumes a moderately solid surface. Hard surfaces, such as armor, double the speed for damage and rebound purposes.

Soft surfaces halve the effective speed. Crash pads or nets can divide the collision speed by ten to twenty times (Gamemaster's decision).

Combat

Personal combat in space is mostly hand-to-hand. Ranged weapon use is possible, though the recoil must be taken into account: it will push back the user unless braced. An acceleration equal to 0.01 g is applied *opposite* the firing direction per point of Damage Multiplier (to translate this into meter/second speed, simply use the gee value — a good enough approximation).

Close combat uses the standard rules, except that any hit will cause the combatants to fly apart unless braced. Use the above rules to get kickback speeds, with both combatants pushed in opposite direction.

Gravity and Health

Micro-gravity conditions cause a variety of health problems. Bone decalcification, whereas the calcium literally "oozes" out of the skeleton, occurs after a few weeks. Certain compounds may have been developed to alleviate the problem, depending on the setting.

Loss of muscle tone is a more common and serious problem. If this is not taken care of, health problems can occur and the person will soon be incapable of tolerating acceleration, not able to visit other worlds.

One point of FIT is lost after a month spent without exercising. Another is lost after two months, another at four months, and so on, doubling the duration every time. At least two hours per day of vigorous are required to avoid this, increasing by one hour every three months spent in free fall until it reaches six hours per day. One point of BLD is lost per two points of FIT, and both HEA and STR are recalculated to take any losses into account.

6.2.8 Radiation

Many phenomenons, natural or made-made, produce radiation, but only in certain situations is the amount large enough to cause damage. Radiation poisoning is usually severe, though it may take a few days for the full effects to be felt.

The unit used to measure radiation is the *rad*. Absorbed rads are cumulative: if thse rules are used, a tally should be kept of the character's current rads. Every week, a character can purge a number of rads equal to a Health roll, provided he was not further exposed. Rads can never be purged entirely: a character will always retain a number of rads equal to one-tenth the largest total ever accumulated.

Rads
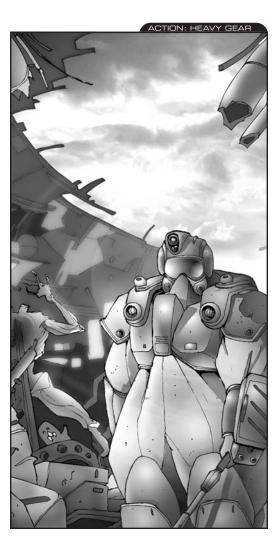
One rad is the effect of one roentgen — the standard unit for radiation — on a living organism. The following table gives sample contamination values from various sources. The values are either absolute numbers, for one-shot radiation bursts, or rates, for prolonged exposure.

Rad Sources

Name	Rad/Rate
1-kiloton air burst at 1 km	100 rads
1-megaton air burst at 2 km	6,000 rads
1-megaton air burst at 10 km	500 rads
1-megaton air burst at 25 km	100 rads
Neutron bomb air burst at 3 km	500 rads
Fallout at ground zero, 1-megaton ground burst	
after 1 hour	5 rads/minute
after 2 hours	2 rads/minute
after 6 hours	30 rads/hour
after 1 day	7 rads/hour
Nuclear reactor meltdown	5 to 50 rads/minute
Solar flare	1 to 30 rads/minute
Background cosmic rays	0.005 rads/hour

Protection

Radiation suits and shielded vehicles are given a protection factor in rads/hour (this can be divided by 60 to get the value in rad/minute). This amount is subtracted from individual bursts or rates as appropriate. Non-shielded vehicles also provide a minimum amount of protection, equal to (Armor x Armor) in millirad/minutes.

Lead, NBC and anti-radiation suits are given a Radiation Shielding Factor (RSF) in rads/hour. Subtract this amount from individual bursts or from hourly rad rates for prolonged exposure.

Irradiation Table

Rads Total	Threshold	Fumble effect
50-99	6	none
100-199	7	Flesh Wound
200-299	8	Flesh Wound
300-399	9	Flesh Wound
400-499	10	Flesh Wound
500-599	11	Deep Wound
600-699	12	Deep Wound
700-799	13	Deep Wound
800-899	14	Deep Wound
900-999	15	1x Deep, 1x Flesh Wounds
1000-1099	16	1x Deep, 1x Flesh Wounds
1100+	17	death

ACTION: HEAVY GEAR

Radiation Effects

The first time a character's accumulated rads exceed 50, or at any time the character receives at least 1 rad thereafter, secretly roll his Health against the Threshold set by the Irradiation Table. Don't roll more than once a day, and don't apply more than one effect (pick the worst). Players should not be told the result — just describe symptoms as they manifest themselves.

If the character succeeds the test, he is unaffected, though his level of accumulated rads stays the same. Failed and Fumbled rolls have a variety of effects, as detailed below (Short and Long Terms Effects). Make a further Health roll in case of a Fumble: the result gives the number of minutes before the effect takes place.

Short-Term Effects

A roll failed by 1 to 4 produces mild radiation sickness. Symptoms appear in a number of hours equal a Health roll. The character will be fatigued and nauseous, incurring a action penalty equal to the MoF. Reduce the penalty by one every 12 hours.

A failure between 5 and 7 will have effects similar to those above, with a penalty of -4. Secondary symptoms will appear after a

number of days equal to a Health roll: lingering fatigue, muscle pain, loss of hair. The character will be at -1 to all activity, except Health tests which are at -2. The character must make a daily Health test vs. 4 to recover. Success means that the character completely recovers in (10 - System Shock) days.

A failure of 8 or 9 is similar to the previous one, except that the symptoms are more severe. The general action penalty is -2, -3 for Health rolls.

A roll failed by 10 to 14 is similar to those above, but graver still: the action penalty is -3, -4 for Health rolls. A failed recovery test delivers a Deep wound, while a Fumble means that the character succumbed.

A roll failed by 15 or more kills the character in a number of hours equal to a Health roll.

ACTION: HEAVY GEAR

ACTION: HEAVY GEAR

Long Term Effects

The effects of radiation can be very subtle and it takes years before the full effects manifest. Irradiated people are more prone to develop cancers. A character who suffered from radiation sickness makes a yearly Health test against half the highest Margin of Failure he ever had in resisting radiation, rounded up. Failure means that the character has contracted a life-threatening cancer — which may or may not be treatable, depending on the setting.

Treating Radiation Sickness

Depending on the campaign's level of scientific development, it may be possible to treat characters suffering from radiation poisoning. If treatment is available, it will come in two steps: recovery from the sickness, and purging of accumulated rads. Depending on the technology, give a +1 to +4 bonus on the recovery roll, and multiply the purging rate by a factor of 2 to 8. If the character receives regular check-ups, apply the recovery bonus for Long-Term Effects' Health rolls.

6.4 Optional Rules

The following section includes entries on rules that will make the playing experience more interesting, but will also make play more complex. Make sure all players understand the basics of the Silhouette system before they attempt to use them, and that all are in agreement.

6.4.1 Reality Distortion Factors (Optional)

Suspension of disbelief — a process by which a viewer or reader voluntarily agrees to be fooled by premises which he knows may not be entirely realistic — is as important a concept in roleplaying as it is in literature or movies. Gamemasters and players must agree on what level of reality they prefer before the game starts. In Silhouette, we use three Reality Distortion Factors (RDF) to describe the various genres available.

The lowest is **Gritty**: at this level, firefights are very dangerous and heroes are just brave people taking great risks. While not a perfect simulation of everyday Real Life, this is as close as it gets. In a Gritty game, everything should be written down. The slightest mistake can be fatal — characters will spend much time worrying about infection and ammo.

The middle level is the **Adventurous**. This is recommended as the default RDF for most games and is used by default in the various Silhouette books. Heroes and villains tend to stand out just a bit more than Joe Average, and death is easier to avoid. Players keep track of ammunition and fuel, but don't worry about "mundane" things like their characters' day to day affairs.

The highest Reality Distortion Level is called **Cinematic**. This is movie- or anime-like adventuring where the laws of physics are temporarily on vacation, heroes and villains are larger than life and puny screen extras are mere cannon fodder. The odds are skewed in favor of powerful characters, and even the most outrageous action has a chance of succeeding — as long as it looks good. Unless it fits the plot, players never have to worry about ammo or maintenance. Cinematic games use a number of the optional rules listed here.

The different Reality Distortion Levels will make for very different gaming styles. As mentioned above, bookkeeping is one of the tasks that will be most affected by the chosen RDF. The Gamemaster should select the RDF of the campaign after consulting with his players. In case of disagreement, Adventurous reality should be used.

Design Notes: Default RDF

Every rule is written with Adventurous reality in mind. Gritty or Cinematic RDFs only alters a result when it is clearly stated in the rules' description. While roleplaying, the Gamemaster should enhance the grimness of the Gritty game and the risk-taking of the Cinematic one by modifying his descriptions and his props (music, etc.) accordingly.

Reality Distortion and Skill Tests

The main effect of the RDF is to change the way the dice are read. At the Gritty level, the maximum die result is six (6). Additional sixes do not add +1 — one can only get *so* good in real life, and you can't blow up a tank with a pistol. The only exception to this is when Emergency dice are used, as they (and only they) can bring the result above six.

Adventurous games read the dice normally — each additional six gives +1 to the die roll. The Cinematic reality level works the same, except that additional fives also count as +1 for the Player Characters and the main villains! (e.g., if three dice are rolled and turn up 5, 5 and 6, the total result is now 8. If 4, 5 and 5 are rolled, the result would be 6, and so on.)

Reality Distortion Factors and Dice

REALITY LEVEL	DIE ROLL
Gritty	Extra sixes (6) do not add +1 to the total
Adventurous	Additional sixes (6) give +1 to the total
Cinematic	Additional fives (5) or sixes (6) give +1 to the total*

*Player Characters and Main Villains only

Reality Distortion and Armor Degradation

To allow different game styles, Armor degradation is subject to an optional Reality Distortion effect. This simulates the armor-piercing power of modern weaponry, or the "always go out with a bang" movie effect. This is the number of Armor points removed after each damaging hit.

RDF and Armor Loss

REALITY LEVEL	LIGHT DAMAGE	HEAVY DAMAGE
Gritty	0	-1
Adventurous	-1	-2
Cinematic	-2	-4

Jumping/Leaping

Characters can double their jumping or leaping distances in a Cinematic game. If they can take a proper run before jumping, add the Margin of Success of an Athletics test versus a Threshold of 4 to the distance jumped, in meters.

The WOO Factor

The WOO Factor (Weapons Out of Ordinance) is designed to simulate the endless shoot-outs of the movies. Ammunition "magically" appears in the gun's receiver, allowing both heroes and villains to put a ludicrous amount of lead in the air. This rule can only be used for Cinematic games. WOO Factor applies to both character and vehicular weapons.

With the WOO factor, the usual ammunition expenditure procedure is ignored — as long as the character does not Fumble, there's ammunition remaining. If the die roll is Fumbled, the weapon is out of ammunition or is jammed, and must be reloaded/cleared at the cost of one standard action (spare ammunition is assumed to be readily available). Weapons using burst fire subtract the ROF used from the dice result — in the movies, automatic weapons don't make it any easier to hit the heroes (but do massive collateral damage!); if the result is 1 or lower, treat as out of ammo, as above.
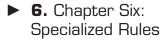
Existential Angst

Cinematic characters, especially in Japanese animation, are often subject to traumatic events — the death of a loved one, the destruction of their home, etc. In reaction, they become driven fighters, to inflict their revenge or make the situation right again. Existential Angst *must* be okayed by the Gamemaster and requires strong roleplaying — if properly played, it can be used at any RDF.

If the character is subjected to a very traumatic event, the player may shift points from the PSY Attribute to AGI, FIT, PER, STR, WIL or a combat-related Skill (Piloting and Gunnery included) on a one-to-one basis. The new numbers should be marked down in pencil beside the current values. As soon as the traumatic situation is resolved (revenge achieved, true love found, etc.), the bonus disappear.

ACTION: HEAVY GEAR

6.4.2 Skill Applications (Optional)

Very skilled characters have amazing abilities which they can use to counteract a bad situation. For example, a skilled martial artist or brawler will eventually become good enough to fight in the dark; a champion technician can repair a critical system in half the time required, etc. These special abilities are "paid for" by sacrificing some of the dice being rolled (effectively lowering the character's effective Skill level) during an action test. If the dice total is reduced to zero, roll as if unskilled.

Anyone can use these Skill Applications, although they will rarely be effective unless a character is highly skilled (4-5 or more); at lower levels, it makes more sense, odds-wise, to take the penalty. Characters can use as many different Skill Applications in a single round as their Complexity rating in the Skill being used (e.g., a character with Hand-to-Hand 6/3 can use up to three different ones every round).

Acting Blind: reduce the number of dice used in a test to counteract lighting penalties on a one-for-one basis (for example, working or fighting in the dark without penalties removes four dice).

Acting Fast: reduce the number of dice used in a test to halve the time required for a non-combat task (for example, sacrificing two dice of Notice would make searching a room take one-quarter of the time usually required; three dice would translate into one-eight, and so on).

Acting while Burdened: reduce the number of dice used in a test to counteract penalties due to Encumbrance (by armor or load) on a one-for-one basis (for example, fighting off a blow while wearing heavy armor with -2 Encumbrance removes two dice).

Acting while Disadvantaged: reduce the number of dice used in a test to counteract penalties due to being in an unfavorable position on a one-for-one basis (for example, fighting off a blow coming from the rear without penalty removes two dice).

Deception Attacks: An attacker may choose to reduce the number of dice used in an attack roll in exchange for applying the same penalty to the defender's own dice.

Defending Against Multiple Attackers: A defender can completely cancel a multiple attacker penalty by removing one die per additional opponent from his Defense tests (i.e., lowering his effective Skill level by one for each additional foe).

Stances

At the beginning of each round, players may declare a stance for their character. The effects of the chosen stance last throughout the round. There are four of them: Neutral, Offensive, Defensive and Focused.

A **Neutral** stance is the default one. It provides no special modifiers.

An **Offensive** stance adds one dice to any task or attack test, but removes one dice for defense and initiative tests.

A **Defensive** stance adds one dice to all defense and initiative tests, but removes one dice for any task or attack test.

The **Focused** stance is special. When using a tool or weapon, the character receives a +2 modifier to the test, but defend as if suffering from a sneak attack (i.e. Defense is 1 + movement modifier + cover modifier).

6.4.3 Leadership in Personal Combat (Optional)

The Leadership and Combat Sense Skills may be used to enhance the abilities and response time of a group in combat. Leadership represents the leader of a group of warriors shouting commands and orders, organizing his group into an effective combat force. A high Complexity rating in Combat Sense represents the training and experience that the character has working in an effective fighting force.

Decide on a leader for the group — it can be any character. When combat starts, the leader of the group gets a number of Tactical Command Points (TCP) equal to the Complexity rating of his Combat Sense Skill. A combat group must consist of at least two people; a lone individual may not generate Command Points. Tactical Command Points may be used by any member of the combat group, but only in response to the active enemy or by himself when he is active. The Tactical Command Point pool is a finite pool which does not refresh; once the Tactical Command Points are used, they are gone for the rest of the encounter.

At the beginning of any round, the leader may spend one standard action to roll his Leadership Skill plus modifiers (see the *Leadership Modifiers* table) versus a Threshold of 1. The MoS is the number of Leadership Command Points generated. Leadership Command Points have the same effect as Tactical Command Points, but the leader must give them out (by shouting, hand signals, etc.). The leader may not use Leadership Command Points, but may use Tactical Command Points.

Throughout a combat round, a character may never use more Tactical Command Points than his Combat Sense Level. A group leader may not give more Leadership Command Points to a character than his Leadership Skill's Cpx, per round.

Command Point Use

Both Tactical and Leadership Points may be used for:
- Gaining a free action (1 pt);
- Gaining a +2 bonus to the next defense roll (1 pt);
- Acting out of sequence (pre-empting opponent; 1 pt);
- Change stance in mid round (1 pt)

Leadership Modifiers
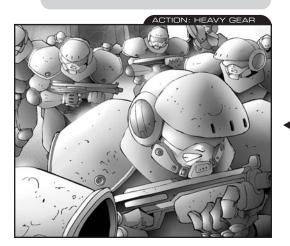
Situation	Modifier
Leader in Close Combat	-1
Roleplaying	+1
All other situation modifiers	see 3.3 and 3.4
Group Size (not including leader):	
3	+0
6	-1
12	-2
24	-3
48	-4
96	-5

Design Note: Look-out, Self!

A leader cannot take Leadership Points because one cannot lead himself. What good does it do for a person to scream at himself to dodge? Also, the limit on the number of Command Points which can be taken each round represents the character's ability to understand tactics and leading and make the best use of those skills and abilities.

ACTION: HEAVY GEAR

6. Chapter Six: Specialized Rules

Example: Leadership

While picking up supplies in the local market, Malachi and Orion have been cornered by the Town Watch. Orion and Malachi are a combat group; Malachi is the leader and has a Leadership Skill of 3/3, INF and CRE of +0, and Combat Sense skill of 2/2. Orion is not really someone who fights much, and doesn't have the Combat Sense Skill.

Malachi has Combat Sense Skill at Cpx 2, which provides two TCP for the encounter. Malachi will be able to all two Tactical Command Points in a round (i.e. Combat Sense Skill 2) but Orion won't (no Combat Sense Skill). Combat begins.

Malachi elects to take two actions, one for Leadership and another for combat. He uses his Leadership Skill of 3 and rolls 2, 4, and 5; a result of 5, vs. a Threshold of 1. After adding in modifiers (-1 for being in hand-to-hand combat and -1 for taking two actions), the MoS is 2, so two Leadership points.

Malachi is able to give Orion up to three Leadership Command Points per round (i.e. Leadership Cpx 3), but will not be able to use any Leadership Command Points because he cannot command himself.

ACTION: HEAVY GEAR

6.4.4 Special Effects (Optional)

In Cinematic games, the flow of the story depends more on how "cool" things are, rather than how realistic. Since the game system is a good simulation of reality, however, dice modifiers may penalize players who want their characters to attempt impression actions within the genre. This is where the Special Effects come in.

A Special Effect occurs whenever a player describes an action that is action-packed, evocative and within the genre and style of the game. The Gamemaster has the full and final authority to decide whether an action counts as a Special Effect or not. Special Effects may not be repeated within the same game session — if the player wants the bonus to kick in, he must come up with a new description or a new way of doing things.

Basic Special Effect: the player describes the action of the character vividly, using words that appeal to all senses. For example, "I swing my sword in a flashing arc of silver aimed at his head, blade whistling in the wind!" instead of "I hit him with my sword." A Basic Special Effect adds one dice to any Skill test attempted in the action.

Advanced Special Effect: the player describes the action of the character vividly and integrate it in the environment at hand. For example, "I grab the bad guy that just attacked me as a shield to protect me while I jump behind the counter while bullets impact all around us." An Advanced Special Effect adds two dice to any Skill test attempted in the action, or gives a free action (presumably, to cover the visual requirement of the Special Effects without adding penalties).

Complex Special Effect: the player describes the action of the character so vividly, using words that appeal to all senses, and the action is so within the genre, that it makes everyone go "wow!" around the table. A Complex Special Effect adds three dice to any Skill test attempted in the action, or gives two free actions.

Special Effects and Game Balance

Special Effects are a neat rule but one that has potential game balance issues. Players may be tempted to use them all the time to boost their stats, which is not the intention. Special Effects should be used only at critical moments in the game. They serve to encourage the players to go beyond the ordinary and take some chances, and to become more descriptive. If an action fueled by a Special Effect fails, don't punish the player for trying; give them a possible way out (for example, a failed attempt involving acrobatics in a high place shouldn't result in a deadly fall, but end with the character dangling from a finger on an edge or wire).

Villains and Special Effects

The characters' antagonists can use Special Effects too. To avoid abuse, only the main villain(s) should be allowed to use them, not the lower grade bad guys. Special Effects should be used with parsimony, and to augment the game, not hurt the player characters. It is a good idea to jolt down a few possible Effects in advance, to save time.

As a rule of thumb, no villain should use more than one Special Effect per game session. Alternatively, if the players use this rule a lot, the GM can build a "pool" of Special Effects for all his NPCs — everytime a character performs a Special Effects, the pool goes up by one.

Design Notes: When in Doubt, Borrow!

Experienced players will notice that the Special Effects rule was inspired from another game. We do this shamelessly: not only does it facilitate future conversions, it also improves the quality of gaming as a whole. Don't be afraid to do the same in your own campaign — if you see a rule or idea that looks interesting and can be incorporated, go for it!

6.4.5 Genre Points

Heroes routinely fall to the edge of defeat, only to find inner strength to finish off the bad guys. This is difficult to emulate with most roleplaying rules. That's where **Genre Points (GPs)** come in — they are a currency between Gamemasters and players to create interesting storytelling effects that suit the campaign's genre without unbalancing the game mechanically.

The GM should select 3-5 **Genre Effects** from the list below that characters can use in the game. Effects should suit the setting's genre and Reality Distortion Level. The *Genres* section (7.5) lists some possible combinations. Gamemasters may create their own Genre Effects, or alter the ones below to better fit the setting. GMs can also veto the use of any approved Effect if it unbalances the game.

Accessorize: 1-3 Genre Points can be used to buy or borrow a piece of equipment not normally available. Cost depends on the item's power or usefulness. GPs must be spent to replace lost items.

Blessed Unconsciousness: For 1 Genre Point, the character blacks out and is ignored by the opponents as dead. All attacks against him cease. He wakes up automatically at the end of the fight.

Burst of Angst: Witnessing a traumatic event unleashes a berserk rage in the character. Each Genre Point spent allows one Attribute Point to be moved from Psyche to any other Attribute except Build. Psyche cannot go below -5. This lasts until the end of the current scene or combat.

Creative Stunt: By spending 1-3 Genre Points (based on how powerful the stunt is), a character gets to use a Skill, Perk, Special Ability or piece of equipment in a new and creative way, once. For example, the firing spring in the character's handgun just happens to match the broken part in the control panel.

Do It Again, Please: By spending 1 Genre Point, the character may re-roll his last test. By spending 3 points, he

may make another character or NPC re-roll. The character spending the GP chooses which roll applies; if both results are below 3, treat the roll as 3.

Dramatic Editing: When the game has been completely derailed, or the entire party about to die, spending 1-3 Genre Points causes a lucky coincidence. The cost is based on how obvious the editing is. For example, the characters find a crucial piece of evidence (1 point), the deathtrap jams just as it is about to crush the characters (2 points) or a previously unknown super-advanced alien race suddenly appears to save the characters (3 points).

Escape Impending Death: For 3 points, Wound Degeneration stops (see Section 3.5.3). The wound(s) remain, but the character is in no danger of dying unless he receives more damage. He will still need healing or medical attention.

Fortune Favors the Bold: At the end of a session, characters may convert unused Genre Points into Emergency Dice on a one-for-one basis.

Get a Clue: An unexpected leap of logic results in a new direction for the adventure, expressed as a clue or a hint from the Gamemaster. The cost depends on how obvious the clue is, and whether the GM feels the characters have made a good effort to solve things on their own.

Goad Villain: A villain can be manipulated into doing something he would normally never do, like fight a hero in a duel *mano-a-mano* or reveal his master plan. This Effect's cost is based on the importance and intelligence of the villain, as well as on how out-of-character he must act. A Cinematic pulp-style villain costs 3 Genre Points to goad, while a Gritty Wall Street executive may cost 6 GPs or more.

Group Effort: If a character lacks enough Genre Points to use an Effect, other characters may donate their GPs. Contributed GPs must be spent immediately. There is no cost for this Effect.

Inner Well of Strength: The character can tap his willpower to temporarily fuel his flagging strength. For one Point, the Action Penalty of

a Flesh Wound is ignored for the rest of the crises. Three points overcomes a Deep Wound. This may be used multiple times, but only on one wound's AP per round (it is possible to return to full "health" after several rounds). The wounds themselves still exist, and still need healing or medical attention.

Insight: For each GP spent, the character may add a die to the next roll or test. Dice must be added before the roll is made. "Insight" can be combined with Emergency Dice, but do not affect the Emergency Dice limit of 5.

Last Hurrah: There may come a point where a hero just isn't going to make it out alive. If a character suffers a fatal wound, he may spend all his remaining Genre Points in one final effort. His actions must be directed towards saving other characters, taking out villains/henchmen, or ensuring that vital information or equipment is passed on. The Gamemaster decides how long this effect lasts, but it should not be longer than a few 6-second rounds. A character doing a "Last Hurrah" ignores Action Penalties from all his current wounds as well as any new wounds he receives. At the end of the "Last Hurrah," the character dies and cannot be revived.

Lucky Break: Instead of taking full damage from a wound, something happens: a falling character lands on something soft, a bullet gets deflected by a canteen, etc. Each 3 Genre Points spent reduces a wound by 1 level. Flesh Wounds are completely negated. Multiple reductions can be made at once; spending 9 GPs can negate an Instant Death result.

Mimic Skill: Sometimes heroes know just what to do — even if they don't know what they're doing. For each GP spent, a character gets 1 level in a Skill he does not already have, up to a maximum of 3. This phantom Skill lasts for one test, and that Skill test must be made immediately.

Mortal Strike: By spending 6 Genre Points, the last wound a character inflicted will eventually be fatal. The Gamemaster determines if death is immediate. This can also be used against structures and vehicles.

Opportunity Seized: For 1 Genre Point the character may take an additional Action at any time without incurring the multiple Actions penalty. This Action can be used to interrupt other characters or NPCs.

The Return Of...: Heroes never die — they just disappear for a while. For 9 Genre Points, the character comes back in the next scene ("lucky I caught that branch on the way down!"). For 6 GPs, he comes back in a few adventures ("I was nursed back to health by a pygmy tribe..."). For 3 GPs, he returns at the end of the campaign, shrouded in mystery, possibly with new abilities.

Sweet Success: Each Genre Points spent adds 1 to the final result of any Skill roll. This can be done even after the roll is made.

How Do They Work?

Newly created Player characters start with 3 Genre Points. Characters with any Attributes rated below -1 receive an additional GP. Characters with more than 6 points of Flaws also receive an additional GP.

Every time the character does something appropriate for the game's genre (each setting will generally list multiple examples — see section 7.5), he gets a Genre Point. Every time the player plays out a character's Flaw (if any), he gets a Genre Point. Every time the player does something cool (the entire game group goes "wow!"), he gets a Genre Point. The easiest way to do this is by using tokens of some sort (pennies, beads, etc.) that can be given directly to the player.

Gamemasters may sometimes put characters in bad situations to keep the plot moving — the villain kidnaps them, their headquarter burns down to the ground, and so on. If they chose to go along, those players affected get GPs in exchange for the temporary lack of control over their character(s).

Genre Point rewards should be tailored to Reality Distortion Factors and the setting's genre. There are no hard and fast rules for this; much of the choice is up to the Gamemaster

in terms of how appropriate a particular action is. As a rule of thumb, Cinematic level games emphasize style, while Gritty games emphasize substance.

Villains can use Genre Points as well, though in general thugs and henchmen shouldn't. The setting's major villain starts with 3-5 GPs plus 1 per character. Important secondary villains get 1-3 GPs. Villains may spend their GPs on the same Genre Effects used by the characters. They may also use their GPs to cancel character GPs as they are being spent, effectively causing a temporary increase in an Effect's cost.

Adventures should be geared to use up about 3 Genre Points per session. Characters should not accumulate more than 6 or 9 GPs except in extraordinary circumstances. The maximum amount of GPs available also depends on the power of the character — weaker characters should have access to more GPs.

Genre Point Pools

Instead of providing GPs to individual characters, Gamemasters may allocate all GPs as a single pool available to all PCs. If a common pool is used, Gamemasters should ignore Genre Effects for sharing GPs, since this will happen automatically. This will affect game play in two ways. First, the amount of GPs that a player can draw upon during a session is significantly higher. Second, it is possible that a player can take advantage of the pool without ever really contributing.
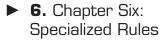
In order to balance this, for any one Effect PCs may freely spend from the pool only their original starting GP total (usually 3 GPs). The Gamemaster and the other players must approve any greater expense. Gamemasters should also limit the maximum number of GPs available to anyone who is spending far more GPs than he is earning. As a note, PCs do not all have to be in the same location to use pooled GPs.

Villains should use the same Genre Point allocation method as the PCs; that is, either individual GPs or a common pool. As with individual GPs, the pool is not available to thugs and henchmen.

Core Concepts: Chapter 6

The followings are examples and further explanations of the core concepts introduced in Chapter Six.

Example: Swarm Attack

See Animals and Creatures, section 6.1, for the basic animal rules.

Al and Jason are being attacked by a swarm of angry wasps (Aggressiveness: 3, Damage/ Turn: x3). The GM rolls 3 dice for the swarm's attack, and gets a 7. This is multiplied by the Damage/Turn of x3 for a total damage of 21. The damage is then split evenly between Al and Jason (rounding down), for a total of 10 each.

Example: Creating a Race

See Aliens and Modified Humans, section 6.2, for creating a new race.

Beth wants to create a racial template for the Elves in his game. She envisions them as being tall, inhumanly attractive, fairly agile, but somewhat short tempered and emotional. Beth also thinks that most Elves should have fairly keen eyes.

Based on her ideas for the Elves, Beth starts building the template by choosing the Attribute Range shifts the race should get. Since they are exceedingly attractive, she decides that she should give them two positive shifts in Appearance (20 CPs). To represent their above average agility, she gives them a single positive shift in that attribute (10 CPs). The short temper and emotional nature are a bit hard to pin down, but Beth finally decides on giving the Elves a single negative shift in both Psyche and Willpower (-10 CPs each). The Total cost is (20 + 10 - 10 - 10 =) 10 CPs.

The keen sight is an attribute that most Elves have, but Beth doesn't quite feel comfortable making all Elves have a perk, so she notes that most Elves should take the Perk: Acute Senses (Sight).

Elven Racial Template:

Elves are built using 10 extra Character Points and 10 less Skill Points than is normal for the Reality Distortion Level of the game. Elves' Attribute ranges are -3 to +3 in all Attributes except the following: Appearance (-1 to +5), Agility (-2 to +4), Psyche (-4 to +2), and Willpower (-4 to +2). Most Elves have the Acute Sense (Vision) Perk, with few exceptions.

Example: Drugs and Toxins

See Drugs and Toxins, section 6.2.2, for basic drug and toxin rules.

Wanting to appear tough, Al knocks back a triple shot of Scotch (three doses of alcohol) making the potency (6 + 10% + 10% =) 8 and the onset time (15 / 3 =) 5 minutes. Al makes a Health test, and gets a 4. For a minute, nothing seems to happen, then Al gets a goofy look on his face (analgesic and euphoric effects) and is having trouble sitting up or talking straight (sedative effect). He currently has a -4 action modifier from the sedative effect

Example: Electrical Wounds

See Electricity, section 6.2.5, for basic electricity rules.

Jim touches a highly electrified fence (intensity 15). He rolls 1 die to see how much damage he takes and rolls a 3. Joel suffers (15 x 3 =) 45 points of damage. This is enough for a Deep Wound. Joel suffers neuromuscular paralysis and is not able to remove his hand from the fence. In addition, he now has to make a Health test to avoid falling unconscious or comatose.

Examples: Fire Damage

See Fires, section 6.2.6, for basic fire rules.

Bubba just fell into a raging bonfire. The bonfire has an Intensity of 7. Two dice are rolled to find out how much damage Bubba takes. The highest die is a 6. Bubba takes (6 x7 =) 42 points of damage this round, enough for a Deep Wound. Bubba is incapacitated for a number of rounds equal to the roll of one die (3). Bubba is almost certainly doomed to a very horrible death.

Steve just pulled Bubba out of the fire. Since he wasn't expose to the fire for a full combat round, the Intensity is halved to (7 / 2 = 3.5, rounded up to) 4. He takes damage based on the roll of 2 dice multiplied by this Intensity, rather than 7. The highest die is a 5, causing (5 x 4 =) 20 points of damage to Steve, thankfully just a flesh wound.

Examples: Igniting Fires

Jason is trying to light a campfire. The wood is flammability 6, and he's trying to light them with a match (Intensity 1). He rolls two dice (a result of 4) and adds the match's Intensity, yielding a total of 5. Not enough to start the wood on fire. After trying a few more times, Jason realizes he should probably start with some tinder.

Jason has accidentally set his jacket on fire. He tries to put out the fire and rolls a 3 on one die. It will take him 3 rounds to put the fire out. Odds are the rest of his clothing (Flammability 5) will catch on fire shortly.

Introduction

This chapter is somewhat different from the previous one: it is not meant to be read from beginning to end (although you may want to do that anyway), but rather to be consulted as the need arises. More than a "how-to" guide to Gamemastering, it nonetheless goes over many of the basics involved in setting up and directing an adventure or a campaign. It also includes a series of tools and forms which will be of use to Gamemasters in organizing and running their campaigns.

The first half of this chapter focuses on the individuals involved in the game: the Gamemaster (who runs the show) and the players (the actors and the audience at the same time). It explains the role of the Gamemaster, his expectations and responsibilities, and prepares novice GMs for the task that lies ahead. While the material within may be of some use to a player, it is really meant for use by Gamemasters, who often don't understand the needs and expectations of their players, and fail to salvage their campaigns when they realize no one is having fun anymore.

ACTION: TRIBE 8

ACTION: TRIBE 8

Characters, whether controlled by the players or Gamemaster, represent the driving force behind any form of storytelling. This is particularly true in roleplaying, where players become active participant by assuming the role of one of the characters. As a result, it is important to have interesting and believable heroes and villains. Section 7.2 provides a few suggestions to help create interesting personalities for the game.

Even experienced Gamemasters sometimes have a hard time running an entertaining game session. There are evenings when players simply can't seem to get moving in the right direction, or there are combat scenes that are bland and uninspired. For just those days (or nights), Sections 7.3 through 7.5 offer a variety of creative tools to help boost the GM's imagination.

7.1 The Art of Gamemastering

While this chapter gives numerous hints on how to be a good Gamemaster and how to properly prepare a game, it can't do the work for you. You have to sit down, plan out scenarios, write up stats, and do all those other things that make a good campaign. The one thing this chapter can't help you with is to come to a game unprepared and hope to survive it unscathed.

Fortunately, world and adventure design is part of the fun of being the GM, and thus this should not be seen as a chore. Using archetypes and other pre-packaged material can help drastically reduce the amount of preparation needed. You still have to come up with plot ideas and milestone events to help advance the story during the game sessions, but if all your non-player characters and vehicles are already designed, that can amount to only an hour or two of preparatory work. As the campaign progresses, you may even find that you have designed enough material previously to cover most of your needs. Your ability to improvise will also improve, but try not to rely on that too much. You may forget vital elements in the long run (unless you record everything carefully) and may end up with an inconsistent campaign.

This section includes several hints and tips which you may want to apply as you gain experience. Use them for what they are: suggestions, not expectations. Learn the basics first, get comfortable with them, then move on to the more advanced techniques. Only use what works for you, at a reasonable pace. If you have never been a Gamemaster before, you may find the task daunting. Don't let that stop you: as with many other activities, practice makes perfect.

7.1.1 The Gamemaster

The Gamemaster (or GM for short) is analogous to the director of a movie, except that he is a director who does not know what lines the actors will come up with next. In addition to designing the setting of an adventure, the Gamemaster is responsible for stocking the sets with an interesting cast of villains, allies and extras (called non-player characters, or NPCs). During a game, one of the Gamemaster's primary tasks is to slip into the role of any NPC who interacts with the players. The Gamemaster's other important task is to guide the game's progress and arbitrate any conflicts, either between player characters (PCs) and NPCs, or between the PCs themselves.

The job of Gamemaster requires some preparatory work, on average more than what most players put in before a gaming session. The players, however, have little more to do than bring their character sheet, sit down and play. In all fairness, however, some players spend a great deal of time writing up their character's background, developing his personality and even inventing subplots to be involved in — GMs should encourage all that. Be that as it may, there are great rewards to being a Gamemaster. Nothing compares to the feeling of seeing the story unfold, except perhaps the feeling of a story taking a sudden twist for the better because a player did something unexpected.

> **Hooks & Tips: Switching Sides**
>
> Few gamers readily jump at the task of Gamemastering, despite all the rewards of the job. If you happen to be a player reading this, you should consider giving it a try. For one thing, being on the "other" side of the fence will give you a new perspective on Gamemastering and will make you a better (or at least a more understanding) player. The reverse is also true — Gamemasters should go back to the role of player once in a while, just so they don't forget what it feels like.

Referee, Opponent or God?

The Gamemaster's job is really a little bit of these three elements. Among other things, the Gamemaster settles disputes and handles all rules-related matters. The GM is encouraged to be reasonable and to listen to his players' opinions, but he's the one making the final call.

He's also the opponent. He breathes life into the antagonists and controls them during combat situations. The Gamemaster's job is not to pound on the player characters until they die, but to provide reasonable and challenging opposition.

Creating worlds and manipulating so many people and events can sometimes give an impression of godhood. Get that thought out of your head — you're no god, or puppet master, either. Let your non-player characters take a life of their own. With time, you will find that your NPCs become more intricate, and they will eventually surprise you by 'coming alive' in your head.

Remember that the game doesn't serve you, you serve the game. If you become a Grim Megalomaniac (another explanation for the acronym GM), you'll soon lose all your players. You're in charge, but give the delusions of grandeur a rest — just have fun and make sure everybody else does. Communication is everything!

7.1.2 The Players

Finding players is not always an easy task. If your close circle of friends isn't enough, place ads in the local game shop, comic book store or the school activity board, or join the local gaming club. Many clubs and stores have a newsletter where you can advertise yourself as a GM looking for players (and vice-versa).

Your "wanted" ads should be simple and to the point, stating the number and types of players you are looking for (see below), how often you want to play and — of course — what setting you want to play in. Be upfront about the style and specifics of the campaign you want to run. Make sure everyone understands what the basic premises of the game are going to be, and that they are comfortable with it. Work out a schedule which is good for everyone and make sure to confirm with your players a day or two before the game, to make sure no one forgets or has a sudden change of plans.

What Are Players Looking For?

Not all players enjoy the same kind of games, and GMs are well advised to take that into account before forming a group for a campaign. Regardless of their individual play styles, players should have similar expectations. This will allow the Gamemaster to create a campaign which will last beyond the first three or four game sessions (a critical time).

Although roleplaying stories can be divided in innumerable genres, we recommend a simplistic view to facilitate the "negotiation" process between players and Gamemasters. *Action* focuses on chases, exchange of gunfire and combat. A series of extremely fast and furious encounters move the story forward, interspersed by some plot-revealing events. *Intrigue* relies on brains more than brawn and revolves around unveiling hidden information. Victory is achieved not by defeating the master villain in combat but by outmaneuvering him in intrigue. The very concept of "villain" is less clear in Intrigue campaigns, where no one's loyalties can be taken for granted.

Of course, nothing stops GMs from mixing elements of Action and Intrigue. Most good roleplaying campaigns will do so, just as most good thrillers or adventure films do. These categories are not set in stone, but rather serve as helpful guidelines for Gamemasters and players.

7.1.3 Teaching the Game

Getting new players into a game, any game, is often the first challenge a GM will face. Players who are not familiar with roleplaying games or who have never played in a particular setting may hesitate before joining your campaign. In the case of completely inexperienced players, they need to know that they're not going to be rejected by the more experienced players.

Roleplaying, despite the existence of rulebooks, is very much a viral hobby: one generally learns to game from being invited into someone else's group. Teaching, however, is a skill all of its own, and to ensure that the newcomer will have a positive experience, a few points should be taken into consideration.

Seek Information: Ask the newcomer what type of character he'd like to play (smart? strong? quick?) and what kind of games interest him. If he prefers fast-paced action, an intrigue-rich first game won't help much in getting him interested in roleplaying. Make a quick summary of the world and the campaign premises for the novice player.

Let them make choices: It's critical that the newcomer doesn't feel like a spectator. Ask him which Skills or Special Abilities he'd like his character to have. Don't worry if the choices seem strange — he will learn as he goes along.

Keep it simple: The newcomer likely hasn't read the entire rulebook. Go through the basic game mechanics and explain to him briefly how combat works. Don't bother with advanced rules, special attacks, or anything of the sort, even if they are "better." There will always be time to learn them later — growing in hobby expertise is part of the fun, too.

Keep it short: Like an advertisement, you have only a short time to make your pitch. Don't spend hours getting into the intricate details and how to do every little thing. Make the encounter quick and explosive, and make it come quickly to a satisfying resolution. If the newcomer enjoys himself, he will ask to continue.

Handle the Mechanical Parts: Create the Character for the new player, not forgetting the previous rules. Don't bog him down with costs and calculations. In play, ask him what he wants his Character to do, and tell him what dice to roll and which stat and modifiers to check. Then tell him if he succeeded or not. If you overwhelm your new player with too many rules, he'll give up.

Be a Guardian Angel: Warn the newcomer if he's going to do something bad. Offer possible consequences, and let him chose ways to avoid them.

7.1.4 Game Balance

Unlike most other games, roleplaying games are not competitions between the players. There is no real winner or loser, only the success or failure of adventures. Roleplayers are expected to work together towards a common cause, and while the Gamemaster is responsible for supplying the obstacles and challenges, he is not the players' enemy. His job is to provide the PCs with just enough opposition for them to feel they have earned their victory, but not so much to make it a no-win scenario. It is a delicate line to walk, one which is easily mastered by Gamemasters who pay attention to their players.

Player Characters

In order to successfully resolve a situation, player characters have access to three general resources: their own abilities (internal resources), their friends and contacts (external resources), and their personal equipment and money (material resources). The Gamemaster should evaluate whether each of the resources is lacking, adequate or overabundant, and determine which one of the resources needs to be adjusted to give the players a fighting chance. The Gamemaster should make sure the PCs have (on average) roughly adequate resources to tackle their opposition. If they are lacking in one particular resource, they should (perhaps only temporarily) have an overabundance of another one.

Opponents

Another option is to do the reverse for the opposition. The latter also has the three resources mentioned above, and Gamemasters may opt to modify antagonists' resources rather than those of the PCs. If, for instance, there is no logical way for the GM to enhance the resources of the player characters without resorting to contrived plot devices, he can instead increase or reduce those of the NPCs. For example, an enemy who is highly skilled (internal resources) and is rich beyond dreams (material resources) may find himself without all the personnel he normally has under his command (external resources) and must do his dirty work himself.

Remember that lack of preparation is no excuse: many Gamemasters come to a game unprepared, quickly whip up some nasties for the characters to fight, then act all surprised when the players are grumpy and unsatisfied. You should prepare villains ahead of time and make sure they give the players a difficult — but not impossible — time.

Pacing

Pacing is everything. Too much opposition too soon in a scenario can be as destructive as too little too late. Make sure you have some opposition ready during every segment of the game and of the campaign (beginning, middle and end). Usually, that opposition tends to become greater as the scenarios progress. Generally, it's a good thing to have at least two fights or encounters during the game session, one after the first third of the scenario, and one near the end. The first battle should foreshadow the last one and hint at how much opposition the characters will face in the end. As a Gamemaster, you want to make sure the players aren't taken by surprise, so follow these rough rules until you know your players well enough to pull a few twists on them — just don't get carried away.

7.1.5 Conflict Management

While some rivalry between player characters is acceptable (and in some cases even desirable), personal conflict between players is not. It is important to resolve what may appear to be a problem between players before it evolves into something nasty. Often, friction between players is due to the fact that one of the parties is not getting enough attention or the other one is getting too much. Regardless of your personal preferences as a Gamemaster, try to put everyone under the spotlight once in a while and give equal time to each player. Definitely stay out of personal disputes between players, but remind them that gaming is supposed to be fun and encourage them to work out their differences outside of game time. The worst thing you can do is to take sides.

7.1.6 Bending the Rules

Rules are a means to an end, not the end itself. If a rule annoys everyone, ignore it. That's right. We, the game designers, are telling you to ignore the rules whenever you believe it's appropriate (and fair). You are the Gamemaster, it's your scenario and it's your game. So long as you remain fair and make sure the players are having a good time (very important!), rules don't have to interfere with your fun.

Never let a player bully you around by saying that the rules say you have to do this or that. That's only for general situations and may not apply all the time. That's why there's a Gamemaster. You will find several players who are fond of finding all possible ways to abuse a game system by taking advantage of its loopholes. Watch for it, especially during character creation, and expose it plainly.

Breaking the Rules

Sometimes, the rules get in the way of a good story. The Silhouette system is no exception. It is a fairly accurate (and unforgiving) simulation of reality. Sometimes, in order to move the game forward and entertain your players, you have to bend or even break the rules.

Do... Let the character run with it if he's found a creative way of handling a situation, even if it's not in the rulebook. If it becomes repetitive, however, you may want to tell the player that it's becoming routine and he won't get "preferential" treatment anymore.

Do... Save a character from certain death if all that condemned him was a bad die roll. It doesn't mean, however, that the character has to escape unscathed. If the players figure out they are invulnerable, the game becomes an absurd parody.

Do... Resist the urge to have NPCs come to the rescue. If the cavalry rides in every time they're about to die, the players will resent having NPCs steal their scenes. It is better to allow them generous chances to succeed than relegate them to secondary roles and watch the henchmen save the day. If you really must introduce someone to help them, make sure that person is not equipped to handle all opposition and gets knocked down quickly.

Don't... Cheat on your die rolls. Except when players shouldn't know the result immediately (e.g. Notice rolls), roll in front of the players, not behind your screen. Players will feel they have earned their victories if they know you aren't giving them any breaks.

Don't... Save a character who puts himself in harm's way. If the player does it, he may be doing it for the right reason (sacrificing his character to save the group, for instance), but he may also be doing it for purely selfish reasons (to test your resolve, perhaps). Many Gamemasters dislike killing PCs because they fear the wrath of their friends, and they often let players walk all over them and get away with outrageous behavior.

Improvising

Gamers are notorious for doing the unexpected, pulling a rabbit out of their hats or throwing in the kitchen sink when all else fails. The more you try to anticipate what they're going to do next, the more surprised you'll be when they do something else.

You should prepare your scenarios before hand, but avoid being overprepared. It is better to give yourself room to maneuver than set out everything in advance. Try to have a few contingency plans for those fragile areas where you suspect the players may go astray, but keep in mind it may not be enough. Have several generic NPCs on standby to use in case the players decide to investigate an area of your campaign you haven't fully prepared yet, and be ready to use subplots as main stories. Deal with the situation and keep the game moving. The PCs will be back on track later.

7.1.7 Gamemastering Fumbles

Fumbles complicate an already tense situation and make the players nervous. They should only really matter during combat, where they can have critical repercussions. Players should be encouraged to spend their XPs to purchase emergency dice and avoid fumbling. Characters with Skills at level 1 should be aware that they will Fumble one out of every six times, and spend XPs accordingly (or suffer the consequences).

Attack Fumbles

These are the most common Fumbles, and the ones that may have the nastiest effect on the PCs' health. Gamemasters may use some of the suggestions below or come up with their own variants. Ideally, it should indicate a complete failure to hit the opponent and inconvenience the PC without having a crippling effect.

Attack Fumbles Examples: Dazzled by an unforeseen reflection, Dud ammo, Weapon/tool gets caught on something, Misfeed, The gun jams, Character slips

Defense Fumbles

Defense Fumbles are the most tragic of all. If the player character who Fumbles a defense roll has the Character Perk of Luck, he should use it right then and there. Because of the rule nature of the defensive Fumble, all the Gamemaster has to do is describe it in an interesting way.

Defense Fumbles Examples: Chose the wrong defensive move, Distracted, Peeked from behind cover at the wrong time, Character slips, Disoriented, facing the wrong way, Ran into the attack

Perception/Notice Fumbles

Characters can be required to make Notice checks on a regular basis to become aware of imminent threats or to pick up obscure details. A Fumbled Notice roll does not necessarily mean the character hears, sees or otherwise perceives nothing — sometimes, it's just that the PC picks up the wrong information.

Perception/Notice Fumbles Examples: Distracting sight or noise, Grain of sand in the eye, Misread/misheard an important detail, Surveillance equipment malfunctions, Attractive person passing by, Shadows play tricks with the eye

Social Interaction Fumbles

The traditional *faux-pas* does not come without a price. Whether the PC is trying to intimidate a prisoner, lie to a police officer or seduce a potential romantic partner, social interaction Fumbles can yield a variety of results, from the totally dramatic to the irresistibly hilarious. Depending on how tense the situation is, the GM may use the Fumble to lighten or darken the mood.

Social Interaction Fumbles Examples: Accidentally insults someone (poor choice of words, bad translation), Momentarily forget an important detail or argument, Someone you know arrives and contradicts you, Unbecoming fit of coughing, Use a detail or argument that's painful to other party, Use wrong detail or argument

Stealth Fumbles

Fumbling a Stealth test only means the character is visible, not necessarily noticed: someone has to be paying attention in the first place. This is a classic in movies and literature, so use it and turn the PCs into nervous wrecks. If the character is indeed noticed, you can either follow up with a combat scene or a chase scene.

Stealth Fumbles Examples: Animal takes a loud interest in you, Character breaks a twig, Coughing fit, Fails to notice give-away shadow or reflection, Stumble upon someone (security guard, passerby, etc.), Fails to notice security camera

Technical Fumbles

Technicians don't always know they've Fumbled their work. Sometimes, it only becomes apparent when the device, weapon or vehicle is being used. In such situations, the GM should test the Skill behind his screen (just so the PCs don't realize the roll has succeeded or not), then decide what to do if the result is a Fumble.

The possibilities are endless, and all are valid if they annoy the character to at least some extent. Another option is to have a part break or explode immediately (doing only minor damage, if any). This can set the player characters on a rapid side-quest to find a replacement part in a panic. A technical Fumble can also be used for recurrent comic relief.

Technical Fumbles Examples: Break important piece (vital to object's main function), Computer crashes and wipes its memory and drives, Device works for 1d6 turns, then fuses, Device works half the time, and only upside-down, Equipment's innards disintegrate in a shower of sparks, Equipment will blow up once turned on for the third time

7.1.8 Assorted GM tools

Though you really need nothing more than this book, some dice, paper and pencil to run the game, a number of tools will make the Gamemaster's task a lot easier.

Scratch Paper: you should have a pile of scratch paper nearby. This is useful to take notes, draw maps or diagrams, or to keep track of things (in combat, for example).

Screen: a traditional Gamemaster item, the screen is a piece of cardboard (or similar, such as an open binder) placed between the GM and the players to hide the GM's notes and secret die rolls. Most screens are covered with useful charts and tables so that the GM doesn't have to hunt for them in the book. The downside of a screen is that it isolates players from the GM, and makes roleplaying encounters a bit more of a chore.

Miniatures and Counters: many players enjoy having a physical representation of their character or favorite vehicle. These can come in useful for complex situations where the characters' positions are critical, and are attractive visually. On the downside, the use of miniatures requires a map, slows down the game immensely, and reduce the roleplaying immersion in the setting.

Computerized Devices: there are a number of GM-oriented software on the market, such as inventory programs, map makers, and so on. A computer can also be used to provide ambient sounds and music to provide the proper mood to the game. They require that the computer be on hand near the game area (not a problem with modern portables), and can be distracting.

Hooks & Tips: Creating Lively Settings

The art of description is very important in roleplaying games. We have five senses; each one of them should be addressed, just like in real life. Don't just give colors and images, describe the sounds, the smells and various textures of the environment where the characters have set foot. More than that, give actions to background characters. Take any scene in a movie: the extras are moving about, chatting, arguing or trading. Also mention the weather, the architecture, the "mood" of the area. All this will help you create a strong atmosphere for your players' minds.

Be evocative. Don't hesitate to change your tone of voice or speech patterns, or to create sound effects whenever appropriate. If you have the time, prepare character handouts: photographs, local maps, relevant illustrations from the books, etc. Also use mood music and lighting, if possible. Nothing conveys the feel of a lonely night patrol like dimming the lights and putting on some eerie music.

Tracking Sheets

While players only have to control their character and maintain one sheet, the Gamemaster must keep track of a large amount of information. This task will be made easier by various types of tracking sheets. Make your own with scratch paper, or download a ready-made sheet from various online resources.

Combat Sheet: use this to keep track of the stats of the bad guys in combat. There is no need to list the full Attributes and Skills, just the ones you need. Keep a small space besides each entry to mark down damage received. It's generally a good idea to prepare a few assorted "thug" sheets in advance, that can be pulled out at a moment's notice.

Impro Sheet: this sheet is intended to help you improvise. It should contains things like a list of names (in case the players want to talk with someone), some location names (if players want to know where they are), random diagrams (to be used as maps, organigrams, or anything else you might need) and any other things you think might come up in the course of the game (names for a corporation, for example). If you happen to need something from the sheet during the adventure, cross it out so that you don't accidentally use it again.

Campaign Sheet: You may want to use a sheet to keep track of various events in your campaign. In an Event Synopsis section, give an outline of the major event of the game session and how it links with the previous and next events. Make an Allies and Opponents section to indicate what helped or hindered the player characters during the scenario, and in which way. A Loose Threads section allows you to jot down plot elements which are incomplete and which you may want to resolve at a later date. Record under Background World Events those events of note which do not affect the PCs' lives directly but represent notable milestones in the game world which the players may refer to later on. Character Subplots occur on a more personal scale and should be noted with meticulous care; player enjoyment is often proportional to the number and quality of the subplots he is involved in. Lastly, an Unbeknownst to the Players section allows you to keep track of events which occur behind the scenes without the PCs' knowledge.
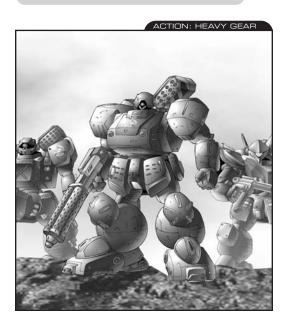
Fill out a sheet after each game, using as many as you need to cover all significant events which occurred during the session. This will prove invaluable later on when you want to pick up on loose threads or simply when you need to tell absent players what happened during a previous game or scenario.

Setting Cards

When the GM is short on time and doesn't have time to properly prepare the descriptions for the areas which the players will visit, it's always useful to have a few pre-generated descriptions handy, such as the one in the sidebar example. Clever Gamemasters may want to keep them on small 5" x 8" or index cards along with a mini-map for handy reference during the game. These texts describe stock locations and situations, and are adjusted "on the fly" to reflect the specifics of the situation.

Example: Setting Card

Abandoned Warehouse: The smell of dust in the air convinces you this warehouse has not been used in years. Reinforced steel shelves are lined up in long, seemingly endless rows that converge toward the other extremity of the building. Countless empty crates and containers are stacked in various corners of the few open areas, abandoned there by long-gone workers. The ceiling is high and while the warehouse is dark, you can make out the metal struts that support the ceiling. There are countless hiding places, here perfect for an ambush.

ACTION: HEAVY GEAR

7.2 Characters

Characters (whether player- or Gamemaster-controlled) are at the center of any story. They are the driving elements of a scenario. If you think of a movie or a book, it is most likely the characters you remember the most, not the hardware or the setting (although these can be remarkable as well).

Campaigns work very much along the same principles. The characters who appear throughout the game have functions very similar to the members of a movie cast. To help plan scenarios and campaigns, it is useful to categorize characters according to their importance in the game (many of the Silhouette-based settings customize this system further — see **Heavy Gear**'s "chesspiece" system, for example).

7.2.1 Cast Rating System

The cast rating system below completely ignores the concepts of allies or enemies. Rather, it focuses on plot importance and personal resources. Obviously, a simple campaign would only feature one Lead Character as an enemy and perhaps another one as ally, while a more complex and long-term campaign could include several of those (with dozens of Supporting Cast and Extras).

Lead Character

Allied Lead Characters are stable and often predictable, and should have a fairly detailed background. On the side of the allies, the more typical Lead Characters are the fatherly mentor, the strong and reliable commander or the soft-spoken, charming civilian. In gritty campaigns, they often start as the heroes and die halfway through to let (one of) the characters take over.

As enemies, Lead Characters can be a scheming power brokers with a hidden agenda (who wants to use the PCs, then kill them), a ruthless rebel leader, or the fierce and patriotic enemy commander. Lead Characters can also be independent individuals, with motivations that oppose them to both good and bad guys, depending on the situation. In general, Lead Characters do not become important until later in the campaign, and should never overshadow the player characters.

Supporting Cast

When acting as allies, the Supporting Cast represents the various co-workers and friends who have enough importance to receive actual names. Their backgrounds need not be as thoroughly detailed as the Lead Characters, but should be established prior to the campaign. They will most likely be involved in various subplots and should be detailed enough to create good scenes.

Enemy Supporting Cast members are few but memorable. Until fairly late into the story, they are the ones who provide most of the opposition to the player characters. They help GMs carry the storyline until its midpoint, after which their importance diminishes while that of the Lead Character(s) increases.

Extras

Extras represent "average" characters. They have no names or impact on the overall storyline, and are included primarily to be used as faceless minions or typical citizens. Keep an eye out for any Extras that catch the players' fancy: these make excellent recurring characters or can be upgraded to Supporting Cast.

Although Extras serve only minor roles in a scenario or campaign, Gamemasters can use them to inject flavor in a setting. Give them distinctive accents and mannerisms, especially if they hail from somewhere different than the PCs. Use them to show players what average people on the street are thinking and how they behave.

7.2.2 The Player Characters

Player characters are the heart of the story: they are the heroes whose exploits we remember fondly or with awe once the game is over. PCs are the exclusive property of their players and they should not be tampered with in any major way without the players' consent (i.e. check with them if the story involves actual mind-control elements).

Some GMs relish in taking over PCs and telling them how they feel and what to do — wrong. The player might as well sit back and watch; his story has become a boring movie. Let the players play their characters the way they want to. See where it leads them and let them deal with the consequences. No harm done: it's only a game.

It can be effective to make some suggestions when describing a scene (e.g. "You feel tension building in your muscles as the smugglers enter your trap."), but do this in moderation. NPCs can also be used effectively to suggest emotions — if the players' companions are nervous during a jungle patrol, that apprehension will transmit itself to the PCs in short order.

Character Stereotypes

Stereotypes are useful because they provide a basic template which can be used "as is" for a little while until they can be given a better and more surprising twist. The four basic types below have been staples of roleplaying games for the last twenty years. Needless to say, gender considerations are ignored, but creating a stereotypically male personality and using a female gender (or vice versa) can yield surprisingly fun results.

The Fighter: Adventurer, pilot, soldier, mercenary, bounty hunter, bodyguard, this character relies primarily on brawn or firepower to solve problems. He is usually strong and agile, and can withstand more punishment than the average person. He needs some level of action to be useful (and enjoyable to play).

Potential twists: death wish, hopeless romantic, brilliant tactician, logistics expert, suave gentleman, idiot savant, post-traumatic stress disorder, unfocused, etc.

The Tinkerer: Technician, scientist or wizard, this character gets things done through research, planning and careful study of the available data. Gifted with superior intellect but a frail physique, he handles puzzles and problems. He is seldom involved in action or combat scenes. Potential twists: powerful physique, total nerd, weapons specialist, sadistic streak, sniveling coward, sharp dresser, obsessive perfectionist, superstitious, grand schemer, successful lecher, etc.

The Socialite: Bard, media star, journalist, politician, this character has charisma, social skills and a glib tongue. The Socialite mingles with people, makes contacts and finds both resources and information whenever required. Socialites are almost diametrically opposed in nature and methods to Fighters. Potential twists: hot tempered, mischievous, biting wit, bluntly honest, dangerously curious, foul-mouthed, refreshingly candid, depraved, etc.

The Rogue: Scouts, thieves, brigands, this character relies on agility and wits to overcome obstacles and achieve his goals. Rogues are often (but not always) nimble and charming, and perform less-than-honest deeds when all else has failed. Potential twists: do-gooder, self-centered, amnesiac, redeemed criminal, fallen marshal, cynic, junkie, soft-spoken, rebel informer, etc.

Fitting Characters Into Groups

For the character creation process, it is preferable for everyone to create their characters together, with the GM answering whatever questions the players have. The PCs' motivations should be agreed upon by all before the game starts to make sure the group has a solid party. It is the GM's responsibility to ensure that the players fit well with each other and there are no potentially destructive conflicts.

A classic Gamemastering technique often used to bond together the members of a newly formed group consists in a trial by fire. Take your group of PCs and put them through hell for a few game sessions. Make sure they save each other's lives several times over to establish a relationship of trust between the PCs.

Don't use NPCs to try and break them up, or drop hints that one of them is a traitor. This can be an enjoyable story twist, but only once PC trust is well established. Save it for later.

Hooks & Tips: The GM's Role in Character Creation

The Gamemaster's job is to ensure that the characters all fit together and that they will not kill each other after the first session. He may ask a player to expand on a particularly interesting point of background, and should make sure that each character as his own "shtick," a unique specialty that no one else has. It ensures that everyone is useful and that no one character can do everything. The GM should try to have a well-balanced group that can handle as many varied situations as possible.

● Motivating Characters

Make sure your characters have motivations which are not radically opposed to one another. Characters who have similar or compatible motivations will often be willing to work and stay together through the tough times that lie ahead. We provide below a few typical motivations often used in literature and movies. Use them and twist them around as you see fit.

Short-term motivations alone won't carry your players through a whole campaign, though. Encourage them to bond and forge stronger links between each other, as well as to develop group motivations that will drive them further. Motivations grow and change with the characters. Don't expect them to stay the same forever.

Family: The character's family is or was involved in a tragedy. Either seeking revenge for their deaths or because they need his immediate help, the PC teams up with people who can assist him and goes through several adventures that make him realize that there is strength in numbers.

Friendship: Some of the characters are long-time friends. Over time, they have learned to trust each other and work together to achieve some common goal (wealth, fame, professional status, etc.). They share everything easily and never hesitate to put their lives on the line for each other.

Duty: The player character is part of a heavily traditional background, either the military or some powerful organization. He is asked to work with the others out of a sense of responsibility toward the organization. The character should have a strong code of honor, however, for this to work.

Revenge: One or more of the character's loved ones (or even the character himself) have been hurt, and it's the PC's job to make sure whoever is responsible pays dearly for his grief. After a while, some characters almost forget why they are vengeful and simply stay that way.

Survival: The characters with this motivation have a powerful common enemy (either a person or the environment). In order to survive, they team up, pool their resources and face the incoming threat. Once the threat is over, they may or may not remain together, however.

Circumstances: Due to circumstances beyond their control, the PCs find themselves entangled in a web of events that further pushes them together. This is especially useful to put together characters who have little in common, but is a potentially short-term motivation.

Character Story

Storytelling almost invariably involves conflict. It serves to push the character towards the resolution of his problems, of the basic premises behind his motivations. Players should always develop some basic character story for their PCs and tell the Gamemaster where they expect it to go in the campaign, although the GM may ask to modify it to fit his campaign. Many of the Silhouette-based settings include tools to help do this, such as random origin charts.

Heroes seldom begin a story as perfect beings. The story, after all, has to talk about something beyond their day-to-day adventures. Most of the time, those very adventures help the character resolve some sort of problem or difficulty in his past. In essence, the character story is the movement between the initial character (at the beginning of the campaign) and the final one.

Design Notes: Why Bother?

You may think that your players are obtuse or beyond help, that they only care about the Attributes, Skills and equipment of their characters, that they are power gamers, or that they simply won't bother. It's possible that they were never introduced to the concept of character stories at all and might enjoy it. Think of it as a pill and sugar-coat it with what they prefer to play, be it action, combat or whatever else strikes their fancy. If you're clever and discreet enough, they'll soon realize that it gives great depth to their characters and might insist on having a character story for every PC they play from now on.

Major Life Changes

Characters should not be static. They evolve, grow and change as their experiences and needs push them towards new goals and beliefs. To spice up a character's story, the GM may consider bringing in some of the following elements,

especially if they can help the PC grow. Players may suggest life changes and the GM should welcome this input, but watch for disguised intentions (no "I discover a super-weapon").

Major Life Changes

- Death of a friend/family member/beloved pet

- Loss of a limb/sense

- Expulsion from group

- Surviving a deadly threat/accident/plot

- Discovering a faith/idea/truth

Death Scenes

This is often very tricky to pull off during a campaign. Character death can happen in one of three ways. It can be the result of a blatantly stupid decision on the part of the player; it can be the result of bad dice; it can be a well-thought, planned decision on the part of the player. Whatever the case, the GM should try to give meaning to the death of the PC, even if the player did something totally weird or out of character.

Self-sacrifice often creates classic (and highly dramatic) death scenes. The Gamemaster can allow the player to almost automatically succeed some kind of very heroic act if he is sacrificing himself for the sake of someone else. The threat of dying has to be very real, however, to prevent players from attempting to sacrifice their characters every other game session. Optionally, the GM may grant a +5 bonus which the player may spread over all the actions required by his death scene (a +3 here, a +1 there and another +1 there; or simply a +5 on one critical action).

Dying speeches are another staple of death scenes. They can be corny, but when skillfully done, they add an emotional depth to the scene that can even move some of the more sensitive players to tears. The trick is to avoid so-called cool one-liners

and turn the speech into a simple gesture, a smile or any form of closure on something which was important to the character in the past.

7.2.3 The Non-Player Characters

Non-player characters represent an essential part of any roleplaying campaign. They populate the world in which the PCs operate and they spice up any scenario. A game that does not feature at least a few detailed NPCs for the player characters to interact with can suffer from a variety of problems, one of them being a lack of "life" in the game world.

Wise Gamemasters will use hordes of NPCs to keep the players on their toes. Since (theoretically) no two NPCs are alike, this means there are no standard reactions or operating procedures for the players to rely on, forcing them to find new and creative ways to solve problems. Furthermore, this gives an advantage to PCs who have developed more than combat Skills for their characters — the Etiquette Skill, for instance, can be a tremendous help in pleasing the locals.

Important NPCs (see *Lead Characters*) are like the Gamemaster's personal characters and should ideally benefit from the same level of attention to detail as the players' own. They should be well developed and consistent, complete with quirks, speech patterns and physical descriptions. The GM should be

ready to play them at a moment's notice and always in accordance with their backgrounds and previous encounters (if applicable).

Looks

One of the bane of most Gamemasters is the dreaded moment when they must create an NPC on the spur of the moment to spice up a stale scene or to introduce a last-second rescuer to assist the players when they need it the most. The following tables should help; the results are skewed and don't reflect reality, but when you're in a fix, it's at least helpful to have somewhere to start. Gamemasters should make a minimum of effort to create small details that make for memorable NPCs (scars, physical deformities, eye patches, features, styles of dress, speech, combat preferences, unusual items, etc.).

NPC Special Features

2D6	APPEARANCE	BEHAVIOR	CLOTHING
2	Albino	Absentminded	Rags
3	Unusual Height	Gloomy	Badly Made/Fitting
4	Artificial Limb	Silent	Inexpensive
5	One-Eyed	Brutal	Utilitarian (cheap)
6	Tattoo	Fanatic	Uniform
7	Scar	Drug Addict	Plain
8	Bald	Zealot	Formal Wear
9	Birthmark	Pacifist	Utilitarian (good)
10	Missing Limb	Loquacious	Elegant
11	Overweight	Sociable	Fashionable
12	Body Odor	Tenacious	High Fashion

NPC Physical Appearance

2D6	2	3	4	5	6	7	8	9	10	11	12
Age	20	25	30	35	40	45	50	55	60	65	70
Height*	150	155	160	165	170	175	180	185	190	195	200
Weight**	45	50	55	60	65	70	75	80	85	90	95
Hair	White	Blonde	Red	Auburn	Brown	Black	Brown	Auburn	Red	Blonde	White
Eyes	Amber	Blue	Green	Brown	Brown	Black	Brown	Brown	Green	Blue	Amber

* Height is measured in centimeters (1 inch = 2.5 centimeters); subtract 1 from dice result for women.

** Weight is measured in kilograms (1 kg = 2.2 lbs); subtract 2 from dice result for women.

Slang & Street Talk

Not being actors, Gamemasters often have to rely solely on their voice to characterize their NPCs. It becomes important to know how to change your voice, your vocabulary and your topics based on which character you are impersonating. Pay attention to the origin of the character, where he comes from, and what kind of accent he has. That should help you give the players a hint about who they're dealing with.

Vocabulary should help narrow down the possibilities: more educated people tend to show off their linguistic expertise by using long words, convoluted syntax, and literary expressions; less educated people just keep it straight and simple, and often make characteristic mistakes.

7.2.4 Creating Good Antagonists

Conflict is the bread and butter of a campaign. Without conflict, there is little that will allow a character to grow and a game to move forward. Having conflict means giving some opposition.

Too often, villains are given little attention and only serve to demonstrate the Movie-Like principle that the good guys always win. Opposition should be what it is, not what it needs to be for box office success. The players will have a greater sense of achievement if they encounter adversaries which make sense and do not give them a break "because it's in the script."

In many campaigns, villains are treated as incompetent and harmless. As a result, enemies are often scorned and discarded as less than a threat. The simplest solution is for the Gamemaster to give his bad guys stronger Attributes, Skills and equipment than the players, but this leads to game balance issues. Here are a few techniques to make the villains more threatening without making them more powerful.

Fools Rush In

Only a fool rushes into a fight unprepared; most villains do not wish to die and act accordingly. Unless an enemy has a death wish, he will keep in mind how many opponents are present, where they are and how much damage they can deliver. A smart enemy will use ranged weapons, and weapons with an area effect if possible, before his opponent is upon him. Also, he will not immediately move into close range and risk being shot in the back.

Send In the Grunts

Smart villains seldom engage their adversaries without first sending in their weaker but more numerous allies, which are expendable, to soften up the opposition. This is a tremendous advantage for the villains, and one which is often neglected by Gamemasters. Grunts are easy to kill, giving the players a sense of accomplishment and power that they might not get out of eliminating just one adversary.

ACTION: GEAR KREIG

Coordinate With Your Teammates

A dead opponent doesn't hit back — strike one enemy hard and kill it, rather than wound or damage several opponents and face their attacks seconds later. A clever Gamemaster will aim multiple shots at one target. It is preferable to demonstrate the effectiveness of this tactic on a friendly NPC as a warning to those who are not expecting a serious opposition.

He Who Runs...

Running away is *always* an option. Often enough, heroic sacrifices where the villains fight to the end occur during the final confrontation. Most enemies will realize when their chances of winning have become ridiculously low, and will try to flee. This way, they can come back later and avenge the deaths of their comrades.

ACTION: CORE COMMAND

Villains With Motivations

Confrontation usually stems from conflicting interests. Gamemasters should find out what makes their villains tick. It is acceptable to have a villain who just wants to kill because he is a psycho, but it is far more dramatic if he does it because his family is held captive by a group of terrorists.

The Triple-Why Rule

Start with a simple statement of what you want the villain to do, then ask "Why?" Then formulate an answer, and ask "Why?" again. Then formulate a second answer, asking "Why?" one last time. With the third answer, Gamemasters have a villain with depth and character motivation. The Y3 rule also works well for character development, but its use is not restricted to personalities. It can also be applied to events and plots to create a detailed and consistent world.

The Opposition's Weakness

It is the weaknesses of a villain which make him interesting and different, not his strengths. All master villains are, by definition, superlative in Skills and Attributes. Providing them with flaws is a good way to keep them vulnerable and to make them more "real." It also gives the players an opportunity which they can use to defeat them, or provides the Gamemaster with a valid reason not to kill the player characters in certain situations.

7.3. Adventures and Campaigns

You, the Gamemaster, have already chosen (after talking with your players) the type of game you wish to run: the style, tone, location, power level, etc. Your task now consists in engineering a story that will fit those criteria. Calibrating the rules, detailing the part of the world in which the players will operate and creating the people who inhabit that area are some of the pleasures of GMing.

Plan the course of the story and how you expect it to end initially; the players will likely take it in other directions altogether, but it is better to have an ending in mind in case you need it. If the GM spends a bit of time preparing a solid series of scenarios and plots, his campaign is going somewhere and has more consistency.

Know where you're going and roughly how long you expect to take to get there. Feel free to change your mind on the way, but remember to bring closure at the end and quit while you're ahead. You don't want your players to say, in a few years, "oh, his game was fun until that particular scenario, and it went downhill from there..."

7.3.1 Designing Adventures

A setting populated by countless monsters and interesting individuals is not enough to make a good game. Gamemasters need a good plot. If characters and creatures represent the meat of a campaign, the plot represents the backbone.

Subplots represent minor storylines that develop during the course of game play. Think of them as secondary attachments to the main story. Gamemasters should continuously introduce little leads and tidbits, regardless of whether players follow them or not. Often, subplots can later develop into a scenario. For instance, the characters might see a news report about the theft of a military arms shipment. Later on, they might stumble across

some thugs carrying some unusually powerful weapons. A week later, the characters might be asked to neutralize a terrorist group which claims to have stolen a nuclear warhead. Not only is it good foreshadowing, it also gives player characters an opportunity to get involved before minor trouble becomes a big problem.

Coming Up With Ideas

The first step in any story development is to come up with story ideas. This need not be done in any organized manner, but it is preferable to write them down as they come. Many clever Gamemasters carry little notebooks with them to scribble down their ideas at any time.

Gamemasters should not be afraid to borrow ideas from other sources. Sometimes, a new twist on an old story can be just as enjoyable as an original tale. Shakespeare is recognized as a great dramatic author, but he got most of his plots from classical or medieval sources. One potentially great source of story bits is the local TV guide: the movies' summaries can provide a story seed which a GM may find relevant.

Another realistic source of ideas, the newspaper provides seeds for countless adventures. It may be useful to link a contemporary personality with a game character that has corresponding goals and values, and to see what he or she does.

Naturally, you can also use several of the plot ideas provided in most Silhouette setting books. Some of them may not be usable in your campaign, but you can use them as background elements or scenarios in which your NPCs participate — it gives them something to talk about to the players when they meet.

When all else fails, the classic "wilderness" adventures remain a solution. The PCs are just dropped in the middle of nowhere and have to make their way back home. Such a time-tested scenario could be the "Jail Break": the

PCs have been captured and must make their way out. In doing so, however, they stumble upon something much bigger and must resolve that problem first.

It is also useful to prepare some typical groups of recurring opponents for personal and tactical combat. This requires a bit more time when preparing the campaign, but speeds up the scenario design process.

Hooks & Tips: The Voice

Remember that you have made implicit promises to your players about the campaign when you started it. The campaign has a style, a purpose, a tone, an attitude, a "voice." Players expect you to stick to that style, and you shouldn't change it on a whim. If you change from session to session, you will confuse your players. Stay true to your campaign concept.

The Beginning

Campaigns have to start somewhere. Surprisingly enough, the simplest way to know how to start one is to know how it ends. Gamemasters should have a clear picture of what kind of campaign they have in mind, so they can decide more easily what kind of approach they will use. The early sessions of a campaign often set the tone for the games to come.

7.3.2 Creating a Campaign

Campaigns should not be improvised: some preliminary work is essential to a successful campaign. The first step in any story development is to come up with ideas, just like with individual adventures.

There are two approaches often used in storytelling. The first one is "Ongoing Involvement," where characters are already immersed in a situation and keep doing what they do best. This leads to more "action" scenarios and a storyline that circumvents cumbersome mind games. The second angle is the "Ascension," where the characters start small (socially, or economically) and get involved in something much larger than themselves. This leads to less action but provides many opportunities for character growth. The first approach is better for players who are already experienced with the game and the world, while the second one allows a GM to gradually introduce new players.

Preparing the Basics

Once concepts are set on paper, the Gamemaster has a vague idea of what will happen in the campaign, but not necessarily in what order. At that point, the GM should work out some sequence of events, either a linear or a tree organization, to see if some concepts readily fit within that framework. Most likely, not everything will fit, but that should not be a concern. It is always a good idea to have backup scenes to plug in at unexpected times or when things get dull.

Once the outline is ready, the Gamemaster will see which elements in the game will be needed on a regular basis: character bios, locations, vehicles, etc. Without spending too much time on each, a clever GM should create small packages of Skills and Attributes for various professions, and call upon them when a new NPC is needed on the fly.

The Pilot Adventure

Before starting a campaign, however, you may want to use a trick that television studios have used for decades: the pilot. Have everyone come over early during the day, and spend most of the afternoon designing everyone's character. Take a break, have supper, and come back for a 4-hour evening session introducing everyone to each other and adventuring together for a bit.

This will give the characters an opportunity to interact with one another and to find out whether they are compatible for the campaign. It gives them a taste of your Gamemastering skills, and it gives you an idea of how they play and what you can expect from them in the future. You will most likely see subplot ideas emerge which you should write down for future reference.

After the pilot session, give everyone a chance to modify their characters if they're not entirely comfortable with them. If you need to make adjustments to the campaign, this is the perfect time to do it. Explain what changes you'd like to bring and why. In television, there are often discrepancies between the pilot and the actual series due to modifications to the basic premises or cast.

Hooks & Tips: American or Japanese Style?

When planning a campaign, you could choose between "Episodic" and "Arcing" styles. American-style campaigns are similar to standard television series: there is a basic concept and character evolution, but no fixed ending. Scenarios can tie into each other, but many will stand alone. Japanese-style campaigns, on the other hand, have a planned ending, and pretty much every scenario takes one step toward it.

American-style games allow for more player input, but they may feel episodic and static. Japanese-style campaigns are usually more dramatic, but they are shorter, and players may feel railroaded toward the ending. A good compromise is to have an overall plot with an ending in mind, but to also intersperse the series with scenarios that are not related. If you find that the PCs are more interested in these side-stories, you can change the campaign's focus slightly.

The Middle of the Campaign

Gamemasters should prepare a general outline of how they expect each session's adventure to run, plus which NPCs they imagine will show up and what equipment will be featured. It is also useful to have one or two potential complications to spice up the scenario if the game runs stale. Some of those complications can stem from subplots introduced earlier during the campaign, or they can be very short-term ones that only apply to the actual scenario.

Most of the games should have something to do with a main storyline which the Gamemaster has prepared from the beginning, but there should also be a number of limited-access or solo sessions for some of the characters who wish to delve deeper into a subplot.

Players expect their characters to have an impact on the world around them. Nothing makes a game pointless like having an NPC save the day, or feeling that a crisis would have resolved itself in the same way without intervention. Players who feel they have affected the setting usually show more loyalty to the campaign and adopt a less confrontational attitude.

ACTION: HEAVY GEAR

That last confrontation is undoubtedly the most important moment. If the Gamemaster has a group of player characters who are not all at the same place at the same time, he must tread very carefully and make sure to split the whole game session into small scenes that concern each of the characters. This is used in movies with great effect: whenever the tension in a scene is at its height, the Gamemaster should shift to someone else's scene and proceed similarly. The GM then returns to the first player, finishes the scene, builds up the tension again, and goes on until the game ends.

If all the player characters are together for the ending, it is still good to try and build up consecutive waves of tension, alternating between their actions and those of important NPCs caught somewhere else. This may require the Gamemaster to narrate events to which the players are not normally privy, but at this point it doesn't really matter. The important factor is to make the finale enjoyable for the players (who can act as "viewers" during those narrative "cut-scenes").

The villains should be difficult to defeat during the final battle, if there is one. They should fight with teeth and claw, throwing everything they have at the player characters and going for the kill. If characters die at this point, it should be a meaningful death scene. Few players will object to their character dying a heroic death at the end of a campaign; they will be very disappointed if all they get is a "You're dead. Next?"

Victory at last! The characters should now get some recognition from their peers (and the population, if applicable). There should be a reward of some kind, although it does not have to be money or fame. In some cases, a medal or a handshake from a former enemy might suffice. It is also important to have a denouement for all of the subplots in which the characters took part.

Hooks & tips: Handling the Unexpected

If there is one law to Gamemastering, it's that player characters are unpredictable. This fact is little known to beginning GMs and has caused many a campaign to fold. Many Gamemasters react badly to unpredictable players who do not follow the path they have prepared; they are unconsciously offended that someone would deviate from their well-orchestrated story. Unfortunately, there is only one way to deal with players who go off the beaten path: cope. The GM must improvise until a time the characters get back on track.

It is vital *not* to railroad the characters into what the Gamemaster believes is the best scenario. Many players enjoy coming up with surprises, and there is nothing wrong with that. The GM has to concentrate on what to do next to make the scenario enjoyable. This is why it is useful to have enough spare subplots and background NPCs to bring in at a moment's notice.

The Ending

The ending of the campaign should receive as much attention as the beginning, and not just during the last few game sessions. A good ending can leave the players with such a good impression that they will talk about it for years. Much like movies, campaigns with a fish-tail ending leave everyone feeling they have been cheated somehow.

The first important rule about the finale is that it should be foreseeable, though not necessarily predictable. Gamemaster can also feature minor events that make little sense until the characters understand the "grand design" at the end.

Near the end of the campaign, there should be a substantial increase in tension. Players should easily feel something important and final is about to happen. Gamemasters should make it clear that the conclusion is near by making their villains more vicious or desperate, or by creating rumors that "something big is gonna happen any time now."

7.3.3 Plot Movers

Novice Gamemasters are often apprehensive during scene changes, especially when they have to resort to improvisation. All they need is a trigger, something they can use as a springboard. That's what we call a Plot Mover.

Preferably, Gamemasters should always have a few Plot Movers ready before the game, in case things get stale or slow. Ideally, they should concern something which is relevant to the current storyline, or possibly a hook to a future thread which the players can choose to follow later on.

Plot Movers

TITLE	DESCRIPTION
Assassins:	A hired killer botches his attempt on a PC's life.
	a) The assassin gets killed by the PCs and drops a hint (verbal or physical) as to who hired him
	b) The assassin leaves and the PCs track him down to a hideout from which he vanishes without a trace.
Bureaucracy:	The characters run afoul of red tape in their investigation.
	a) A stubborn (and incorruptible) clerk seems determined to stop their efforts with countless forms.
	b) A corrupt clerk misdirects the characters' investigation toward several dead ends.
Home Front:	Some enemy threatens a PC's family.
	a) He only wants to scare the characters and leave, but may hurt them if threatened.
	b) He hurts or kills one as a demonstration of what may occur if the PC persists.
Innocents in Danger:	Enemies have taken hostages and are making demands.
	a) The villains make outrageous demands and threaten to kill a hostage every 15 minutes.
	b) The hostages are actually accomplices of the villains.
Raw Action:	The chief enemy has sent some troops to get rid of those pesky player Characters.
	a) The opposition is real and will carry through with its mission, perhaps even with fanatical zeal.
	b) The opposition is only strong enough to distract the PCs from the real crime happening elsewhere.
Remember Me?:	The PCs are not the only ones with a long memory: an old enemy comes back to haunt them.
	a) He means to kill the player Characters to make them pay for their past affront.
	b) He only wants to hurt them, ruin their reputations and threaten their loved ones.
Crowd Scene:	The PCs are in hot pursuit (or being chased) and they fall upon a parade or some kind of rally.
	a) They have to go against the flow of the crowd to find/escape their prey/pursuers.
	b) The enemy begins shooting through the crowd to get to the player Characters.
Annoying Reporters:	The player Characters are investigating something and so is that annoying reporter.
	a) The reporter decides to tail the PCs and see if they lead him anywhere where there's a hot story.
	b) The reporter finds out about some embarrassing information regarding the PCs' past activities.
Beat the Clock:	The PCs are in a tough spot and only have a limited amount of time to resolve the situation.
	a) Some deadly device (bomb, poison, raid) is going to be set off if they fail.
	b) Enemy reinforcements are on their way and will surely capture the PCs if they don't hurry up.
Weather Patterns:	Violent and sudden changes in weather occur without warning.
	a) A tempest suddenly develops and hinders both movement and visibility.
	b) Characters find themselves ill-equipped to handle the weather and must quickly find shelter.
Wheels Within Wheels:	The PCs find themselves inadvertently entangled in the political machinations of several groups.
	a) A group needs them to distract enemy forces, who happen to be on their side in the first place.
	b) The PCs obtain evidence of some conspiracy, and several buyers start harassing them.
The World Out There:	Sometimes, even player Characters pay attention to the news.
	a) The PCs learn about some important international event.
	b) The PCs hear about some local rumors of trouble with bandits or rebellious youth gangs.

7.4 Running Combat

Conflict is a vital part of storytelling, and conflicts sometimes lead to outright combat. Unfortunately, many novice Gamemasters blunder and run combats in a methodical, almost monotone manner. It is always wise to have that angle covered, and to run fight scenes that grab the players' attention and get their blood racing.

Combat is one of the GM's multi-purpose tools. It can get the game moving again, provide clues that went unnoticed before, wake the players up when the game enters a lull and generally spice things up a little bit. Unfortunately, it also means there is great potential for abuse.

Remember that players don't always know everything which their characters know. For instance, a ten-year-old player with a grizzled combat veteran character may not know what to do if he gets ambushed, but his character would. If the GM can think of a better way to react than the player does, and if it would make sense for the player's character to know it, then it's your duty to at least tip the player on how to act. Knowledge or appropriate Skill tests are allowed if the information is relevant. Note that the reverse is also possible: more knowledgeable players should give hints if they know something the GM doesn't.

This section covers most of the elements which you should watch for during combat. Vehicular combat makes use of pretty much the same elements, suitably modified to take into account the vehicles' greater size and speed. For instance, vehicles may also make use of cover, especially nimble ones such as mecha or combat bikes.

7.4.1 Combat Sense

Many players chafe under the restrictions imposed upon them by the Combat Sense Skill. "Hey, all I wanna do is shoot my gun! It doesn't take a genius to do that!" These players have probably never been shot at. When a human being is placed in a dangerous situation, his mind drops back to a more primitive, survival-oriented level. We all fear being hurt, especially by lethal chunks of metal. Much of a soldier's training focuses on new reflexes that help override these natural instincts, thus allowing him to fight back without having to think about it (and lose precious seconds panicking).

The key to translating this into game terms is to be explicit. Don't say: "You fumbled your Combat Sense roll; you don't get to act." Say instead "You break into a cold sweat and you flinch as bullets impact the wall just above your hiding spot. You want to do something, but it's like you're just a passenger in your own body. Your hands dive for your weapon, but you're too nervous and can't seem to get the safety off."

7.4.2 Movement

Movement rates should serve as guidelines more than exact numbers. Drawing a simple map may help the players relate to the environment and choose on their course of action. You can use pieces of string to approximate how far the characters can get, but avoid measuring. It slows the game to a crawl and makes it look more like a lagging computer simulation than the dangerous, fast-paced melee the players are expecting.

In the case of vehicles, there are numerous driving and piloting stunts, and it would be futile to try and list them all. The list below is a sample. Whatever the action attempted, apply the vehicle's Maneuver and Speed modifier to all Piloting tests.

Maneuvers

MANEUVER	THRESHOLD	EXAMPLE
Avoid Hazard (small)	2	Tire, debris chunk
Avoid Hazard (medium)	5	Crate, garbage container
Avoid Hazard (large)	8	Pile of debris, wreckage
Avoid Hazard (ground)	5	Oil Patch, mines, caltrops
Bootlegger (45 degrees)	2	Change orientation and stop without turning
Bootlegger (90 degrees)	5	Change orientation and stop without turning
Bootlegger (180 degrees)	8	Change orientation and stop without turning
Hard Brake	5	Slows down rapidly
Hard Turn	5	Turn in a short distance without losing speed
Sideswipe	5	Treat as a side ram, force a Piloting test

7.4.3 The Environment

For some reason, opponents (and sometimes even the characters) often don't use the cover they have available. Gamemasters should always provide the players with some opportunity for cover (see the defensive values for cover in Sections 3.3 and 3.4). If they're fighting in an alley, make sure there are dumpsters and old cars nearby. Go visit a real alley before the game and jot down a few of the cover opportunities you can find. The more details available, the more dynamic the combat scene will be.

Feel free to play around with lighting and visibility. A fight in the dark can be extremely unnerving, especially if the players forgot to bring lighting equipment. A combat scene under pouring rain is also another movie classic that has great impact. Whatever you do, avoid bland gamespeak ("You have a -2 modifier for all attacks"). Instead, describe the situation: "The water pouring down your face gets into your eyes and blurs your vision. To make matters worse, it's very dark; your only light source is a lonely bulb placed high on the wall to your left. Suddenly, flashes burst from the blurred shadows, briefly revealing the outlines of incoming gunmen. (Oh, and by the way, your attacks are at -2.)"

7.4.4 Injuries

It is often assumed that unless there's a Flesh or Deep Wound result, nothing has happened. Untrue — if an attack connects, there is at least a minimal level of pain. Even though the damage may not be enough to cause a penalty, it doesn't prevent the pain from being at least distracting. While the wound may not be enough to register a game effect, it will certainly affect the character. Keep reminding him about it: "Okay, your shot hits the second gunman. By the way, the recoil from your rifle causes a sharp stab of pain in your bruised shoulder."

Acting Tough

It is a tradition in roleplaying games to act tough and ignore the wound(s) of the character. Thanks to Hollywood tradition, most players assume that showing a brave face is easy and try to roleplay that. If they really want to ignore (at least partially) a wound penalty, the characters, no more than once per combat scene, must pass a Willpower test versus 5 (affected by the action penalty for any wound suffered). The character's action penalty is reduced by a number of points equal to the Margin of Success. Note that this "counter-penalty" only affects the action penalty, not Health tests or any other test the GM deems appropriate. If the character fails the test, make a System Shock test, adding the Margin of Failure to all other penalties.

The players should be encouraged to spend Emergency Dice to improve their odds of success if they really want to look tough. This rule should only be used in Cinematic games, although Gamemasters may want allow a player character to do it during a scene that is particularly heroic. At the end of the fight, the GM should also have the player roll a standard System Shock test to see if the character remains conscious.

7.4.5 Tools of the Trade

Many players like to collect weaponry. They also like to carry it around. Beyond the social problems it causes, it may be inefficient. Often, a simple pistol will do the trick where an assault rifle would be too conspicuous or just plain dangerous — swinging a long-barreled weapon in the confined space of a ship's corridor is asking for trouble.

Individuals who are armed to the teeth appear scary and dangerous. John and Jane Doe from the street — not known for their bravery (average Willpower or lower) — tend to steer clear. If engaged in conversation, they will answer briefly and take the earliest opportunity to leave, unless the player characters happen to have high Influence and Psyche to counteract the negative effects of the gear they carry around.

Some people may react with aggressiveness and try to antagonize armed characters, taunting them and daring them to show they "have guts." It is often a rite of passage among gang members to show off how tough they are by harassing someone bearing weapons.

Most establishments forbid (or at least severely frown) upon openly displayed weapons. Again, this comes back to trouble. They will ask the individual to leave his weapons with the doorman for safekeeping. Some Gamemasters take advantage of this by having the weapons disappear. Grave mistake: the players will never again part with their armament. Characters who cause trouble will be thrown out and their weapons returned to them through the authorities (who will no doubt ask questions).

7.4.6 Basic Tactics

There exist more combat tactics than can be covered here. If you really want to put your players through hell, try to find information about basic techniques used by real-world soldiers. Note that the following tactics should not be used to eliminate characters wantonly, but are basic techniques which military types should know.

Gamemasters often under-play the opposition to the characters. Enemies are real people who want to accomplish their mission and live through it. They don't particularly relish the thought of physical harm and take appropriate action to prevent it. They will use body armor, cover, ambushes, sneaky tactics, grenades — anything that will keep them alive while eliminating the threat. Whatever the players do, the bad guys can do also. Using these hints and tactics, powerful characters aren't needed to provide strong opposition.

Shoot First

That's probably the main rule to learn. Getting rid of the enemy before he can even try to hurt you makes your chances of surviving the encounter excellent. Don't allow the enemy the opportunity to fight back. Use snipers if you can — you can see them, they can't see you.

Get Cover

Any cover. Fast. A ditch, a tree, even a street curb will do. By using cover, you greatly reduce your odds of taking damage, or reduce that damage if you get hit. Never walk on the road if you can walk in the forest. It may take longer, but you have more time than health. Usually.

Gather Intelligence

Ask around about potential enemies. Get the lowdown on who they are, how they operate, what kind of equipment they use, who employs them and what their greatest weaknesses. If you know what tricks they will pull on you, you can prepare against them and turn the tables.

Avoid Trouble

Try talking your way out of it. If you're not there to be shot at, you can't get hurt. If at all possible, try to steer clear of potentially dangerous areas. Gamemasters should give players fair warning about what could be considered dangerous behavior, but if they persist, then they're fair game.

When In Doubt, Grenade It Out

With a good toss, a grenade can get within some of the most heavily armed positions. It can rid you of multiple opponents at once, and is generally unconcerned by body armor. Tear gas grenades are also great to incapacitate under-equipped enemies. Be careful, however. Clever people will use mesh screens to keep grenades out and possibly send them back your way!

If It's Obvious, It's Probably a Trap

If there's something in the middle of the road that looks suspicious, or if you're entering a canyon that seems to be the perfect site for an ambush, then you're probably headed for trouble. And even if you're not, a healthy dose of paranoia is going to get you through many adventures.

Work in Teams

Characters should cover each other as they advance, leapfrogging toward their objective and ducking behind cover. They should first concentrate their firepower on the highest visible threat. Use multiple attacker bonuses. Attacking from several angles and distracting the enemy with mock fire is a great way to instill a sense of panic among the opponents.
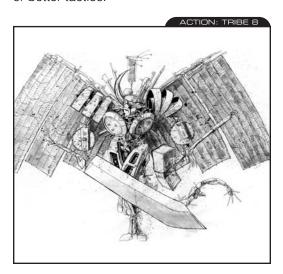
Use Passive Defense Systems

Mine fields, wires, and traps can all can help secure areas. Prudent travelers and soldiers do more than just take turns standing watch during the night, they make sure that they're well protected where they're vulnerable and that anyone attempting to sneak up on them is detected. Clever scouts can learn to bypass those traps and surprise you, though. Also, remember where they are so you don't trip them yourself!

Get Terrain Advantage

Make sure you choose where the battle is going to take place. If you can, lure the enemy into a narrow location where his maneuverability is reduced. Even if you don't get to choose the battlefield, still try to make the best of what you've got. Incidentally, avoid doorways and obvious access points: they are often watched and booby-trapped.

If It Looks Bad, Leave

If it doesn't look like you're going to win, get out of there. As the saying goes, "He who runs away, lives to fight another day." It's best to leave and return with reinforcements, or to use another approach altogether. Use your brains: get out alive, then return with more firepower or better tactics.

ACTION: TRIBE 8

7.5 Worlds and Genres

Silhouette CORE is a near-universal roleplaying game system — near-universal, because it still needs to be modified to fit the peculiarity of each narrative genre being played. For example, a space opera game will need a different approach than a campaign set in the historical Middle Ages. Fortunately, there are tools to do so, namely the Reality Distortion Factors and the Genre Points, both of which were introduced in section 6.4.

This section examines various genres that can be played with Silhouette CORE and provides hints and tips on how to model them.

7.5.1 Mixing Genres

New ideas can be sparked through combining genres, even ones that are seemingly unrelated. The movie "Event Horizon™" combines Science-Fiction and Horror. "Highlander™" blends Modern and Fantasy. Any story involving comic book super-powered heroes mixes Modern, Fantasy and Science-Fiction. As a rule of thumb, no more than three disparate genres should be mixed. Resolving all the differences and genre conflicts is difficult enough with three; any more genres could make it impossible.

Alternate History: What if history worked out differently? Where would we be now if Rome hadn't fallen? If the Vikings had colonized North America? If China had fully exploited gunpowder? History is full of pivotal events that could have resulted in a vastly different modern day if any of them had played out in another way. A changed history doesn't need to be outlandish; in fact, it only needs to be different enough to satisfy the requirements of the story. The better-known Alternate History is the Steampunk sub-genre, which combines elements of Science-Fiction with a historical setting to produce a Victorian era full of technological wonders.

Time Travel: This offers a way of mixing Science-Fiction with a wide variety of historical settings. characters may move through time as a result of an accident, a naturally occurring gateway, or a dedicated time travel device or vehicle. The past is also not the only thing accessible — any future destination is equally valid. Time travel campaigns require a good grounding in history, plus a model to resolve paradoxes should a critical historic event turn out differently due to meddling. Paradoxes are often used as plot devices — the "time stream" must be returned to its original state or the universe will become unraveled.

Dimension Traveling: This allows characters to "shift" between different versions of modern Earth. The differences may be subtle, like a predominantly left-handed population, or they can be blatant, such as a communist United States governed by sentient dinosaurs. Like time travel, some event in the parallel Earth's past turned out differently. This event doesn't ever need to be identified, and even if it is, characters can usually do little about it unless they also have the ability to travel through time. The only requirement of an alternate Earth is that it be recognizable as a different Earth. Everything else can be changed. The television show "Sliders™" is an ideal example of dimensional traveling.
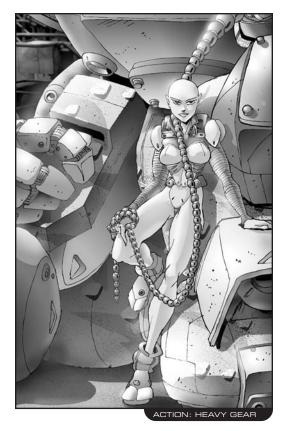

ACTION: ALTERNATE HISTORY

7.5.2 Heavy Gear

Heavy Gear is a Science-Fiction story. Initially set on Terra Nova, a lost Earth colony, heroes must deal with the disintegration of the political alliances that beat back a recent attempt at conquest by a new imperialist Earth government. Old hates and jealousies are returning, with potentially devastating consequences. Stock elements include: giant robots, a constantly changing geo-political climate and epic story arcs. The primary locales are all on Terra Nova, though published supplements introduce other colony worlds. Stakes are high and personal, as characters are swept up by events that threaten to change the face of their world.

Focus: Heavy Gear's most recognizable feature is the Gear, a walking anthropomorphic fighting machine. Gears are meant to be as simple as their technology will allow. Pilots sit in a chest-cavity cockpit and are completely enclosed by the machine. Weaponry can be physically attached (like missile packs), or carried in much the same way a human soldier carries and uses a rifle. There are a wide variety of Gears, each specialized for some role, such as heavy assault or scouting. Armies still use traditional combat vehicles, but Gears are by far the weapon of choice. Gamemasters can design Gears using the construction rules in Chapter 4.

RDF & Genre Points: Heavy Gear is Adventurous, though it can be converted to Gritty or Cinematic. Genre Effects include: Burst of Angst, Creative Stunt and Inner Well of Strength. Experience Point rewards are typical and have no special focus.

Character Types: Player characters are often military, which gives them an above-average power level with specialized training and equipment. characters will always be from the same military unit. Mixing units, especially between governments, is temporary and brief.

ACTION: HEAVY GEAR

Skills, Perks and Flaws: Skills and Cpx ratings have no caps. Perks and Flaws are not limited. Military characters will have some level of the Rank Perk, though whether it is assigned or must be purchased is up to the Gamemaster.

Technology: Although placed several thousand years in the future, setbacks, disasters and deliberate simplification has set technology roughly equivalent to 100-200 years from now. Local transportation is swift and efficient and voyages to other stars are possible, though such trips are long and expensive. The most obvious advance is the Gear-related robotic sciences.

Campaign Ideas: Heavy Gear campaigns can be focused on the Terra Nova setting, following themes such as conquest or revenge. The setting can also be taken off world, possibly with the epic goal of reunifying Earth's lost colonies and defeating the imperialist Earth aggressors.

7.5.3 Jovian Chronicles

Jovian Chronicles is a Science-Fiction/Anime setting. The Solar System has been colonized out as far as Jupiter. Twenty-five years ago, the Central Earth Government and Administration (CEGA) took control of Earth. Most colonies view CEGA as a threat, and many have rallied around the Jovian government. A "Cold War" state exists, but high tensions and animosities could spark a system-wide war. Stock elements include giant robots, "Top Gun" style space combat, planetary and orbital colonies and tense military standoffs. Locales include any of the inner planets of the Solar System — each supports large populations, including Venus (thanks to a massive terraforming effort). Stakes can be low or high, and not necessarily personal. characters can save the entire Solar System, or spend their time tracking down smugglers in the Asteroid Belt.

Focus: While Jovian Chronicles is by genre an Anime-style setting, its strength lies in its firm grounding in reality. Setting technologies are not only plausible, but have been deemed necessary for survival in space. Conditions are heavily influenced by literature and movies such as "2001: A Space Odyssey." It takes weeks or even months to travel between planets, and combat in space is a deadly affair where even a small oxygen leak could spell doom for a vessel's crew.

RDF & Genre Points: Jovian Chronicles is Adventurous, though it can be converted to Gritty or Cinematic. Genre Effects include: Burst of Angst, Creative Stunt and Inner Well of Strength. Experience Point rewards are typical and have no special focus.

Character Types: Player characters are typically military, which gives them an above-average power level with specialized training and equipment. Many other occupations are available, ranging from Martian guerilla fighter to freighter captain. The feasibility of alternate occupations depends on the scope of a specific campaign.

ACTION: JOVIAN CHRONICLES

Skills, Perks and Flaws: Skills and Cpx ratings have no caps. Perks and Flaws are not limited. Military characters will have some level of the Rank Perk, though whether it is assigned or must be purchased is up to the Gamemaster.

Technology: The setting is 200 years in the future. Humanity can build massive orbital colonies, some up to forty kilometers long. Advances in robotics and computers have produced exo-armors, 16-meter tall combat robots. Fusion-powered vessels regularly travel between colonized worlds, but with the threat of war very few do so unarmed.

Campaign Ideas: Jovian Chronicles can be played as a military campaign by soldiers on either side of the conflict. The setting can also accommodate intrigue and espionage as well as purely civilian stories featuring merchants or explorers.

7.5.4 Tribe 8

Tribe 8 is a mix of the Fantasy, Horror and Post-Apocalyptic genres. Humanity has begun to win its freedom from demonic conquerors known only as the Z'bri. With the aid of seven supernatural entities called Fatimas, the enclave of Vimary was established for the Seven Tribes of humanity. There are some humans, the Fallen, who see the Fatimas as no better than the Z'bri. The Fallen are intent on founding an Eighth Tribe to be free from both. Stock elements include: magic, quests, fighting Z'bri monsters and promoting various versions of freedom. Stakes are always high and personal, and usually involve the survival of all humanity (what's left of it).

Focus: A central aspect of Tribe 8 is Synthesis, a form of magic supposedly gifted by the Fatimas but somehow still useable by the Fallen. It is a direct manipulation of the real world on a personal level, with (relatively) immediate and short-lived effects. The Z'bri also use a form of Synthesis called Sundering.

Simplified Synthesis

Each PC has a Synthesis Skill, and should chose any three Attributes (except PSY) which can be used with it. Synthesis affects tests involving Skills governed by the selected Attributes. After a 5-round trance, make a Synthesis test (Threshold 5) against the target Skill's Attribute. Any MoS is added to the actual Skill test, which must be made immediately. A Synthesis Fumble means that Synthesis cannot be used again for 1d6 hours. Synthesis trances can be shortened to 1 round, but give a -2 to the Synthesis test. See the **Adrift on the River of Dreams** (DP9-820) book for more.

RDF & Genre Points: Tribe 8 is Adventurous, but can be adapted to either Gritty or Cinematic. Genre Effects include: Burst of Angst, Creative Stunt, Insight and Opportunity Seized. Experience Point rewards are typical and have no special focus.

ACTION: TRIBE 8

Character Types: Player characters are above-average power level. They are usually Fallen, and tend to be warriors, mystics, thieves or "Keepers" — survivors dedicated to rediscovering the knowledge and technology of the pre-Z'Bri world.

Skills, Perks and Flaws: Cpx ratings, Science and Medicine Skill levels are capped at 2, although a few Keepers can go a point or two higher. Property is capped at 6 points, and Wealth is defined as barter items instead of actual cash.

Technology: Although Tribe 8 takes place in the future, post-apocalypse technology is a medieval equivalent. Some modern day "artifacts" are available, like guns, and those that still function are extremely valuable.

Campaign Ideas: The Z'bri are still powerful, and humanity must continue the war against them. The Fatimas have secrets and hidden agendas that keep much of the Seven Tribes preoccupied. The Eighth Tribe must defeat both the Fatimas and the Z'Bri to truly free humanity.

7.5.5 Gear Krieg

Gear Krieg is an Alternate History setting, loosely based on the pulp novels of the 1930s-1940s and placed on the historical backdrop of World War II. Though "history" is similar to actual events, the subtle (and not so subtle) introduction of advanced technology and superscience will make the outcome quite different. Powered by advanced science, will the darkness of fascism spread across the world, or can brave men and women stop it?

Focus: Gear Krieg features a version of World War II where advanced science has run rampant. As a result, the technology of the era is really only a "jumping-off" point. Gamemasters are advised to research Nikolai Tesla and other inventors of the time, as well as watch programs like "Secrets Weapons of the Luftwaffe." Gear Krieg takes all the plans, the prototypes and a few of the wild claims, and assumes they all came true. Gamemasters can use the design rules in Chapter 4 to create their own superscience devices, or they can simply let player characters have items that normally won't be available for several decades.

RDF & Genre Points: Gear Krieg is at least Adventurous, if not outright Cinematic. Practically any Genre Effect can be used, though the setting favorites are: Creative Stunt, Dramatic Editing, Goad Villain, Lucky Break and The WOO Factor. Cinematic settings use accelerated healing rates. Wounds are always considered as treated with constant medical aid (Section 3.5.6). Experience Point rewards are typical and have no special focus, but should slant toward Emergency Dice instead of character building.

Character Types: Player characters are soldiers and adventurers of at least above-average power level. They can be a part of a military organization, or they can be freelance vigilantes doing their part in the war against the Axis.

Skills, Perks and Flaws: Skills are unrestricted and have no Cpx caps. Perks and Flaws are also unrestricted, but those selected by Player characters should reflect the pulp-and-science nature of the setting.

ACTION: GEAR KRIEG

Technology: Gear Krieg uses World War II technology, with notable differences. Jets were invented sooner, tanks have legs and can walk (some even have arms), armored Zeppelins abound and Nikolai Tesla has developed deadly lightning guns. Player characters have access to superscience items including jet packs, stun guns and night-vision goggles.

Campaign Ideas: Gear Krieg campaigns can focus either on the pulp or the war elements. Pulp games pit heroes against mad scientists in world-threatening plots. War campaigns focus more on the frontline soldiers as they fight superscience with superscience.
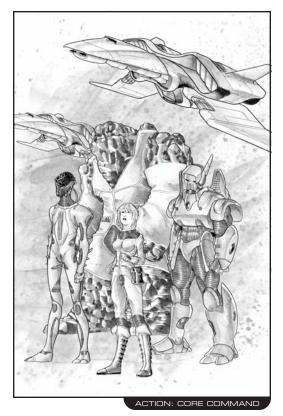
7.5.6 CORE Command

Core Command is a space opera on the grandest scale. Across the galaxies, races are being awakened to defend their very existence against an encroaching evil that menaces the entire space-time continuum. Brave heroes must step forward to protect reality, else the universe itself may crumble into nothingness! Stock elements include: massive starships, powerful weapons, inscrutable aliens and technology so advanced it seems like magic. Stakes are obviously as high as they can possibly be, and actual settings are limited only by the imagination.

Focus: Since CORE Command features "science so advanced it seems like magic," elements of the Fantasy genre can be translated into the game simply by changing the reasons for why things work. Spells become psionics or a focused quantum manipulation of space-time. A possessing demon can be a hostile Artificial Intelligence program that can download itself into a biological mind. Gods are vastly powerful transhuman entities that can project power through their human agents. Essentially this also means that any rules system applicable to the Fantasy genre is also useable in CORE Command (see Section 7.5.7 for suggestions).

RDF & Genre Points: CORE Command is Cinematic level, though it can be adapted for Adventurous. Any Genre Effect can be used, but preferred Effects include: Creative Stunt, Dramatic Editing, Get a Clue, Lucky Break and Sweet Success. Healing rates are rapid: all wounds heal in one quarter the time they would take if treated with constant medical aid (Section 3.5.6). Experience Point rewards are typical and have no special focus.

Character Types: Player characters will be high-powered CORE Agents, diplomats and adventurers. They have an awesome array of technology at their disposal, though it may be of questionable effectiveness against an enemy that can destroy space-time.

ACTION: CORE COMMAND

Skills, Perks and Flaws: There are no restrictions on Perks, Flaws or Skills save for the specific campaign. In fact, it may be possible for player characters to "swap" Skills (neural programming) based on what they feel they may need for a given situation.

Technology: Technology is incredibly advanced — the sky is the limit. Starships can cross the gulf between galaxies, and carry weapons capable of destroying planets. Artificial Intelligence is commonplace, and cybernetics and genetic engineering have progressed to such a level that there is little distinction between man and machine.

Campaign Ideas: CORE Command can follow vast story arcs with nothing less than the universe at stake. Campaigns can also be on a more personal level, with traditional Science-Fiction threats like space pirates, natural disasters or interstellar war.

7.5.7 Fantasy

Fantasy is part of the Alternate History genre, though it focuses more on the legends and beliefs than actual history. Fantasy settings tend to be medieval European, although any ancient setting is valid (Middle Eastern and Asian are popular). Stock Fantasy elements include magic, noble quests, and heroic deeds. "Good" and "evil" are usually clearly defined, although some settings muddy the waters with politics and court intrigue. Stakes usually reflect player characters' relative power levels. Low-powered PCs save villages; high-powered PCs save kingdoms.

Focus: Fantasy settings focus on the ability to do fantastic things. Magic is the most prominent aspect of this, whether it be through spells, enchanted items or superhuman abilities. Gamemasters need to decide how common magic is. Can everyone use it, or is it limited to an elite group or race?

Magic Spells

Treat spells as weapons and use Section 4.3, Systems Design: the point cost is the Casting Cost (powerful "spells" will need many negative characteristics to be castable, such as Power-Hungry). This cost is subtracted from a "Spell Points" pool equal to a caster's STA. One SP is regained every 30 minutes of rest. The caster must buy a Magic Skill (WIL for casting, KNO for arcane knowledge) and may know as many spells as his Magic Skill level x Cpx rating. Casting is a standard action, modified by spell characteristics.

RDF & Genre Points: Fantasy games are Cinematic. Typical Genre Effects include: Burst of Angst, Creative Stunt, Last Hurrah, The Return Of... and Sweet Success. Healing rates are accelerated. Wounds are considered treated with constant medical aid (Section 3.5.6). Experience Point rewards focus on new Skills and abilities — characters grow and gain power quickly.

ACTION: FANTASY

Character Types: Player characters are high-powered, though they may start low. Occupations are variations of warrior, wizard, cleric and thief archetypes. Many settings allow PCs of non-human races (e.g., elves and dwarves). A few fantasy settings let PCs play monsters (e.g., orcs and goblins).

Skills, Perks and Flaws: Cpx ratings, Science and Medicine Skill levels are capped at 2. Characters spending over 6 points on the Property Perk are considered nobility and will have a title. This may require purchasing the Authority or Rank Perk.

Technology: Technology in Fantasy settings is extremely limited — usually little more than a medieval equivalent. Transport is by horse or carriage. Communication is by messenger or letter (for those who could write). Some settings allow gunpowder, but this is extremely rare.

Campaign Ideas: Fantasy campaigns contain a healthy dose of swordplay and sorcery, regardless of specific setting. Many campaigns are truly epic in scope, involving a handful of heroes undertaking a lengthy task that could decide the fate of the known world.

7.5.8 Cyberpunk

Cyberpunk is set in a dark near future, 20-50 years from now. It exaggerates modern social problems: massive urban sprawl, unchecked corporate power and the complete subversion of freedom and privacy. Life is cheap. Information is more valuable than gold, and thanks to hackers and viruses the Internet is as much a battleground as the filthy crime-ridden streets and back alleys. Some settings include orbital colonies, but Cyberpunk is mainly Earth-bound. Stakes are usually low and personal (and self-serving).

Focus: The setting's biggest feature is an advanced mind-machine interface allowing direct mental control of computers, implants and prosthetic attachments. Most people have some form of cybernetics simply to help them survive.

ACTION: CYBERPUNK

Character Types: Player characters are high-powered due to their implanted augmentations. Typical occupations are related to combat or computers/hacking. True heroes are rare, and often PCs are just as nasty and selfish as the villains.

Skills, Perks and Flaws: Technical and combat Skills are emphasized, with no level or Cpx rating caps. The Property Perk is capped at 6 points and the Wealth Perk is unavailable. Characters have at least one Flaw or Addiction. Damaged implants may temporarily cause additional physical Flaws.

Technology: Technology is reasonably advanced. Transportation is fast and efficient, regardless of destination, as are communications. Personal weapons are still slug throwers, though more powerful and versatile. The biggest improvements are with human-machine interfaces and prosthetic limb technology.

Campaign Ideas: Cyberpunk may be played in its classical form or as "Biopunk" with genetic manipulation creating organic implants and direct modifications. Cyberpunk can also be incorporated into a broader Science-Fiction setting, introducing cybernetics on an interstellar scale.

Cybernetics

A basic mental computer interface implant costs 1000 credits. Specialized artificial limbs and organs are designed as "vehicles" with the TV*1000 as the monetary cost. Attributes increases (AGI, APP, BLD, FIT only) and mental Skill implants cost 500 credits times the desired rating's XP price. Physical Skills are purchased as knowledge implants (KNO Attribute only) for half that cost. Perks affecting physical abilities can be purchased for CP*1000.

Each implant requires a Medicine (Surgery) test. A Fumble indicates implant rejection in d6 days; the implant must be removed or cause 1 Flesh Wound of infection per day.

During creation, characters receive 10 extra CPs as cybernetic upgrades, applicable only to physical Perks and Attributes. Players may use XP rewards to buy upgrades (1 XP = 1000 credits).

RDF & Genre Points: Cyberpunk games are Gritty or, more rarely, Adventurous. Typical Genre Effects include: Creative Stunt, Fortune Favors the Bold and Get a Clue. Experience Point rewards emphasize upgrades over personal improvement, as suggested in the sidebar.

7.5.9 Horror

Horror settings place ordinary people in situations of extreme danger, trapped in an isolated locale and facing psychopaths or supernatural threats. The genre actually covers a wide range that includes traditional gothic horror, slasher movies and psychological thrillers. Horror settings are unique in that character survival is in no way guaranteed. In fact, characters are usually ill equipped to deal with their foes, and must be very clever and very careful to avoid certain death. Conversely, success comes with a price, and those who make it are often physically or psychologically scarred.

Focus: Atmosphere is critical in Horror settings. A feeling of suspense and fear must be maintained, otherwise the story loses potency and becomes subject to ridicule. Rules systems can dictate fearful behavior, but only roleplaying can keep players in the proper frame of mind.

ACTION: HORROR

Fear and Mental Stability

When confronted with something horrific (like a mangled corpse or a hideous creature), characters must make a PSY test vs. a Threshold corresponding to what they face (dead body 2, mutilated body 4, horrid monster 7-9). A failure causes a temporary 1-point PSY loss and a mild Phobia Flaw to whatever caused the test. A Fumble causes permanent PSY loss and a severe Phobia.

Temporary PSY loss and Phobias can be eliminated through three months of counseling per PSY point. Permanent PSY loss can be temporarily regained through drugs, although the PC immediately gains the Addiction Flaw (**Addicted** version). PSY drops by 1 each day the drug is not taken.

RDF & Genre Points: Horror is usually Gritty, though sometimes Adventurous. Typical Genre Effects include: Creative Stunt, Get a Clue (sometimes at the cost of sanity) and Mimic Skill. Experience Point rewards are typical.

Character Types: Player characters are low-powered, usually ordinary people with ordinary occupations. Occasionally they are part of a paranormal investigation agency, but this confers little advantage in terms of power level. Some settings allow PCs themselves to be supernatural creatures, though they are still outclassed by their foes.

Skills, Perks and Flaws The Skills initially available to characters reflect their everyday occupations. Unless they are part of an investigation agency, paranormal-related Skills are usually not available until *after* the characters survive their first encounter. Initial Perks and Flaws are not limited, though characters will acquire mental Flaws as they progress.

Technology: Technology is reflective of the time period — usually modern day, but it can be any point within the last century. Ultimately, technology is largely irrelevant, as powerful items are either unavailable or completely ineffective.

Campaign Ideas: Horror campaigns can be classic paranormal investigations or "survival" games, with the characters actively hunted down. A third option is the psychological thriller, a less violent path with emphasis on investigation and revelation.

7.5.10 Western

Western is a specific form of the Historical genre, focusing on the colonization of western North America from roughly 1850-1910. Most Westerns are "Hollywood" style, more like swashbuckling with six-shooters than actual history, and feature stock characteristics: helpless damsels, dastardly villains (who always wear black), barroom brawls and showdowns at high noon. Settings are remote locations like frontier towns, ranches or somewhere out on the open range. Stakes are low, but personal. Cowboys get to go after cattle rustlers and bank robbers, and don't ever have to worry about saving the world.

Focus: Westerns center very much on the individual: his sense of justice, his skill with a gun, and his will to do what needs to be done. Combat is central — villains are never defeated without a good fight. In fact, many Westerns are just a series of brawls and gunfights leading up to a pivotal shootout or showdown.

Showdowns

Showdowns are the ultimate test of nerves and reflexes. Both gunslingers make an Opposed Test, each using the higher of Intimidate (WIL) or Notice (PSY, human perception). Add Cpx ratings as a bonus to the roll. The winner adds his MoS to his Initiative roll.

RDF & Genre Points: "Hollywood" Westerns are Cinematic, while realistic settings are Gritty. Typical Genre Effects include: Dramatic Editing (for cliffhanger escapes), Inner Well of Strength, Lucky Break and The WOO Factor. "Hollywood" Westerns use accelerated healing rates: all wounds are considered treated with constant medical aid (Section 3.5.6). Experience Point rewards focus more on Emergency Dice — Western characters are slow to change, and learn new Skills only when they must.

ACTION: WESTERN

Character Types: Player characters are relatively high powered, even in realistic settings. Cowboys, gunslingers, town sheriffs and agents from the Pinkerton agency are typical occupations. Indians may also be played, though they suffer socially from prejudice.

Skills, Perks and Flaws: Typical Skills include Small Arms and Riding. Cpx ratings are capped at 3, and Skills involving technology are not available (e.g., no Computer, no Pilot - Aircraft). Perks or Flaws are unrestricted, save that characters don't normally have Property or Wealth.

Technology: Technology in the late 1800s was limited. Transportation was by horse, stagecoach/wagon or steam train. Communications were by letter or telegraph via established railway lines. Electricity was generally not available; folks burned wood for heat and used lanterns for light.

Campaign Ideas: Westerns can be played as either historically accurate or "Hollywood" settings. It has also been popular lately to combine Westerns with other genres, producing Western-Horror or Western-Steampunk like the television shows "Legend" and "Briscoe County Jr."

7.5.11 Espionage/Conspiracy

The Espionage/Conspiracy genre ("Spy Games" for short) is a specialization of the Modern genre, although the time period extends all the way back to the start of the Cold War in the late 1940s. Spy Games are either over-the-top action adventures or deadly intrigue-laden thrillers. Stock Spy Game elements include gadgets, vehicle chases, evil masterminds and global doomsday plots. Stakes are always high but not always impersonal — especially not when a player character is targeted for assassination.

Focus: Combat is a hallmark of Spy Games, but it is by no means limited to fistfights and gunplay. Chases, often in customized vehicles, are commonplace, and the more outrageous the vehicles and the locale, the better. Rules for chases can be found in Section 3.2.6.

Another important element is the gadget. Player characters have access to a wide range of weapons and tools, all of which are carefully disguised as innocuous items such as a laser-beam wristwatch, night vision contact lenses and shoe phones. Rules for building gadgets and modifying vehicles are in Chapter 4.

RDF & Genre Points: Spy Games are Adventurous or Cinematic, depending on the setting's movie qualities. Most Genre Effects can be used, but the top three are: Accessorize, Creative Stunt, and Sweet Success. Cinematic settings have accelerated healing rates: all wounds are considered treated with constant medical aid (Section 3.5.6). Experience rewards focus on acquiring Emergency Dice for use in daring escapes and other stunts.

Character Types: Player character power levels range from above-average to high, depending on realism. Typical assignments include covert intelligence, infiltration and assassination. PCs may be mercenaries, but usually belong to an intelligence agency. The Gamemaster is not obligated to use existing agencies, and can create one to suit his needs.

ACTION: ESPIONAGE

Skills, Perks and Flaws: Since characters have specialized training and resources, they have no caps on Skills. Early Cold War settings may limit Cpx ratings to 3 or 4. Perks and Flaws are likewise unlimited. Intelligence agency members must have the Obligation Flaw, but each level taken also provides a free level of Wealth Perk for buying weapons and equipment.

Technology: Technology is reflective of the time period. Specialty items, gadgets and vehicles are very advanced compared to their mundane counterparts. Characters have access to almost any piece of equipment, although exotic items will take time to procure.

Campaign Ideas: Campaigns can be played with characters as "Hollywood" style super-spies (James Bond, XXX) or as "Mission Impossible" teams designed for covert infiltration and espionage. Gamemasters can also dispense with international politics and have the PCs fighting a hidden war between secret organizations ("The Man from U.N.C.L.E.").

7.5.12 Modern

The Modern genre is a broad classification capturing current storytelling styles that do not easily fit into other genres, such as: action ("Die Hard"), martial arts ("Rumble in the Bronx"), police ("Hill Street Blues"), crime ("Ocean's Eleven") or contemporary war ("Three Kings"). The unifying feature is the present-day setting, give or take a few years. Stakes can be high; characters can face terrorist plots, but actually saving the world tends to belong more to the Espionage genre.

Focus: Although combat doesn't have to be pivotal to a Modern setting, it is an important consideration. In realistic stories, player characters should be aware that combat is deadly and they will have few advantages over the villains when the shooting starts. Conversely, martial artists possess the closest thing to "superhuman powers" and should receive special consideration, especially in movie-inspired settings.

Martial Arts

Years of training provide martial artists with large advantages in hand-to-hand combat. Martial artists may add their Cpx ratings as a bonus to Skill tests using Athletics, Combat Sense, Defense, Hand-to-Hand, Melee, Sleight of Hand and Stealth. They should also use the various Skill maneuvers available.

RDF & Genre Points: movie settings are Cinematic with Genre Effects that highlight extreme acts such as: Burst of Angst, Creative Stunt, Last Hurrah, and Sweet Success. Realistic settings are Gritty with more down-to-earth Genre Effects: Fortune Favors the Bold, Get a Clue and Opportunity Seized. Experience Point Rewards focus on improving Skills and personal abilities in Gritty settings, and focus on acquiring Emergency Dice otherwise.

ACTION: MODERN

Character Types: Player character power levels and occupations are tied directly to the Reality Distortion Factor as well as setting requirements. At the very least, PCs will have access to some Skills and equipment not normally available to the general public.

Skills, Perks and Flaws: Characters will have some combat, vehicle or technical Skill, depending on setting specifics. Perks and Flaws are not restricted, though military personnel will have Rank and law enforcement (and some criminals!) will have Authority.

Technology: Technology is equivalent to current-day levels. Player characters may have interesting or unique gadgets, but they will be realistic (or at least plausible) according to current know-how, even in Cinematic settings.

Campaign Ideas: Campaigns are as varied as the potential settings. Characters could be a part of a highly-trained team called upon to handle specific situations (SWAT, military Special Ops or vigilantes). Settings could also completely discard violence in favor of heavy intrigue, battles of wits and good old-fashioned detective work.
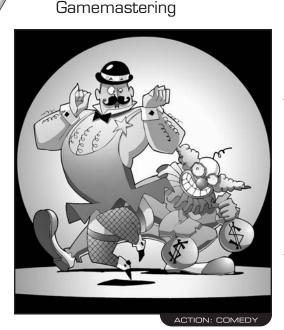
7.5.13 Comedy

Comedy is not so much a genre as a means of adapting other genres to reflect a lighter, humorous tone. Any genre can be satirized, no matter how dark or foreboding. In fact, sometimes the best Comic settings are adaptations of the bleakest genres. Stock characteristics include: parodies of well-known people (either real or fictional), over-the-top situations, events or actions aimed mainly at getting a laugh. Stakes can be low or high, depending on the style intended. Whatever the outcome, the ultimate goal is to have a good laugh!

Focus: Comedy is king. Beyond that, anything goes. The setting itself determines the appropriate type of humor. In lighthearted Comedies, action can be extreme, but people don't often get hurt or die — if they do, they come back unharmed in the next scene. Dark Comedies are the complete opposite. Death and violence is common, but sometimes the best joke is how a character finally expires.

ACTION: COMEDY

Character Types: Player character types and power levels depend greatly on the setting's specifics. All characters will have a comic aspect, and in some cases are the best catalyst for humor.

> **Skills, Perks and Flaws:** Limits and restrictions depend on the actual setting. Characters will have Perks and Flaws that exaggerate or emphasize their comic aspects.
>
> **Technology:** Technology varies with setting, but characters should have access to anything that will increase the mayhem of the story without overbalancing the game.
>
> **Campaign Ideas:** One possible Dark Comedy campaign could be a Cyberpunk parody, emphasizing ludicrous firepower and ridiculous villains. Lighhearted Comedy could feature a "Blues Brothers" style action adventure, loaded with car chases; bonus rewards are given if the PCs manage to work in musical numbers and dance routines.

Situational Modifiers

A Comedy setting requires a standard of play that emphasizes roleplaying and comedic action. Gamemasters should include the optional Special Effects rules (Section 6.4.4.) with the emphasis on "funny" rather than "cool." GMs should also consider more frequent Genre Point awards, and offer them to players that make the group laugh. Both must be done within the context of the setting — even Comedy games can be ruined if things get out of hand.

RDF & Genre Points: Comedies can have any Reality Distortion Factor and Genre Effect. Dark Comedies are Gritty, and avoid Genre Effects that minimalize the effects of wounds or death. Lighthearted romps are Cinematic and favor Genre Effects allowing heavy dramatic manipulation. Unless the RDF is Gritty, healing rates are accelerated: all wounds are considered treated with constant medical aid (Section 3.5.6). There is no special focus for Experience Point rewards.

7.5.14 Anime

Anime, like Comedy, is a stylized means of interpreting other genres. Anime is heavily influenced by Japan, though not necessarily Japanese in origin (like "Samurai Jack"). Genres typically targeted by Anime include: Fantasy (specifically feudal Japan), Modern, Horror and Science-Fiction. Stock characteristics include: giant robots, giddy teenage girls, physically powerful villains speaking in deep baritones, and angst. Usually lots of angst. Regardless of geography, all locales will have a uniquely Japanese flavor. Stakes can be low or high, but will always be intensely personal.

Focus: Anime plots should involve all player characters to a great personal degree. Gamemasters should create numerous relationships between the setting and the PCs. Some are established during character generation, while others are revealed as the story progresses. At any given point in time, characters should feel pushed or pulled by several different influences, and decisive actions (especially the really important ones) never come easy. GMs may want to include the rules on Existential Angst (Section 6.4.1).

RDF & Genre Points: Anime settings are never Gritty. Player characters always stand above the crowd. Genre Effects emphasize angst and action, such as: Burst of Angst, Creative Stunt, Dramatic Editing, Lucky Break and Sweet Success. If Genre Points are not pooled (Section 6.4.6), PCs should also have Group Effort to reflect the interconnectedness of all things. Healing rates are accelerated unless a prolonged convalescence is dramatically appropriate. All wounds are normally considered treated with constant medical aid (Section 3.5.6). There is no special focus for Experience Point rewards.

Character Types: Player character power levels and occupations depend greatly on the setting. However, Anime PCs are at the very least above average in power, and are almost always teenagers or young adults (unless their concept calls for an older mentor figure).

ACTION: ANIME

Skills, Perks and Flaws: Skill, Perk and Flaw limits vary with the setting. Gamemasters should use the genres being adapted as guidelines.

Technology: The specific setting also influences technology. Player characters may have access to one or two unique devices if important to the plot, such as a giant robot. Otherwise, they will be limited by occupation and lifestyle.

Campaign Ideas: Anime Comedies focus on love interests. PCs compete for the same person, but regardless of who wins, it isn't long before a new interest arrives. Anime dramas revolve around the fallout from an event or personal decision. A possible plot could involve the PCs becoming part of the Yakuza (the Japanese "Mafia"), and dealing with the impact it has on their friends and families. Over-the-top action Anime is a never-ending symphony of combat involving martial arts, big guns and giant robots.
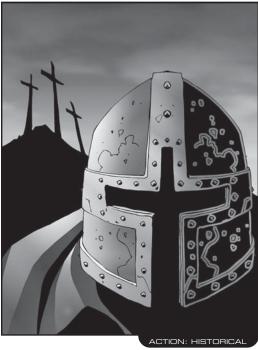
7.5.15 Historical

The Historical genre covers a lot of ground — all of recorded history, in fact. Stories can be set in ancient Greece, colonial America or World War II. The one unifying feature is the realism stemming from historical accuracy. There are no universal stock features for Historicals: the chosen time period and locale will provide details to flesh out the particular setting. Stakes can be high, as characters of that period may be a part of one of the world's great struggles. For those characters, the outcome has yet to be determined and they are very much a factor in how everything is resolved.

Focus: Historicals are very realistic. Gamemasters must do their homework when creating them, especially if the players are familiar with the chosen time period. Fortunately, information on everything from typical lifestyles to equipment prices is readily available through the Internet or local library. If players are new to the setting, GMs will have to incorporate a means of educating them without turning the game into a history lecture. The easiest way is to start them off at the bottom of an organization: recently hired, recruited or kidnapped and pressed into service. This allows the players to learn at the same rate as their characters.

RDF & Genre Points: Historical settings are Gritty, though a very few may be Adventurous. Genre Effects are limited, but can include: Creative Stunt, Fortune Favors the Bold and Get a Clue. Experience rewards are typical and have no special considerations.

Character Types: Player character power levels are average or slightly above average. They may be exceptional people, but they are not superhuman. Occupations will vary with the setting, and depend a great deal on the stories being told.

ACTION: HISTORICAL

Skills, Perks and Flaws: Limits on Skills, Perks and Flaws vary depending on the actual time period. Generally, the farther back in history, the lower the Skill levels and Cpx ratings cap on Science, Medicine and Technology-related Skills. Certain Skills, like Computer and Pilot (Aircraft), are available only in recent time periods.

Technology: Available technology will vary depending on the time period. Gamemasters must do their research in order to avoid errors and anachronisms.

Campaign Ideas: Campaigns in the ancient world could include soldiering in the constant warfare between Greek city-states or plotting intrigue in the Roman Senate. Medieval campaigns could take place during the Crusades or revolve around the intricacies of samurai life. "Modern" campaigns could feature prohibition-era gangbusting or a tour of duty in war-torn Vietnam. The possibilities are effectively limitless.

Core Concepts: Chapter Seven

The followings are examples and further explanations of the core concepts introduced in Chapter Seven.

PROBLEM PLAYERS

Gamemasters can get discouraged from running a campaign because they unsuccessfully dealt with problem players in the past. These tend to have particular quirks and tendencies which, left unchecked, can ruin the game for everybody else. This section only covers the most frequent and troublesome types. If a problematic individual is truly, irredeemably disruptive, kick him out of the game and save everybody the aggravation.

The Rules Lawyer: This guy can recite (correctly) any segment of the rules from its paragraph number. He then uses this knowledge to find loopholes and give himself unfair advantages over other Players. Make sure you set the record straight from the beginning: you're the GM. Listen fairly to all arguments, then make your decision. Be fair and objective in your judgment, and remind the Rules Lawyer that you don't always use all the rules in order to keep the game moving. That's often more important than searching five minutes for an obscure modifier.

The Know-It-All: This is the guy who has wide knowledge of a real-world topic and uses it in the game to its fullest extent. The Know-It-All imposes his know-how on the Gamemaster, arguing decisions whenever they don't make sense. You have two options: tell him that this is just a game and you need to cut corners to run the session smoothly (probably won't work) or you can pre-empt his arguments by asking him how it really works. He's more interested in showing off his knowledge than cheating.

The Killer: Whatever the problem, the Killer use extreme measures to get rid of it. Anything that gets in his way is met with deadly force. Make sure you warn him of the consequences of his actions *before* he pulls the trigger — killing indiscriminately attracts retribution. If the Killer is aware of the social rules of your setting, he can never say you didn't warn him.

The Munchkin: This guy wants everything — high Attributes, high Skills, big guns, powerful vehicles, everything. These treasure hunters are hard to control. Use reverse psychology instead: give them everything they want without opposition, and focus on the more interesting characters. They'll soon learn that the good stuff doesn't lie behind stats and wealth.

The Show-Off: This Player wants to look good and to be worshipped by everyone in the game — Players, PCs and NPCs alike. He'll literally "teleport" from one scene to another (intervening in scenes where he's not supposed to be) and lie about his dice rolls. Stop him. He can't be at two places at the same time. If you can't see the dice, insist that he roll again. In fact, you should do this for everyone, just to avoid trouble.

The Specialist: A hybrid of the Munchkin and the Show-Off, the Specialist systematically creates characters with very focused abilities (often combat, but other variants are possible). He's extremely good at one thing and one thing only. He'll often try to direct the game towards his specialty, to the exclusion of everybody else's. Make sure some situations cannot be resolved by the use of his skills set alone. Better yet: make sure at character creation that he has a well-rounded character.

The Actor: This harmless category has been known to have disturbing effects on campaigns. They're not doing anything wrong per se — after all, they only act their characters as an actor would — but they just go overboard with the acting part. They just suddenly go all lyrical on you, dress up as their characters (weird when it's a male Player with a female PC) and flutter about, undoubtedly hoping that someone in the room is going to be impressed with their acting skills. Just ignore them and move along, lest you risk upsetting everybody else for wasting game time on frivolities.

Character-scale Vehicles

Occasionally, you may find that you need to use vehicles in a meaningful way during an RPG session, but you don't want to break out the hex maps or deal with conversions mid-game. Here's a "quick and dirty" conversion guide that will let you run vehicles in RPG combats. Remember to precalculate any changes to ensure things run smoothly.

- Rounds are 6 seconds as per standard Character action
- Vehicle armor and damage are multiplied by 10.
- Vehicle weapon range is multiplied by 50.
- Vehicles follow the action rundown in the character action section. If you want a grittier feel, halve the actions available to vehicles.
- Damage against vehicles is dealt with as normal, use the crew injury rules if needed. If an exposed crewman is hit, use the character damage rules.
- Called shots on vehicles work as per vehicle rules, although you could use the character rules if attempting to hit an exposed crewman. (Drop 2 dice.)
- Vehicle speed in meters is 10 times the MP spent (x50 for flying vehicle). (MP x Hex Size is meters/30sec. Divide by 5 to get meters/6sec.)

- Rather than obscurement, apply cover modifiers for vehicles, using your common sense as to what counts as cover for a vehicle. (A shrub that would cover a child will not normally count for a tank.) Otherwise, defensive modifiers work the same for both characters and vehicles (Remember to use MP for determining vehicle defense, not actual speed in meters.)
- Vehicles get a -2 to hit characters, unless the weapon has the Anti-Infantry Perk. Otherwise attack modifiers remain the same. Remember that Top Speed and Combat Speed are based on MP, not actual speed in meters.
- Point Blank range is determined as per Character action rules.
- Characters count as size 1 for throwing, ramming, etc.

Monsters as Vehicles

For really huge creatures like Dragons, it's sometime better to design them as vehicles. This allows you to emulate extra attacks and special abilities with relative ease. Skill levels should be determined based on party capabilities and Reality Distortion Levels. Remember that without the AI perk, "weapons" will have a -2 to hit the characters

Example: The Dragon

Size:	9 (~25,000 kg)
*Defensive Threat Value (DTV)	
Movement: Flight 3/5 (119 kph), Stall Speed 1 [250m/turn]	
Walker 1/2 (13 kph)	[20m/turn]
Maneuver: -2 (-3 Ground)	
Armor:	6/12/18 [60/120/180]

*Miscellaneous Threat Value (MTV)	
Crew:	Living 2 (Effectively)
Deployment Rge: 14 Hours (needs 10 hrs of sleep per night)	
Reaction Mass:	n/a
Perks and Flaws: 2 x Manipulator Arms (3), 2 x Manipulator Legs (6), Sensors (0/2km)	

*Offensive Threat Value (OTV)							
Qty.	Name	Arc	ACC	DM	BR	ROF	Perks & Flaws	Ammo
2	Front Claw	F	0	3 [25]	0	0	Armor Crushing, Linked, Melee	Unlimited
2	Back Claw Grab	FF	-1	4 [35]	0	0	Entangle, Armor Crushing, Linked, Melee, Flying Only	Unlimited
1	Tail Swipe	R	0	4 [40]	0	0	Knockback, Melee	Unlimited
1	Bite	F	0	5 [45]	0	0	Melee	Unlimited
2	Wing Buffet	L/R	-1	2 [18]	0	0	Melee Unlimited	
1	Fire Breath	F	0	5 [48]	0 [25m]	-2	Attenuating Damage (1), Incendiary, Smoke, Wide Angle (60)	

NOTE: All personal scale ratings listed in braces []

Introduction

This chapter explains how to convert and use the existing Silhouette CORE material to the same basic task resolution system used by the world's most popular fantasy roleplaying game (hereby designed as Open Gaming Rules for simplicity). Said rules have been made available to gamers at large through a movement called the Open Gaming Foundation. It thus seemed appropriate to refer to them here as Open Gaming Rules.

Those Open Gaming Rules (and the 20-sided dice used by it) are available at the local game store; alternatively, they can be downloaded for free from the Open Gaming Foundation's Web site (http://www.opengamingfoundation.org/). This chapter is meant for use by people who are intrigued by the worlds and game settings supported by Silhouette CORE, but do not want to learn entirely new rules to play in them.

ACTION: HEAVY GEAR

ACTION: HEAVY GEAR

The strength of the open gaming movement is that there is no need to re-invent the wheel. As such, we have tried to refer to the Open Gaming Rules as much as possible, including using some existing rule mechanisms to emulate other, similar effects. Feel free to migrate as much rules material from other Open Gaming-based games or games that use similar rule engines.

In general, the rules presented here are less detailed than what you may be familiar with. However, you can easily incorporate the skills, Feats, and detailed rules that you like without discarding anything provided here. In general, if Open Gaming rules already exists for a given situation, it has been ignored to save space. Thus, freezing to death, starvation, poison, diseases, and so on are not covered here.

The material shown here covers all the basics. Where there is no conversion provided, refer to the main text of the Silhouette CORE rules or the equivalent section in the Open Gaming Rules.

8.1 Basic Mechanics

Silhouette uses a pool of six-sided dice which are rolled: the highest result is taken as the total and modifiers are applied to it. Each task has a difficulty "Threshold" to beat and the degree of success or failure is measured by the difference between the Threshold and total of dice result and modifiers — this is the Margin of the Success or Failure.

The Open Gaming Rules, on the other hand, uses a binary task resolution — meaning that you either succeed or fail, with nothing in between. Degree of success (or failure) is up to the group, irrelevant, or determined by a second die roll (for example, damage inflicted in combat). The basic mechanism is to roll a twenty-sided die (referred to as a 'd20'), adding whatever modifiers are applicable. The Threshold or target number to beat is called a "Difficulty Class (DC)," which itself may be subject to its own modifiers. The Open Gaming Rules has many more modifiers than the Silhouette game engine, and the larger die type used means you will get wildly more random results at both ends of the spectrum.

As a rule of thumb, multiply any Silhouette Threshold by 3 (for cinematic games) or 4 (for grittier games) to get the equivalent Open Gaming Rules' Difficulty Class (DC).

A further distinction is in the focus and importance of innate ability versus trained use. In Silhouette, the innate ability (the Attributes, see below) play an important role in the game mechanics, but each character is much more defined by the choices in Skills and other less mechanical details (behavior, mannerisms, friends and enemies). The Open Gaming Rules' system places little emphasis on the innate Ability Scores, since these change very slowly and, compared to all other modifiers to die rolls, play only a small part in the overall game. Instead, emphasis is put on the Class/Level makeup, Feat choice and equipment — each of which are important in how they define mechanical bonuses to die rolls, special abilities and a wide variety of important secondary abilities — Armor Class, weapon attack and damage bonuses, Hit Points and Saving Throws. When working on conversion between the system, keep this in mind to avoid "down-playing" a Silhouette CORE character in the Open Gaming Rules' system.

8.1.1 Characteristics

Silhouette uses ten primary Attributes and derives a number of other stats from them: Agility, Appearance, Build, Creativity, Fitness, Influence, Knowledge, Perception, Psyche and Willpower. The primary Attributes are open-ended in both directions (below zero and above zero) but humans are restricted to a range of -5 to +5, with the vast majority (upwards of 95%) falling within -3 to +3.

The Open Gaming Rules use six primary Ability Scores: Strength, Dexterity, Constitution, Intelligence, Wisdom and Charisma. Other characteristics (Hit Points, Armor Class, etc.) are partly influenced by one or more of these Ability Scores, or are totally independent from them. The Ability Scores range from 1 to infinity, with beginning characters having scores between 3 and 18. They have associated modifiers that range from -5 to an open-ended bonus; the rule is to subtract 10 from the Ability Score and halve the difference, rounding down (for example, 1-10 = -9, divided by 2 is -4.5, rounded down to -5).

In general, the best idea is convert through the Ability Scores' modifiers (since they, like in Silhouette, are zero-averaged values). Treat the Silhouette Attribute as the "Ability Score modifier" of the Open Gaming Rules Ability Score. In the case of fractions (0.5's and such) use the upper end of the Ability Score: for example, a converted Strength of +3.5 would mean a +3 in Open Gaming Rules (Strength of 16 or 17), with the actual Strength score being 17 (the upper part of the 16-17 range).

In Silhouette, animals (and some monstrosities and alien creatures) use an Attribute called Instinct instead of Knowledge, Creativity, Psyche and Willpower. When needed, just replace Instinct in the stat block when doing a conversion. Silhouette animals and monsters also tend to lack a full character-type statistic block; use you best judgment when converting, or use the closest Open Gaming Rules equivalent for animals, plants, etc. (for example, rather than converting the Silhouette stats of a horse, use the native Open Gaming License stats for horses).

Attributes to Ability Scores

TO GET...	USE...
Strength:	FIT + (BLD + AGI)/2
Dexterity:	AGI + (PER + FIT)/2
Constitution:	BLD + (FIT + PSY)/2
Intelligence*:	KNO + (CRE + WIL)/2
	CRE + (KNO + WIL)/2
Wisdom:	WIL + (PER + CRE)/2
Charisma*:	INF + (APP + PSY)/2
	APP + (INF + PSY)/2

*Use formula yielding highest result

Ability Scores to Attributes

TO GET...	USE...
Agility	Dexterity Modifier x 0.75*
Appearance	Charisma Modifier x 0.5*
Build	Constitution Modifier x 0.5*
Creativity	Intelligence Modifier x 0.5*
Fitness	Constitution Modifier x 0.75*
Influence	Charisma Modifier x 0.75*
Knowledge	Intelligence Modifier x 0.75*
Perception	Dexterity Modifier x 0.5*
Psyche	Wisdom Modifier x 0.5*
Willpower	Wisdom Modifier x 0.75*

*Round to nearest whole number. E.g., 1.5 rounds toward 2, 2.25 toward 2, etc.

Hooks & Tips: Converting Attributes to Abilities

When converting from Silhouette CORE to Open Gaming Rules, keep in mind that in the latter the average character has a number of higher Ability Scores than their counterparts in Silhouette (owning to the fact that in most cases, the Ability Scores are rolled at random with some weighting towards the upper half of the range, while Silhouette is a point-buy system).

The conversion formulae have been adjusted for this, but straight conversion may still yield characters and monsters whose Ability Scores are a little weak compared to their "natural" siblings in the Open Gaming Rules. Also, conversions should be made one way only — it's impossible to make a complete equivalence between the two sets of stats, since they operate on different design approaches.

Size Comparison

D20 SIZE	BLD RATING
Fine	-10
Diminutive	-8
Tiny	-6
Small	-4
Medium	+0
Large	+6
Huge	+10
Gargantuan	+15
Colossal	+16 and higher

In Silhouette a creature's Build (BLD) score also determines its size (the higher BLD, the larger the creature). Open Gaming Rules separates size from body frame somewhat.

► **8.** Chapter Eight:
Open Gaming Rules Conversion

characters being the three broadest categories), which are then measured against a single "Character Level" system which allows a common means to compare the power of diverse characters. This Level plays an important role in the formation of Challenge Ratings (i.e., how tough the opponents and tests need to be to be a worthy threat).

8.2.1 Race

The conversion rules in this chapter presume an attempt to match converted characters directly with their counterparts in the Open Gaming Rules, and as such new rules and deviations have been kept to a minimum. The dual-statted Silhouette CORE settings will feature the required racial modifiers, if any are needed.

While most Silhouette CORE settings are based around humans, there are a number of differences among them that could qualify as different Open Gaming Rules "races," if the Gamemaster so allows it. If you choose not to do this, then treat all Silhouette CORE characters as Humans (from the Open Gaming Rules).

Example: Converting Stats

Shiri's Silhouette Attributes are: AGI +2, APP +1, BLD 0, CRE +1, FIT +1, INF +1, KNO 0, PER 0, PSY +1, WIL 0. Going through the numbers, this translates as:

Strength: FIT + (BLD + AGI)/2 = (1 + (0 + 2)/2) which equals 2, this means she has a Str of 14;

Dexterity: AGI + (PER + FIT)/2 = (2 + (0 + 1)/2) which equals 2.5, means a Dex modifier of +2, and the upper range of the Ability, or 15;

Constitution: BLD + (FIT + PSY)/2 = (0 + (1 + 1)/2) which equals +1, or a Con of 12;

Intelligence: CRE + (KNO + WIL)/2 = (1 + (0 + 0)/2) which equals +1, so Shiri has an Int of 12;

Wisdom: WIL + (PER + CRE)/2 = (0 + (0 + 1)/2) which equals 0.5, rounded to +0, so Shiri has a Wis of 11;

Charisma: INF + (APP + PSY)/2 = (1 + (1 + 1)/2) which equals 2, this means she has a Cha of 14;

8.2 Character Conversion

Characters in Silhouette are built on Character Points, Perks, Flaws and a couple of basic choices (Special Abilities or other setting-derived stats). Character advancement is purely about buying Attribute increases, getting new Skills/Abilities/Perks, or buying off Flaws. Many advantages gained have no mechanical components (things like personal status, information about the locations of various items, favors owed, etc). Silhouette characters tend to be very skill-oriented.

Open Gaming Rules characters, on the other hand, are built from a combination of templates — the common ones being Race and Class, which are further measured by experience-derived Levels. The average character is a mix of Classes, each with their own Levels, and one or more templates (a Half-Dragon, Fiendish, Blessed Human, for example, may have as many of four different cumulative templates). These Classes and templates give structure to the character and put them into specialized game niches (magic-users, skill-focused characters and combat-focused

ACTION: CORE COMMAND

8.2.2 Character Classes and Levels

Silhouette CORE is a Class-less rule system. When converting a Silhouette character, chose the most appropriate Class from the existing Open Gaming Rules choices. When doing the reverse, use the Class as a thematic guide to select Skills and other stats.

Many Silhouette CORE settings are fairly low-powered places, and it would be thematically appropriate if player characters have a number of the generic "NPC" Class Levels — Adept, Aristocrat, Commoner, Expert, or Warrior. Again, specific Classes will be included in the dual-statted Silhouette CORE settings, if any are needed.

Most Silhouette-base settings have plenty of secret orders, elite groups, and other organizations that would make excellent sources of Prestige Classes. These groups will be appropriately statted in the setting books.

Experience Points and Experience Levels

The average Open Gaming Rules-based character increases in experience Level every 13.33 encounters, with a Challenge Rating equivalent to the character's existing Level. You may find using story awards and roleplaying awards (optional rules found in the Open Gaming Rules) to be of use in order to keep the flavor of the game and keep the focus on the characters and their story, rather than on combat encounters.

Silhouette characters have no Levels (unless using the optional Level rules in Section 2.6); they use accumulated experience points on Emergency Dice (immediate short term increases in Skill Level) or to buy individual improvements to their character. Comparing Silhouette's XP totals to Levels isn't necessarily the best way to compare characters, however, especially when taking into account RDF and baseline character points (a Cinematic 50/70 character is more powerful than an Adventurous 30/40 character, even after 50 XPs).

For the most part, a Silhouette character's defining qualities lie in a pretty small cluster of skills. One can estimate a character's effective d20 level (and vice-versa) by looking at the average of their best five Silhouette Skills (for the most part, everything else tends to be background or hobby Skills).

Character Level Comparison

COMPARISON	AVERAGE*	D20 LEVEL
Green	1	1th level
Qualified	2	4th level
Veteran	3	7th level
Elite	4	10th level
Legendary	5	13th level
Legendary	6	16th level
Legendary	7	19th level
Legendary	8	22nd level**
Legendary	9	25th level**
Legendary	10	28th level**

*Average of the ratings of the character's best five Skill, rounded up.

**Possible but outside the scope of the basic d20 rules.

ACTION: TRIBE 8

When dealing with split-Skills or multiple converted Skills, again use good judgment and keep an eye on the Skill points total. If the character has high Silhouette Skill Levels in, for example, Survival and Navigation, then that would point to maybe devoting a number of the Open Gaming Rules Skill points in Wilderness Lore (possibly even picking up a Skill Focus: Wilderness Lore Feat).

Silhouette also allows for Skill Specializations, giving a bonus when using the Skill in a situation dealing with, or related to, the area of specialization. These specializations are best converted using Feat slots, such as Alertness, Skill Focus, or Weapon Focus (and Specialization, if your character has four or more Levels of the Fighter Class).

Example: Classes

Asa and Shiri, two player characters, have survived for their first few sessions — Asa's Skill average is 2, Shiri's 3. This translates into Level 4 and 7 characters, respectively.

Asa, a Tribe 8 character, was an Evan Seedling (a farmer, in other words), so we'll give him a Level in Commoner. He ran away at a young age and made his life among the Herites, acting as a vigilante and guerrilla poet (defacing Tribal symbols with his words). This gives him 3 Levels in the Bard Class.

Shiri, yet another T8 character, was a dancer, one of the Maskers (who incorporate martial arts into their dancing). Once banished, she took up the role of a sort of leader, a Lightbringer, who sought to unify the various Fallen cells. Class-wise, this best translates as 2 Levels of Monk and 5 Levels of Bard.

8.2.3 Skills and Feats

Silhouette is based entirely on Skills and Attributes. Since Open Gaming Rules focuses less on Skills, where the number of points available is based on Class and the maximums are limited by Levels, the best guideline to use is to simply look for the Open Gaming Rules Skill equivalencies on the table, calculate points available by the Open Gaming Rules Class and Level, and then distribute them proportionally.

Some of the Silhouette system's Skills translate into Feats in the Open Gaming Rules system (see the *Skill Conversion* table). You should use your best judgment whether or not to use precious Feat "slots" on those Skills. As a rule, one should only do so if the Skill/Feat represents a major part of the character (a famous general, etc), or if you have a Feat slot to spare.

Feats

Feats have no parallel in the Silhouette rules. As a result, Feat selection should be done on a case-by-case basis, choosing whatever is most appropriate to the character's Class, Race and Level. These rules introduce a number of new or modified Feats, as noted below.

The Silhouette CORE settings put some restrictions on the existing Feats normally available. Refer to the player's handbook for each setting, as needed.

ACTION: HEAVY GEAR

► **8.** Chapter Eight: Open Gaming Rules Conversion

Skill Conversion

SILHOUETTE CORE SKILL	OPEN GAMING RULES SKILL
Animal Handling	Handle Animal
Archery	*
Athletics	Jump, Balance, Tumble, Climb, Swim
Combat Sense	(Feat: Improved Initiative)
Craft	Craft (specify)
Defense	(Feat: Dodge)*
Demolition	Demolition (new Skill)
Disguise	Disguise, Hide
Etiquette	Diplomacy
Forgery	Forgery
Gambling	Bluff
Gunnery	(Feat: Weapon Proficiency: Gunnery)
Hand-to-Hand	*
Interrogation	Intimidate
Investigate	Gather Information
Language	Speak Language (specify)
Leadership	(Feat: Leadership)
Medicine	Heal
Melee	*
Navigation (Land)	Wilderness Lore
Negotiation	Diplomacy, Appraise, Profession (Trader)
Notice	Spot, Search, Listen, Sense Motive
Performance Arts	Perform
Pilot (Air)	Pilot (Aircraft, new Skill)
Pilot (Ground)	Pilot (Land Vehicle, new Skill)
Pilot (Naval)	Pilot (Boat, new Skill)
Read/Write**	Read/Write Language (specify)
Riding	Ride (specify)
Seduction	Bluff, Diplomacy
Sleight of Hand	Pick Pockets
Small Arms	(Feat: Weapon Proficiency: Firearms)
Stealth	Move Silently
Streetwise	Gather Information
Survival (Land)	Wilderness Lore
Teaching	Profession (Teach)
Throwing	*
Tinker	(Feat)
Trivia/Lore	Knowledge (specific)

* If using the basic Open Gaming Rules for combat Skills and BAB, then use the Silhouette character's combat Skills as guidelines as to which weapon proficiencies and other Feats to select. If the alternate combat rules are preferred, use the individual combat Skills as a guideline for how many Skills points to devote to Base Attack Bonus and Dodge Bonus and which Feats to select.

** Not available as a Silhouette Skill; if KNO +1 or higher, assign the Open Gaming skill.

Demolitions (new, Int, Trained only)

Demolitions involves knowing where to place explosive materials to maximize their damaging effect, and how to arm and disarm these devices. Secondary knowledge includes some information on how to make explosives.

Class Skill: none; the Demolitions Skill is a cross-Class Skill restricted to characters with chemistry knowledge only.

Check: A check against a DC 20 will allow the character to shape the explosive (multiply damage by 1.5 after subtracting the hardness of the object). To shape an anti-personnel charge, the check (DC 20) increases the area of effect by 50% (multiply by 1.5) and increases the damage (add 2 points per damage die, and add 4 to any Save DC to avoid the damage).

Defusing/safely destroying the device requires a check against a DC of 20+CR of explosive (treat as a trap). This is only the base DC: the Gamemaster should take into account stress, distraction, and other pressures. The Take 10 or Take 20 are not allowed on this roll; failing the roll by 10 or more triggers the device.

Pilot (new, Int, Specify)

Piloting covers the use of vehicles other than animal-based ones (which uses Ride or Handle Animal), including cars and airplanes, as well as more mundane skiffs, river barges and rowboats. When choosing this Skill, the vehicle type (Land, Naval, or Air) must be specified.

Class Skill: Ranger, cross-Class for all others.

Check: use this Skill whenever asked to make a roll for piloting the vehicle in much the same way that Ride is used in conjunction with animals.

Certain Feats, such as Mounted Combat and Ride-by (and Fly-by) Attack would be appropriate to use in conjunction with smaller vehicles where the 'pilot' is attempting to fight while also controlling the vehicle. Actual situational use is up to the Gamemaster's judgment.

8.2.4 Alternate Combat Rules (Optional)

Whereas Silhouette allows the player to control the combat effectiveness of their characters — to make a master combatant, one needs only take high Levels of Combat Sense, a combat Skill or two (with Specializations) and Defense — the Open Gaming Rules system allows for standardized Base Attack Bonus and for the most part disconnects Armor Class (the defensive combat score) from character development. The following optional rules are closer to the Silhouette approach and may be substituted if all participants agree.

Classes no longer have a Base Attack Bonus increased at every Level. Treat Base Attack Bonus as a Skill. Make it a "Class Skill" for Fighters, Warriors, Paladins, Barbarians and Rangers, and a cross-Class Skill for the rest of the Classes.

To do the same for the defensive side of combat, create a Skill called "Defense" — this becomes a Class Skill for Fighters, Rogues, Monks and Barbarians, and cross-Class for all others (with some exceptions — see below). Defense provides a "dodge" bonus to AC equal to the number of full ranks devoted to it. Like all other dodge-type bonuses, it is lost in situations where the character cannot benefit from their Dexterity modifier to their Armor Class, and like other dodge bonuses it is the exception to the "stacking" rule — Defense's dodge bonus to AC stacks with all other dodge bonuses.

Any class that does not have BAB or Defense as a Class Skill will have either fewer skills or a lower Combat ability than a member of the same class using the standard d20 rules. This results from them having to spend 2 points every second level to gain an ability they would normally get automatically. As such, Warrior-types are favored. To rebalance this, make Defense into a Class skill for the non-combat types.

To make the most use of these modifications, increase the "Skill points per Level" by 2 more points for the following classes: Fighter (increasing it to 4 per Level), Paladin (4 points per Level) and Warrior (4 points per Level). Don't forget that monsters also get to change their attack and defense bonuses.

► 8. Chapter Eight: Open Gaming Rules Conversion

In conjunction with the above you could, for important or dramatic fights between player characters and primary villains, use the optional "Defense Roll" Open Gaming Rules rule variant, instead of the standard rule which fixes the DC of the attack roll at the Armor Class. This variation does match how combat in handled in Silhouette CORE, but it does slow down the task resolution somewhat.

Personal Gear and Treasure

The equipment chapter supplied with each setting should help you figure out what equipment your character will have in an Open Gaming Rules-based campaign. The biggest difference between the two rule systems is that the Open Gaming Rules bases item values on a coinage scheme, and no such formalized structure exists in the Silhouette CORE world (which is nominally based on the 'credit' but varies from setting to setting).

Design Notes: Another Rule?

These modifications allows players to better reflect the combat effectiveness of their characters: the old sage need not be a master fighter just because she's a Level 18 Librarian. The alternate rules also allows players to customize the defensive side of their characters.

Some may be afraid that it creates combat "tanks:" for example, Level 1 characters who sink all their bonuses into BAB and pick up the Skill Focus and Weapon Focus Feat, begin the game with a BAB of +11 (+4 for Skill ranks, +2 Skill Focus, +1 Weapon Focus, and +4 for 18 Str or Dex, depending on the weapon used). This, of course, not including stat or equipment modifiers, or a +11 to AC (+4 Dex mod, +1 Dodge Feat, +4 for 4 ranks of Defense +2 for Skill Focus). Is this a "loophole"? Not really — these players are making a conscious choice to make their characters useless outside combat situations. Also, the character will often not be good at both offense or defense.

SECTION 5

APPENDIXES

Appendixes

This section contains numerous tools, listings and forms that are either used for reference or to help play the game.

Silhouette CORE
Probabilities and Alternate Dice

Probabilities for rolling six-sided dice in Silhouette. Additional Sixes adding +1 to the total:

	Skill					
	0	1	2	3	4	5
1	3.6%	16.7%	2.8%	50.0%	10.0%	0.0%
2	25.0%	16.7%	8.3%	3.2%	1.2%	0.4%
3	19.4%	16.7%	13.9%	8.8%	5.0%	2.7%
4	13.9%	16.7%	19.4%	17.1%	13.5%	10.0%
5	8.3%	16.7%	25.0%	28.2%	28.5%	27.0%
6	2.8%	16.7%	27.8%	34.7%	38.6%	40.2%
7	0.0%	0.0%	2.8%	6.9%	11.6%	16.1%
8	0.0%	0.0%	0.0%	0.5%	1.5%	3.2%
9	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%
10	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AVG	2.53	3.50	4.50	5.04	5.39	5.67

Probabilities for rolling six-sided dice in Silhouette with additional Fives and Sixes adding +1 to the total. (Cinematic RDL rule):

	Skill					
	0	1	2	3	4	5
1	30.6%	16.7%	2.8%	0.5%	0.1%	0.0%
2	25.0%	16.7%	8.3%	3.2%	1.2%	0.4%
3	19.4%	16.7%	13.9%	8.8%	5.0%	2.7%
4	13.9%	16.7%	19.4%	17.1%	13.5%	10.0%
5	8.3%	16.7%	22.2%	22.2%	19.8%	16.5%
6	2.8%	16.7%	30.6%	38.9%	42.0%	41.2%
7	0.0%	16.7%	2.8%	8.8%	16.0%	22.6%
8	0.0%	16.7%	0.0%	0.5%	2.4%	5.9%
9	0.0%	16.7%	0.0%	0.0%	0.1%	0.7%
10	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%
AVG	2.53	3.50	4.53	5.12	5.54	5.90

Optional Rule: Adding +1 for multiples of the highest die.

A house rule that's been around for a while is to have multiples of the highest die add +1 to the total. This is similar to the Cinematic rule featured earlier. This has the effect of slightly increasing the average roll.

Probabilities for six-sided dice, with multiples adding +1 to the total:

	Skill					
	0	1	2	3	4	5
1	30.6%	16.7%	2.8%	0.5%	0.1%	0.0%
2	25.0%	16.7%	5.6%	1.4%	0.3%	0.1%
3	19.4%	16.7%	13.9%	6.9%	2.9%	1.2%
4	13.9%	16.7%	19.4%	15.7%	10.5%	6.4%
5	8.3%	16.7%	25.0%	26.9%	24.6%	20.5%
6	2.8%	16.7%	30.6%	40.7%	47.0%	49.7%
7	0.0%	16.7%	2.8%	7.4%	12.9%	18.3%
8	0.0%	16.7%	0.0%	0.5%	1.6%	3.5%
9	0.0%	16.7%	0.0%	0.0%	0.1%	0.3%
10	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%
AVG	2.53	3.50	4.61	5.21	5.60	5.89

Optional Rule: Adding +1 for multiples of any die.

Dice that come up the same value (not only 6s) are counted as +1 to the die total for that number. Thus, a character rolling a 5 5 5 2 would have a total score of (5+1+1)=7. A character rolling 2 2 2 6 would still have a score of 6, as it remains the highest possible value of the die roll (2+1+1 = 4 vs 6). This has the effect of raising the average die roll, while still requiring that multiple 6s be rolled for the highest successes. It also prevents a case where a player rolls 5 5 5 5, a very very small statistical chance (and thus 'lucky' roll) and gain nothing from it but a 5.

Optional Rules: Using Eight or Ten Sided Dice

Some people feel limited by the choice of the classic six-sided die, and prefer to use larger die types. Silhouette was designed to use six-sided dice, and as such using larger die types alters some things and requires the GM to make a few changes based on these changes and the feel of the campaign.

Using Larger dice increases the randomness of tests and decreases the importance of Attributes and other modifiers. It also makes combat potentially more lethal, due to the possibility of a larger Margin of Success. The larger dice types result in higher rolls, thus requiring larger thresholds.

If you like using larger die types, but find the results too random, you can institute either of the optional dice rolling methods from the previous section. Either of them should reduce the randomness of larger die types

Probabilities for rolling eight-sided dice in Silhouette. Additional Eights adding +1 to the total:

	Skill					
	0	1	2	3	4	5
1	23.4%	12.5%	1.6%	0.2%	0.0%	0.0%
2	20.3%	12.5%	4.7%	1.4%	0.4%	10.0%
3	17.2%	12.5%	7.8%	3.7%	1.6%	60.0%
4	14.1%	12.5%	10.9%	7.2%	4.3%	2.4%
5	10.9%	12.5%	14.1%	11.9%	9.0%	6.4%
6	7.8%	12.5%	17.2%	17.8%	16.4%	14.2%
7	4.7%	12.5%	20.3%	24.8%	27.0%	27.6%
8	1.6%	12.5%	21.9%	28.7%	33.5%	36.6%
9	0.0%	12.5%	1.6%	4.1%	7.2%	10.5%
10	0.0%	12.5%	0.0%	0.2%	0.7%	1.5%
11	0.0%	12.5%	0.0%	0.0%	0.0%	0.1%
12	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%
AVG	3.19	4.50	5.83	6.51	6.94	7.25

Probabilities for rolling ten-sided dice in Silhouette. Additional Tens adding +1 to the total:

	Skill					
	0	1	2	3	4	5
1	19.0%	10.0%	1.0%	0.1%	0.0%	0.0%
2	17.0%	10.0%	3.0%	0.7%	0.2%	0.0%
3	15.0%	10.0%	5.0%	1.9%	0.7%	0.2%
4	13.0%	10.0%	7.0%	3.7%	1.8%	0.8%
5	11.0%	10.0%	9.0%	6.1%	3.7%	2.1%
6	9.0%	10.0%	11.0%	9.1%	6.7%	4.7%
7	7.0%	10.0%	13.0%	12.7%	11.1%	9.0%
8	5.0%	10.0%	15.0%	16.9%	17.0%	16.0%
9	3.0%	10.0%	17.0%	21.7%	24.7%	26.3%
10	1.0%	10.0%	18.0%	24.3%	29.2%	32.8%
11	0.0%	10.0%	1.0%	2.7%	4.9%	7.3%
12	0.0%	10.0%	0.0%	0.1%	0.4%	0.8%
13	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%
14	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%
AVG	3.85	5.50	7.16	8.00	8.52	8.88

To convert Thresholds from standard Silhouette for use with d8s or d10s, follow this chart. Note that the thresholds do not map neatly, and as

such, the odds of beating a given threshold will vary between die types.

Threshold Conversion

d6	Type	d8	d10
1	Effortless	1	1
2	Routine	2	3
3	Easy	4	5
4	Moderate	5	7
5	Challenging	7	8
6	Difficult	8	9
7	Very Difficult	9	10
8	Extremely Difficult	10	11
10	Near Impossible	13	14
12+	Pray for Divine intervention!	15+	16+

If you find that the amount of Damage being dealt is too high, you may wish to institute one or both of these options:

* Maximum MoS equal to the number of sides on the die type used

* Divide multiply Weapon DM's by 0.75 (75%) for eight-sided dice, and by 0.6 (60%) for ten-sided dice.

Silhouette CORE Character Creation Costs Reference

Attributes

CHARACTER POINTS			
	Joe Average	PC	Major NPC
Gritty	10	20	30
Adventurous	10	30	50
Cinematic	10	50	70

Attributes

SHORT	NAME	DESCRIPTION
AGI	Agility	Physical prowess and co-ordination
APP	Appearance	Physical comeliness
BLD	Build	Physical size and mass
CRE	Creativity	Mental innovation and quick thinking
FIT	Fitness	Physical conditioning and endurance
INF	Influence	Charisma and persuasiveness
KNO	Knowledge	Education and logical thinking
PER	Perception	Alertness and ability to discern details
PSY	Psyche	Mental health, empathy, and luck
WIL	Willpower	Mental endurance and conviction.

Attribute Costs

RATING	COST	DESCRIPTION	WEIGHT EQUIV.
+5*	36	Unbelievable	180-250 kg
+4*	25	Superhuman	140-180 kg
+3	16	Exceptional	115-140 kg
+2	9	Superb	95-115 kg
+1	4	Good	80-95 kg
0	1	Average	70-80 kg
-1	0	Poor	60-70 kg
-2	+1	Weak	50-60 kg
-3	+4	Pathetic	40-50 kg
-4*	+9	Hopeless	25-40 kg
-5*	+16	Tragic	10-25 kg

Values marked with a "*" fall outside Human norms.

Any value marked as +X adds that value to the your CP total.

Any CP unused after buying Attributes can be used as Skill Points OR as Emergency Dice.

Skills

SKILL POINTS AVAILABLE			
	Joe Average	PC	Major NPC
Gritty	20	40	60
Adventurous	20	50	80
Cinematic	20	70	120

Skill Costs

LEVEL	COST	ABILITY	DESCRIPTION
1	1	Rookie	Basic Training
2	4	Qualified	Miminum to earn a living
3	9	Veteran	Professionals
4	16	Elite	Season Professionals
5	25	Legendary	The very best
6+	Lvl x lvl	Legendary	Living Legends and heroes
Specializations cost 5 per Specialization.			

Complexity Costs

LEVEL	COST	TRAINING	DESCRIPTION
1	Free	Basic	Self taught or basic training
2	4	Trained	Full training
3	9	Advanced	Advanced Courses
4	16	Expert	Wide Field of knowledge
5	25	Legendary	Renowned expert

Remember that all Skill Points must be spent, they do not turn into Emergency Dice.

Perks and Flaws (Optional)

Perks and flaws are bought with Skill Points. Consult the Perks and Flaws table found on page 39.

Step 5: Secondary Attributes

Secondary Attributes

Short	Name	Description
STR	Strength	Raw physical Strength
HEA	Health	Physical well being and resistance to disease
STA	Stamina	Physical Endurance and wound resistance
UD	Unarmed Damage	Damage inflicted in hand-to-hand combat
AD	Armed Damage	Base damage in melee combat

Calculating Secondary Att.

STR	(Build + Fitness)/2, round towards Zero
HEA	(Fitness + Psyche + Willpower)/3, round off
STA	(5 x (Build +Health)) + 25, minimum 1
UD	3 + Strength + Build + Hand-to-Hand skill level, Minimum 1
AD	3 + Strength + Build + Melee skill level, Minimum 1
Flesh Wound	Stamina / 2, round up
Deep Wound	Stamina
Instant Death	Stamina x 2
System Shock	5 + Health, Minimum 1

Silhouette CORE Generic Weapon & Armor List — Game Stats

MELEE WEAPONS	ACC	PARRY	DM	BASE RANGE	ROF	NOTES
2-Handed Sword	-1	0	AD+18	Melee	N/A	2-handed, Min +1 STR
Bastard Sword/Katana	0	-1/0	AD+11/13	Melee	N/A	1-handed/2-handed
Battle-Ax	0	-1	AD+13	Melee	N/A	2-handed
Broadsword	0	0	AD+9	Melee	N/A	2-handed
Chainsaw	-1	-2	AD+15	Melee	N/A	Fuel/batteries; run for 1d3 hours
Claymore	0	-1	AD+16	Melee	N/A	2-handed, Min +1 STR
Club	0	-1	AD+3	Melee	N/A	Any large stick-like item
Dagger/Knife	0	-1	AD+3	Throw	0	-1 ACC when thrown
Fighting Stick	0	+1	AD+4	Melee	N/A	Can be used to Parry
Flail/ Heavy Chain	-1	-2	AD+10	Melee	N/A	Unwieldy, can become tangled
Hatchet	0	0	AD+7	Throw	0	Can be thrown
Javelin/Short Spear	0	0	AD+6	7+STR	0/1	Can be thrown
Long Spear	-1	+1	AD+12	Melee	N/A	Add +1m to reach
Long Sword	0	-1	AD+11	Melee	N/A	2-handed
Mace	0	0	AD+7	Melee	N/A	Crushing damage
Maul	-1	-2	AD+16	Melee	N/A	2-handed, Min +1 STR, crushing
Nunchuka	0	+1	AD+8	Melee	N/A	Can be used to Parry
Pick Ax	-1	-1	AD+14	Melee	N/A	2-handed
Poleax	-1	+1	AD+15	Melee	N/A	2-handed
Quarterstaff	0	+1	AD+7/+11	Melee	N/A	Wood/Metal, 2-handed
Rapier	+1	+1	AD+11	Melee	N/A	Piercing damage
Short Sword	0	0	AD+7	Melee	N/A	Also represents Wakazashi
Sickle	0	-2	AD+4	Melee	N/A	Cutting damage
Throwing Knife	0	-1	AD+2	Throw	0	Can be thrown
War Scythe	-1	-1	AD+14	Melee	N/A	Unwieldy, requires room
Warhammer	0	0	AD+9	Melee	N/A	Crushing damage
Whip	0	-2	AD+3	Melee	N/A	Entangles. Thres. = MoS-1 to get free

GUNS	ACC	DM	BASE RANGE	ROF	AMMO	NOTES
Taser Pistol	0	3	4	0	30	Intensity 5 Elec. attack, bruise damage
Revolver, Light	0	7	5	0	6	.22 caliber
Revolver, Medium	0	14	6	0	6	.38 caliber
Revolver, Heavy	0	23	7	0	5	.45+ caliber
Pistol, Light	0	10	6	0	10	6mm
Pistol, Medium	0	15	6	0	9	9mm
Pistol, Heavy	0	24	7	0	8	.45+ caliber
Rifle, Light	0	18	45	0	1	7.62mm
Rifle, Medium	0	24	50	0	20	9mm
Rifle, Heavy	0	28	60	0	10	.50 caliber
Assault Rifle	0	28	65	1	40	7.5mm+
Shotgun/Autoshotgun	0	28	7/6	0/1	10	12-Gauge
Sniper Rifle/Laser	+1	40	100/200	0	5	Affected by smoke
SMG, Light	0	12	22	2	40	7.62 mm
SMG, Medium	0	18	25	2	30	9mm
SMG, Heavy	0	24	30	2	30	11mm+
Laser pistol	+1	8/17/26	9	0	30	Uses 1/4/9 ammo per shot, respectively
Laser Rifle	+1	26/35/44	120	0	10	Uses 1/2/3 ammo per shot, respectively

HEAVY WEAPONS	ACC	DM	BASE RANGE	ROF	AMMO	NOTES
Anti-Armor Guided Missile	+1	150	150	0	1	Guided, Indirect Fire
Anti-Armor gun	+1	70	150	0	5	.50 caliber+
Chaingun	0	30	50	4	Belt	9mm or similar
Aux. Grenade Launcher	-1	Grenade 40		0	1	Indirect fire, fits on rifle
Grenade Rifle	0	Grenade 50		0	5	Indirect fire
Light Mortar	-1	120	150	0	5	Indirect fire, Min Range 150
Light Machine Gun	0	30	100	2	Belt	7.62mm
Medium Machine Gun	0	32	125	3	Belt	7.5mm+
Heavy Machine Gun	0	42	130	3	Belt	.50 caliber+
Rocket Launcher	0	140	50	0	1	Bazooka-type launcher
SAM Launcher	+1	70	250	0	1	Guided, Indirect Fire

Grenades	ACC	DM	Base Range	RoF	Area
Concussion	0	30	Throw	0	9
Fragmentation	0	26/14	Throw	0	8/30
Incendiary	0	24/8	Throw	0	8/12
Gas	0	5/Gas	Throw	0	2/30
Smoke	0	2/Smoke	Throw	0	1/30

The second number under 'Area' is the secondary damage area. Those within the primary damage area suffer both damages, those outside suffer only the second DM. Use the Drug/Disease rules for Gas effects.

RANGED WEAPONS	ACC	DM	BASE RANGE	ROF	AMMO	NOTES
Sling	-1	7	Throw	0	N/A	Needs a quick wind-up time
Bola	-1	7	6	0	N/A	Entangles. Thresh. = MoS to get free
Short Bow	0	7	5	0/1	N/A	Small bow
Recurve Bow	0	10	8	0/1	N/A	Standard bow
Long Bow	0	12	10	0/1	N/A	Min +1 STR
Modern Compound Bow	0	13	8	0/1	N/A	Powerful but needs maintenance
Crossbow	0	14	7	0/3	N/A	Powerful but slow to reload
Hand Crossbow	0	6	4	0/1	N/A	Useful secondary weapon
Repeating Crossbow	-1	8	7	0	6	Cumbersome

ARMOR	VALUE	ENC	CONCEAL
Light Flak Vest	15	0	Yes
Light Flak Suit	20	0	Yes
Medium Flak Vest	25	0	Somewhat
Leather Armor	5	0	Somewhat
Studded Leather	8	0	Somewhat
Chain Mail	14	-1	No
Plate	22	-2	No
Futuristic Composite	32	-1	No

SHIELD	ACC	PARRY	DM	ARMOR	ENC.
Buckler	-1	+1	AD+1	11	0
Round	-2	+2	AD+3	13	0
Heater/Kite	-2	+2	AD+4	15	-1
Tower	-3	+3	AD+5	18	-1
Modern Riot	-2	+3	AD+5	20	0

If the parry fails by the parry bonus or less, the attack hit the shield. Subtract the shield's armor from the attack. If using the Armor Degradation optional rules, apply this to the shield as well.

• ANIMAL HANDLING

Attributes: INF (training), KNO (basic care)

Specializations: Animal, Herding, Performing Tricks

Possessed By: Farmers, Ranchers, Circus Performers

The Animal Handling Skill measures the ability of a character to care for and train various animal species. The Skill includes knowledge of the animal's preferred foods and daily habits, reproductive cycle and the basic signs of disease. Natural Sciences (Life) is needed to actually treat diseased animals, however.

• ARCHERY

Attributes: AGI (firing), PER (firing at Extreme range)

Specializations: Longbow, Compound Bow, Crossbow, Sling

Possessed By: Athletes, Hunters, Primitives

The Archery Skill allows the character to use primitive missile weapons such as longbows, slings or crossbows. This is the primary ranged weapon Skill in historical and fantasy genres. In settings featuring firearms, this Skill might still be used for sport and historical events, but rarely for actual combat. Specialized arrowheads/projectiles can be used to make the weapons more versatile.

• ATHLETICS

Attributes: AGI (grabbing items), FIT (physical activities), KNO (evaluating moves)

Specializations: Running, Football, Volleyball, Break Fall, Climbing, Swimming

Possessed By: Athletes, Sports Enthusiasts, Soldiers

Athletics represents the character's ability to engage in sporting and physical activities of all kinds. It includes the necessary Skills and knowledge of the rules and regulations along with the physical training required by athletic activities. Athletics is also used for running, and climbing up and down a steep (more than 60 degrees) incline. See *Movement*, section 3.2, for more.

A high Cpx in this Skill represents the ability to perform tumbling, balancing, or gymnastics. In some game genres, Acrobatics can be used in combat instead of Defense (see Chapter 7) — the ability to vault over a group of guards in an escape or tumble under a hail of bullets from an opponent's gun are all highly desirable.

• BUSINESS

Attributes: INF (dealing with people), KNO (techniques)

Specializations: Finance, Management, Foreign Trade, Accounting, Economics

Possessed By: Businesspeople, Bankers, Accountants

Business is the ability to manage the affairs of a business, corporation or nation. This could include anything from compiling product feasibility reports to the creation of marketing campaigns to promoting a product, whatever that product may be. A small number of Player Characters are likely to take this Skill based upon their background. They may find it useful in a political campaign, but in a more action-oriented one, its utility may be limited.

• COMBAT SENSE

Attributes: PER (applications), KNO (techniques)

Specializations: Urban, Jungle, Marsh, Night-time, Ambushes

Possessed By: Soldiers, Police, Criminals, Warzone Residents

A character with Combat Sense is trained to be aware in dangerous situations, such as firefights. Combat Sense is used primarily to detect ambushes and for initiative purposes. This Skill is useful to the majority of characters who will take part in a high-adventure campaign, but characters in a political campaign will probably not need it.

A high Complexity in this Skill represents the character's expertise in small-unit tactics (a prime example is the positioning of troops while they are engaged with enemy forces). The Skill is useful to commanders of units of all sizes, and is one of the most important to soldiers who wish to rise in the ranks. See section 6.3 for advanced use of this Skill.

• CRAFT (SPECIFIC)

Attributes: varies, but usually CRE or KNO

Specializations: Commercial, Specific sub-category

Possessed By: Artisans, Metalsmiths, Cooks

The Craft Skill covers the ability to produce useful and artistic creations with one's hands. A specific craft must be chosen: it can include such things as cooking, grooming, jewelry, metalwork, woodcraft, weaving, etc. The market for fine items makes it lucrative to know one of these crafts (though only at high levels), and the ability to recognize the value of such crafts is in demand from many interested parties.

Grooming, a character's ability to improve the physical appearance of a person through the judicious use of clothing and grooming, is a special craft. The Margin of Success of a Grooming Skill test vs. 5 (fumbles are ignored) is added to the character's Appearance Attribute.

• DEFENSE

Attributes: AGI (diving for cover or dodging), PER (spotting defensive positions)

Specializations: Unarmed, Melee Attacks, Ranged Attacks

Possessed By: Soldiers, Police, Criminals, Convenience Store Clerks

The Defense Skill is a measure of how good the character is at avoiding incoming attacks, whether by making the best use of available cover (be it a lamp-post, a concrete wall, or another character) or actually dodging hand-to-hand or melee blows. Most player characters have this Skill to some degree.

• DEMOLITION/TRAPS

Attributes: CRE (charge placements), KNO (techniques, chemistry)

Specializations: Mining, Military, Construction

Possessed By: Military and Industrial Specialists, Terrorists

Demolition is the Skill concerned with setting and detonating explosive charges in such a way as to maximize damage done to the target, and either maximize or minimize the collateral damage caused by the explosion. The Skill encompasses the ability to deactivate these same charges. It also includes the knowledge required to produce various types of explosives from raw materials. The pre-modern version of this Skill allows one to set traps and disarm them.

• DISGUISE

Attributes: CRE (putting on), PER (spotting), KNO (techniques)

Specializations: Specific Disguise, Theatrical Special Effects, Vehicles, Buildings

Possessed By: Actors, Undercover Agents, FX Specialists, Rebels

The Disguise Skill covers the physical aspects of changing the appearance of a person or item, including proper use of makeup, masks, and clothing. Actual impersonation or mimicry of a specific person or type of person also require the Performance Arts (Theatrics) Skill, however.

The Skill also allows the user to disguise constructs, such as vehicles (Cpx 2), bunkers (Cpx 3) or even bases (Cpx 4), from visual recognition: apply the MoS of the Disguise effort to the Threshold of any test to recognize the item or person for what it really is.

• ETIQUETTE (SPECIFIC)

Attributes: INF (interaction), PER (spotting faux-pas)

Specializations: Military, Business, Aristocratic, Bureaucracy

Possessed By: Sophisticates, Military Officers, Businessmen

Etiquette reflects the character's familiarity with proper methods of social interaction within formalized settings, such as military ceremonies, upper class gatherings or business meetings. Many politically-inclined characters will possess this Skill, regardless of their social standing. If a character attempts to use his Skill to interact in a related but unfamiliar milieu, a -2 penalty is imposed on the test.

• FORGERY (SPECIFIC)

Attributes: CRE (creating), PER (spotting), KNO (techniques)

Specializations: Electronic, Written, Art, Counterfeiting

Possessed By: Criminals, Spies, Police Experts

The Forgery Skill is the character's ability to accurately duplicate a variety of objects, such as official documents, works of art, money, and handwriting. It also encompasses the ability to recognize a forgery as such, and give an opinion as to the origin of the forgery based on the style and materials used in creating it. If a character attempts to use his Skill to work in a related but unfamiliar field, a -2 penalty is imposed on the test.

• GAMBLING

Attributes: PER (applications), KNO (techniques), CRE (cheating), PSY (raw luck)

Specializations: Specific Game, Cheating, Bookkeeping

Possessed By: Gamblers, Bookies, Suburban Husbands

Gambling represents the character's knowledge of the rules of games of chance. It further allows the character to estimate odds, cheat at most games (if required) and place bets on events. This Skill is one of the old standbys for many types of characters.

• GUNNERY (SPECIFIC)

Attributes: PER (applications), KNO (techniques)

Specializations: Vehicle Model, Projectile Weapons, Missiles, Energy Weapons

Possessed By: Combat Pilots, Combat Gunners

Gunnery Skill is required to fire any non-portable weapons, such as those mounted on vehicles or installations. The specific areas of knowledge are: Mecha, Ground, Naval, Air and Space. If a character attempts to use his Skill to fire weapons on a vehicle type other than one with which he is familiar, a -2 penalty is imposed on the test.

• HAND-TO-HAND

Attributes: AGI (disarming), FIT (combat and blocking blows), KNO (evaluating moves)

Specializations: Striking, Grappling, Tripping, Throwing

Possessed By: Boxers, Martial Artists, Police, Soldiers

The Hand-to-hand Skill measures the proficiency of a character in close-range combat using unarmed fighting techniques. A high Complexity rating in Hand-to-hand implies that the character is using some form of martial art, such as karate or boxing. Almost all military personnel receive basic training in this Skill, and many other individuals and professions find it necessary to learn some of the techniques involved.

• HEAVY WEAPONS

Attributes: PER (using weapons), KNO (maintenance)

Specializations: Machineguns, Mortars, Grenade Launchers, Missiles

Possessed By: Soldiers, Police, Criminals

The Heavy Weapons Skill is a measure of the character's proficiency with man-portable support weapons such as mortars, grenade launchers and missiles. The Skill includes basic knowledge of the maintenance procedures. This Skill is taught almost exclusively in military and para-military circles and is seldom shown to those not sanctioned to use it by the authorities. The pre-modern version of the Skill lets characters build and operate catapults, trebuchets and similar weapons.

• INFORMATION WARFARE

Attributes: INF (communicating), CRE (use, codebreaking), KNO (techniques, maintenance)

Specializations: Sensors, ECM, Underwater Sensors, Comm Jamming

Possessed By: Combat Pilots, Sensor Op Specialists, Explorers

Information Warfare is a catch-all Skill that covers the myriad aspects of sensor operations, electronic counter-measures (ECM), and electronic counter-counter-measures (ECCM). This Skill is used for detection tests, electronic jamming, and other similar activities. It is required to operate and effectively counter communications devices. It is also used in the design and breaking of codes used for communications between two parties.

• INTERROGATION

Attributes: APP (flirt), BUI (physical intimidation), INF (wits), WIL (domination)

Specializations: Casual Questioning, Torture, Specific Type of Informant

Possessed By: Police Officers, Intelligence Experts

Interrogation measures a character's ability to extract information from an unwilling informant. Although such exchanges can be roleplayed, Gamemasters can use Opposed Action Tests with informants rolling either WIL or Interrogation, whichever is higher. A MoS of 4 or more indicates that the informant may not even realize he has revealed something of note.

• INVESTIGATION

Attributes: PER (applications), KNO (techniques)

Specializations: Searching, Surveillance, Forensics

Possessed By: Police, Private Detectives, Spies

The Investigation Skill allows the character to collect information on people, places and events. This information can be gathered by any means not covered by the Streetwise or Computer Skills. Player Characters may want to have this Skill to one degree or another since it allows them to uncover facts about their antagonists which might otherwise remain hidden.

• LANGUAGE (SPECIFIC)

Attributes: CRE (applications), KNO (grammar and vocabulary)

Specializations: Specific Dialect, Specific Jargon

Possessed By: Travelers, Diplomats, Scholars

This is the ability to communicate and be literate. The number of languages spoken doubles at each Cpx (Cpx 1 is one language, Cpx 2 is two, Cpx 3 is four, and so on).

All characters their native tongue has level two (standard) or three (if they are highly educated — KNO +1 or higher) at no cost. Some languages will not be available to all characters; players should check with their GMs about which languages their character can learn.

When using social Skills in a foreign language, characters are limited to their Language level. For example, if the character has Language at level 1 (and knows Russian) plus Negotiation at 5, and tries to bribe a Kremlin guard to let him pass, he can only use Negotiation at level 1.

• LEADERSHIP

Attributes: INF (leading people), PER (evaluating morale and skills)

Specializations: Military, Political, Business, Cult

Possessed By: Military Officers and NCOs, Politicians, Businesspeople

Leadership is the capacity to lead others, either by example or through inspiration. Any group which will see combat on a tactical scale will dearly need someone to guide its actions; entering battle without a well-defined leader only increases the chaos the group will experience. See section 6.3 for advanced use of this Skill.

• MEDICINE

Attributes: CRE (applications), KNO (techniques), INF (dealing with patients)

Specializations: Combat, Aquatic, Sports, Neurology, Forensics, Surgery, Toxicology

Possessed By: Soldiers, Lifeguards, Trainers, Paramedics, Physicians

Medicine is the ability to diagnose and treat various pathological conditions, such as dangerous traumas, diseases and infections. The lowest levels (2/2 and below) are effectively First Aid: the ability to stabilize wounded peoples' conditions so that they can be transported to more effective treatment.

A higher Medicine Skill is required for any long term medical treatment such as aiding in recovery from disease, and for any type of serious internal surgery. A specialization *must* be chosen before a character can go above Level or Complexity 3.

• MELEE

Attributes: AGI (striking targets), FIT (blocking melee weapons), KNO (evaluating moves)

Specializations: Knives, Clubs, Fencing

Possessed By: Soldiers, Police, Criminals, Martial Artists

The Melee Skill reflects how good a character is at attacking and/or defending with close-combat weapons, such as knives, cudgels or swords. This type of weapon use is probably the most widespread of all since it involves relatively little training and mostly inexpensive weapons, yet increases the amount of damage dramatically.

• NATURAL SCIENCES (SPECIFIC)

Attributes: CRE (applications), KNO (techniques)

Specializations: Various Fields of Study

Possessed By: Professors, Students, Researchers, Designers

Natural Sciences is a catch-all Skill that includes any of the "hard" sciences dealing with the universe: earth (geology, meteorology, etc.), life (biology, virology, etc.) and physical (mathematics, physics, chemistry, etc.) sciences.

A specialization *must* be chosen before a character can go above Level or Complexity 3 in this Skill. If a character attempts to use his Skill in a field other than one with which he is familiar, a -2 penalty is imposed on the test.

• NAVIGATION (SPECIFIC)

Attributes: CRE (applications), KNO (techniques)

Specializations: Night-time, Map and Compass, Star Position, Terrain Type

Possessed By: Campers, Explorers, Pilots, Soldiers, Survivalists

Navigation represents the character's proficiency in the various techniques used to track one's positions and movements. The specific areas of knowledge are: Sea, Land, Urban, Air, Space. If a character attempts to use his Skill to navigate in a terrain other than one with which he is familiar, a -2 penalty is imposed on the test.

• NEGOTIATION

Attributes: INF (interaction), BUI (intimidation), PER (evaluating progress), KNO (techniques)

Specializations: Specific Commodity, Specific Culture, Barter

Possessed By: Traders, Smugglers, Business people, Ambassadors

Negotiation measures a character's ability to influence the final decision in bargaining, or the price in a transactions (be it for cash, credit or barter). This is always an opposed Skill roll, with the MoS x 5% as the maximum discount possible when currency is involved. A Player's roleplaying should always be weighed as powerfully as the die roll, and the specific circumstances of the deal should be kept in mind. There are many situations in which prices or positions are firmly fixed, and cannot be affected by haggling in any way.

• NOTICE

Attributes: PER (applications), KNO (observation techniques), PSY (human perception)

Specializations: Specific Sense, Night-time, Forward Observing, Tracking

Possessed By: Researchers, Soldiers, Police, Investigators

Notice is the ability to perceive details that may be otherwise overlooked. This includes finding a clue hidden in a crime-scene, spotting a face among the crowd, reading the fine print on a legal document, etc.

At higher levels, a careful observer may use the Skill to empathize with the person he is observing and can sometimes make prudent assumptions about the inner workings of the target. The pre-modern specialization of this Skill is Tracking, which can also be used for hunting.

• PERSONAL FLIGHT DEVICE

Attributes: AGI (release timing), FIT (freefall maneuvers), KNO (packing, evaluating equipment)

Specializations: High-Altitude, High-Wind, Night-Time

Possessed By: Skydivers, Paratroopers, Pilots

The Personal Flight Device Skill allows the character to use and control a parachute or similar personal flight device, such as a hang-glider, jet pack or grav belt. It also includes the ability to prepare and pack parachutes, make minor repairs to equipment, and estimate wind speed and evaluate weather patterns that might affect the drop or flight.

• PERFORMANCE ART (SPECIFIC)

Attributes: CRE (creative process), FIT (art involving body), INF (acting), KNO (techniques)

Specializations: improvised, performance, genre, tragedy, comedy

Possessed By: Sophisticates, Professionals, Youth

This is a catch-all Skill for performance art: the number of arts practiced doubles at each Cpx (Cpx 1 is one, Cpx 2 is two, Cpx 3 is four, and so on). Each art is a separate field (theatrics/acting, danse, music, mime, singing, etc.). The Skill covers all aspects of live or recorded performance. This includes the ability to produce, direct, act or otherwise work in these media. If a character attempts to use his Skill to do a performance in a related but unfamiliar field, a -2 penalty is imposed on the test.

The Treshold of Art tests is chosen by the player — this is the quality aimed for by the object or representation. A low Threshold indicates that the artist plans to do something correct, nothing more, while a high Treshold means the artist aims to create a masterpiece. Performance Arts (Theatrics) also allows an actor to impersonate someone else through the use of disguise, voice and mannerism mimicry, provided that the impersonator knows enough about the subject to make the act convincing.

• PILOT (SPECIFIC)

Attributes: AGI (control), PER (grabbing items, for mecha), KNO (using onboard systems)

Specializations: Vehicle Model

Possessed By: Combat Crew, Joe Average, etc.

The Pilot Skill is the ability to control the movements of a vehicle. Although most modern characters are assumed to have a license and drive competently (unless from a fantasy background, which use Riding instead), to take a Skill in this is unusual except for characters who use such vehicles often.

There are five areas of knowledge: Mecha (for humanoid or limbed vehicles), Ground (for wheeled, tracked and hover vehicles), Naval (for boats and subs), Air (ballons, aircraft) and Space. If a character attempts to use his Skill to control a vehicle type other than one with which he is familiar, a -2 penalty is imposed on the test.

• RIDING

Attributes: AGI (controlling animals), FIT (riding stunts), KNO (animal care)

Specializations: Specific Animal, Racing, Dressage

Possessed By: Equestrian Athletes, Ranchers

The Riding Skill measures the character's ability to control a riding animal (which have their own Riding modifiers, depending on their training — see section 6.2). It is used if any difficult type of maneuver is wanted from the mount. The Skill also includes a basic ability to care for the animal. Characters from fantasy background are assumed to be able to ride competently (modern and future characters use Pilot: Ground instead).

• SEDUCTION

Attributes: APP (first impression), INF (seduction), KNO (techniques)

Specializations: Specific Sex, Eye Contact, Specific Seduction Style

Possessed By: Con Artists, Fashion Models, Gigolos, Prostitutes

Seduction measures a character's ability to sway others by the judicious use of looks and sex-appeal. The Skill includes an understanding of what people find attractive and the ability to adapt to different preferences. It is possible to get any desired information from a seductee before any serious things occur, but beware: sometimes, the roles of the people involved are reversed, and the seducer may become the seductee.

• SLEIGHT-OF-HAND

Attributes: AGI (grabbing items), PER (spotting/evaluating moves)

Specializations: Pickpocket, "Magic" Tricks, Shoplifting

Possessed By: Petty Criminals, Stage Magicians, Spies

The Sleight-of-hand Skill is a measure of how good the character is at the subtle hand movements required by activities like pickpocketing or stage magic. Abilities such as palming and concealing small objects upon one's person are covered by this Skill.

• SMALL ARMS

Attributes: AGI (combat), KNO (maintenance), PER (sniping)

Specializations: Pistols, Rifles, SMGs

Possessed By: Soldiers, Police, Criminals, Hunters

The Small Arms Skill is a measure of the character's proficiency with man-portable firearms such as pistols, rifles, and submachine guns. The Skill includes basic knowledge of the maintenance procedures. This is another popular weapon-related Skill, and many small arms are available in most modern and future settings (though at various levels of legality).

• SOCIAL SCIENCES (SPECIFIC)

Attributes: CRE (applications), KNO (techniques), INF (dealing with people)

Specializations: Various Fields of Study

Possessed By: Professors, Students, Researchers

Social Sciences is a catch-all Skill that includes any of the "humanities" sciences dealing with people and societies: anthropology, history, law, linguistics, literature, sociology, political science, philosophy, or psychology (the latter being high-Level/Cpx in Social Sciences).

A specialization *must* be chosen before a character can go above Level or Complexity 3 in this Skill. If a character attempts to use his Skill in a field other than one with which he is familiar, a -2 penalty is imposed on the test.

• STEALTH

Attributes: AGI (move silently), CRE (hide), PER (spotting), KNO (evaluating moves)

Specializations: Urban, Indoors, Jungle, Woodlands, Nighttime, Desert, Winter

Possessed By: Thieves, Spies, Soldiers, Police, Commandos, Hunters, Snipers

The Stealth Skill is the ability to go undetected, be it by human observers or by electronic surveillance devices. It also represents a character's proficiency at using make-up, special clothing, and netting to conceal himself or other objects by matching the texture and color scheme of the surrounding terrain. The Skill allows the user to set ambushes or to dissimulate himself from his ennemies. He can also hide constructs, such as vehicles (Cpx 2), bunkers (Cpx 3) or even bases (Cpx 4), from visual detection: apply the MoS of the camouflage effort to the Threshold of any test to spot the concealed item or person.

• STREETWISE

Attributes: INF (interaction with people), PER (spotting opportunities), KNO (contacts)

Specializations: Gangs, Organized Crime, Homeless, Prostitutes, Getting Item (Specify)

Possessed By: Urban Residents, Gang Members, Criminals

Streetwise is a catch-all Skill for interacting with the "shadier" elements of society and includes basic knowledge of the underground of a city the character is familiar with. Obtaining illicit drugs, purchasing illegal firearms or just finding out what is going on through non-standard channels, are all activities which Streetwise encompasses.

• SURVIVAL (SPECIFIC)

Attributes: CRE (creating), PER (spotting), KNO (techniques)

Specializations: Jungle, Desert, Winter, Urban, Foraging, Shelter

Possessed By: Soldiers, Campers, Survivalists

The Survival Skill allows the character to survive in hostile environments, such as jungles or deserts. Survival includes hunting, foraging, and obtaining shelter and water (space survival, being very different, is covered in the Zero-G Skill). The number of environments known doubles at each Cpx (Cpx 1 is one, Cpx 2 is two, Cpx 3 is four, and so on). If a character attempts to use his Skill to survive in an unfamiliar terrain, a -2 penalty is imposed on the test.

• TEACHING

Attributes: CRE (teaching), KNO (techniques)

Specializations: Any other skill

Possessed By: Professors, Combat Instructors

Teaching is the Skill of transmitting knowledge and expertise to others in a clear and coherent fashion. It is a Skill which few Player Characters who are not from an instructional background possess, since most PCs spend their lives learning Skills necessary for their chosen profession and are generally ready to retire by the time they are interested in passing their knowledge along. See *Experience*, section 2.5, for advanced use of this Skill.

• TECHNICAL SCIENCES (SPECIFIC)

Attributes: CRE (applications), KNO (techniques)

Specializations: Various Fields of Study

Possessed By: Professors, Students, Researchers, Designers

Technical Sciences is a catch-all Skill that includes any of the sciences dealing with the technical abilities required to operate, repair, maintain and create any equipment of the specified type not covered elsewhere in the Skill descriptions. This includes computer (system use, maintenance, programming, system admin, neural nets), electronics (electronic devices, security systems, lasers) and mechanics (all mechanical and structural devices — automotive, industrial, locks, hydraulics).

A specialization *must* be chosen before a character can go above Level or Complexity 3 in this Skill. If a character attempts to use his Skill in a field other than one with which he is familiar, a -2 penalty is imposed on the test.

• TINKER

Attributes: CRE (creating), PER (spotting opportunities), KNO (techniques)

Specializations: Vehicles, Weapons, Appliances, Computers

Possessed By: Inventors, Technicians, Hobbyists

The Tinker Skill allows a character to build or modify machinery under time constraints (jury-rig a temporary repair), poor conditions (lack of proper tools) or to modify equipment in novel and desperate ways (install a car engine to power a boat). Items built or modified using this Skill, rather than the proper Technical Skill(s), will only last as long as needed, and then fall apart; if used by anyone else, they also fall apart. A new Tinker test against the creation Threshold must be made whenever the item is pushed or takes damage; if failed, the item suffers a malfunction that requires one full-round action to fix. If Fumbled, the item falls apart.

• THROWING

Attributes: AGI (striking targets), KNO (evaluating distances)

Specializations: Knives, Javelins, Balls, Grenades, Darts

Possessed By: Soldiers, Game Players, Athletes

The Throwing Skill is the ability to accurately throw an object at a target. It is the Skill used when throwing grenades and other offensive weapons. The sports and activities which use this Skill are too numerous and varied to mention.

• TRIVIA/LORE (SPECIFIC)

Attributes: varies, but usually KNO

Specializations: Specific sub-category of the Trivia/Lore category

Possessed By: Gamers, Fans, Socialites

The Trivia (Lore, for pre-modern settings) Skill covers the ability to recall knowledge on a very specific topic. A field of knowledge must be chosen: it can include such things as games, medieval history, cars, etc. A successful Skill test produces a bit of obscure yet useful information relevant to the situation at hand.

• VISUAL ART (SPECIFIC)

Attributes: CRE (creative process), KNO (techniques)

Specializations: improvised, medium

Possessed By: Sophisticates, Professionals, Youth

This is a catch-all Skill for visual art: the number of arts practiced doubles at each Cpx (Cpx 1 is one, Cpx 2 is two, Cpx 3 is four, and so on). Each art is a separate field under the same Skill (calligraphy, painting, drawing, sculpting, pottery, etc.). If a character attempts to use his Skill to do a performance in a related but unfamiliar field, a -2 penalty is imposed on the test.

The Treshold of Art tests is chosen by the player — this is the quality aimed for by the object or representation. A low Threshold indicates that the artist plans to do something correct, nothing more, while a high Treshold means the artist aims to create a masterpiece.

• ZERO-G

Attributes: FIT (moving about), KNO (evaluating moves, suit procedures)

Specializations: Rapid Movements, Delicate Movements, Melee, Ranged Combat

Possessed By: Anyone living in space

Zero-G reflects the ability of the character to move about and perform actions in weightless or micro-gravity (under 0.1 g) environments. The Skill includes basic knowledge of vacuum suit procedures; in an emergency, a person with this Skill can instruct another individual in the rudimentary use of the suit. It also includes space survival techniques, such as how to work an airlock, patch a hole or use an emergency evacuation pod.

For combat in weightless or micro-gravity (under 0.1 g) environments, the lowest Skill level of either Zero-G or the usual combat Skill (Hand-to-Hand, Melee, Throwing, Archery or Small Arms) is used. The changes in balance, momentum and a host of other details will turn a deadly warrior into a slowly drifting corpse without proper training.

• ACCELERATED HEALING

Thanks to some natural vigor, the character heals faster than other people. The normal healing rules are used (see section 3.5), but the character needs only three-quarters of the required time. Accelerated Healing has no downside.

• ACUTE SENSES (SPECIFIC)

Hearing: The character has excellent hearing and tends to notice faint or high-pitched sounds more readily than other people. He gets a +1 modifier for Notice checks based on hearing. The downside is that sudden loud noises (like a nearby explosion) can momentarily deafen a character.

Sight: The character has sharp eyes and tends to notice faraway or small items more readily than other people. He gets a +1 modifier for Notice checks based on vision. The downside is that sudden bright lights (stepping out of a dim area into sunlight) can momentarily blind a character.

Smell/Taste: The character has a sharp nose or palate and can readily identify odors and tastes. He gets a +1 modifier for Notice checks based on smell or taste.

• AMBIDEXTROUS

The character can use either hand for tasks requiring manual dexterity without the "Using Off Hand" penalty, though he may not attack twice per action. Ambidextrous has no downside.

• ANIMAL COMPANION

The character has a faithful pet, steed or companion. This animal is both well trained and emotionally bonded to the character, meaning it will stay by his side other than (perhaps) the occasional romp through the neighborhood. The downside of an Animal Companion is responsibility: pets must be fed, walked and housed. Cost depends on the animal's size (1 for a small pet like a ferret, 2 for a medium one like a dog, 4 for a large one like a gorilla) and intelligence (1 if untrainable, 2 if capable of obeying basic commands, 4 if trained and intelligent).

• ANIMAL KINSHIP

The character has a "touch'" with animals. Domesticated animals will respond well to training and instructions, granting the character a +1 to all Animal Handling or Riding Skill tests. Wild animals are less likely to attack the character and may respond to some basic commands once the character makes a basic connection with the beast (specific details are left to the Gamemaster).

• AUTHORITY

The character represents the authorities. He could be a policeman, a secret agent, a Military Police agent, etc. The effect of this Perk depends largely on the circumstances — policemen have no extra authority outside their jurisdiction. The potential downside of

Authority is responsability: the character will likely be subject to a code of conduct, have to report for duty or follow orders.

• COMMON SENSE

The character always considers the outcomes of his actions first. The Gamemaster gives the player a warning when the character is about to do something foolish, even if there is no indication of danger. The GM does not have to give any details. Common sense has no downside.

• CONNECTIONS

The character has one or more useful connections. These can be close allies who would be willing to help the character no matter what, or more casual acquaintances who are especially useful. This Perk does not cover casual, personal relationships (such as a lover, friends and neighbors) unless they are particularly useful or dedicated.

Allies are connections who are willing and able to help the character, even in dire circumstances, without asking for much in return (at least not immediately). Examples include a brother who is also a police sergeant.

Contacts are connections who will not necessarily go out of their way to help the character without promise of recompense. They generally provide useful information or equipment, but will not come to the rescue at their own risk. Typical contacts include a snitch, a smuggler or a forger.

The potential downside of Connections is reciprocity. Contacts will expect either to be paid in cash or by being owed favors. Allies are less demanding, but are likely to call for help when they need it. Turning down an allies call for help is a sure way to *lose* that ally.

• DOUBLE JOINTED

The character's entire body can contort and flex in seemingly impossible ways. The character can fit into spaces half the size of what regular people can, as well as being able to easily slip out of restraints unless special precautions are taken (+1 to escape tests).

• FAKE IDENTITY

The character has more than one identity. He has a complete, fully-detailed life on the side, with separate dwelling, job and identification papers. People attempting to track the cover identity back to the character will find it very difficult to do. The potential downside of Fake Identity is maintenance. The character needs to spend time and money keeping his alter ego current, doing such things as making bank transactions, subscribing to newspapers or even making appearances as that person.

• FAMOUS

The character is famous. He can be a well-known artist or a political figure. In certain situations, famous will work for the character — people will readily help him or provide access to restricted areas. Fame's potential downside is

lack of anonymity. The character may be recognized wherever he goes (Notice vs. 8 - cost of Perk), and may be watched by the press and other interested parties. This can make subtlety or stealth very difficult.

• FAVOR

Someone important or a powerful group owes the character one or more favors. This debt is real and known by both the character and the indebted party and is likely to be honored, all things being equal. The character may call in this debt when convenient, although story elements may limit his opportunity to do so. The downside of a Favor is resentment: if the character is not careful, the indebted party may feel he is being taken advantage of.

Financial Debts	Debts of Honor	Point Cost
20,000 credits	key favor	1
50,000 credits	multiple favors	2
75,000 credits	major boon	3
150,000 credits	multiple boons	4
500,000 credits	life boon	5

• IMMUNITY

The character is immune to one, and only one, specific drug, poison or disease that shows up in the setting. This Perk can be acquired: it is possible to build an immunity to toxins or diseases. Immunity only has a downside if it is a beneficial drug the character is immune to.

• INFLUENCE

The character is either a recognized authority or carries significant prestige in a certain social, geopolitical or professional sphere. Although this is not a guarantee that the character will get his way all the time, his opinion will be listened to (+1 to INF tests for each 2 points of Perk), and he can find others to support him if need be. Typical areas of influence include: a city, the military, big business, the media and a government. Influence's downside is notoriety: others in the same field may seek the character out or target him.

• INTUITION

The character gets uncanny hunches and bursts of inspiration, and the Gamemaster can allow the player to make CRE rolls whenever he thinks the character might get one, even if there are no obvious clues present. Fumbled CRE rolls for Intuition result in extremely poor guesses, and are Intuition's only downside.

• LIGHT SLEEPER

The character sleeps lightly and awakens at the slightest noise. He cannot be surprised when sleeping and always gets a normal defense roll. Light Sleeper has no downside, other than that it may be difficult to get a good night's sleep in a noisy environment.

• LONGEVITY

The character's lifespan is longer than that of a normal person's — past mid-life, he will always look and feel like someone half his age. Longevity's only downside is the envy of others and outliving friends and loved-ones.

• LUCKY

The character is exceptionally lucky. Once per session, the Player may elect to reroll a Fumble. Alternatively, he can choose to switch the modifier of a single die roll once per session, *after* the test has been made — for example, turning a -3 into a +3.

• MACHINE-TOUCH

The character is exceptionally good with machines and has an uncanny understanding of their workings. Any task to repair machinery and devices is considered to be Complexity 1, regardless of the device.

• PERFECT PITCH

The character always knows if something is in tune and gains a +1 bonus to any musical or sound-related task.

• PHOTOGRAPHIC MEMORY

The character has an excellent memory. Whenever a Knowledge roll is made to recall information previously seen, heard or read, the rating of the Perk is added to the dice roll. The downside is that traumatic events can also be recalled: a character with the Flashback Flaw will have a Threshold of 5 instead of 4.

• PROPERTY

The character owns a substantial and useful piece of property. This could include a one-of-a-kind weapon, a nightclub, a ship, or a mansion used as a headquarters. This Perk should only be used for key story props and settings — the owner of a lavish cruise boat should have this Perk, but an accountant with a condo and car does not need it. The downside of property is upkeep: ships, dwellings and clubs must be maintained and staffed, and items can be stolen or confiscated.

1 or 2 point objects are small items: a leading-edge high-powered computer for a hacker, or a tricked-out rifle for a hitman. Higher costs are for bigger items: 3 (small vehicle) to 6 (nightclub, etc.) to 9 (large estate).

• QUICK LEARNER

The character learns quite rapidly and can gain extra benefit from tutors who try and impart their knowledge upon them. Quick Learners subtract one from the number of months of tutelage required to learn a Skill from a tutor, although the minimum remains one week. Those teaching a Quick Learner also get a +1 bonus to their Teaching Skill test to reduce the XP cost of a Skill increase. Quick Learner has no downside.

• RADIATION RESISTANCE

The character is exceptionally resistant to radiation poisoning. When making Health tests for status, he gets a +1 modifier to his dice roll.

• RANK

The character is a recognized member of a powerful military, paramilitary or civilian organization. This station will give him authority in certain circles as well as access to resources, contacts and equipment.

Military Rank indicates membership in an organized military force with authority from a nation. **Paramilitary Rank** indicates membership in a force that wields armed might and is organized along military lines, but does not serve as the main defense force of a nation (such as police or militia). Para-military forces may or may not operate with government authority. **Civilian Rank** indicates membership in an organized and powerful non-military organization, such as a powerful zaibatsu, a government department or an organized crime family. Civilian Rank is categorized according to generic stations and should be purchased only if membership confers a real benefit. Note that military rank has a fixed cost, but civilian and paramilitary rank is provided with a cost range depending on the power and influence of the group.

The potential downside of Rank is responsibility. Members of the military or other powerful groups have to follow codes of conduct, abide by regulations and follow orders from superiors.

Rank	Military	PM/Civilian
Enlisted/Member	2	0-2
Junior Nco/Veteran Member	4	2-4
Senior Nco/Lieutenant	6	4-6
Junior Officer/Assistant-Director	8	6-8
Senior Officer/Director	10	8-10
General Officer/Senior Director	12	10-12

• SENSE OF DIRECTION

The character seems to have a compass in his head. He always knows where he is located and never seems to get lost. In space, characters with the 3D Sense of Direction can always figure their orientation in relation to a spacecraft, station or nearest celestial body. Sense of Direction has no downside.

• SENSE OF TIME

The character always knows what time it is and always know how much time has passed from any one event to another.

• STRONG IMMUNE SYSTEM

Characters with a Strong Immune System are especially resistant to diseases and the effects of drugs. These characters get a +1 to Health tests made against the contagion and virulence of diseases, as well as the Potency of a drug or toxin (see *Disease*, section 6.3). A Strong Immune System has no inherent downside other than the fact that the character will also resist beneficial drugs, such as analgesics.

• SUBORDINATES

The character has one or more faithful servants. These subordinates are professionally bound to serve the character in a well-defined way, but do so above and beyond the call of duty. The player and Gamemaster should develop the conditions of servitude as well as the identities of all subordinates; they need not be fully statted out, but core competences should be determined. Typical subordinates include: menservants, bodyguards, and executive assistants. The downside of Subordinates is responsibility: they must often be paid and they may legitimately ask for assistance from time to time.

• THICK-SKINNED

The character has a high pain Threshold, allowing him to resist injuries that would put lesser people out of commission. Thick-skinned characters add five points to their Stamina and recalculate their damage Thresholds accordingly. Thick-Skinned has no downside.

• WEALTHY

The character has money. Lots of it. Exactly how much depends on the characteristic's rating. The rating is multiplied by 10,000 to know how many credits the character can get within the hour, provided he is within communication range of a financial institution (any light speed delays, if proper for the campaign, are added to the hour). Each use of Wealth temporarily reduces the rating by one for a full week, and further uses will continue to reduce the rating and "reset the clock" for recuperating wealth.

For example, a character with level 3 Wealth draws 30,000 credits on Monday, so his Wealth is reduced to 2. The next Thursday he withdraws another 20,000 credits (his new maximum). This means his Wealth is considered 1 until the following Thursday, when it climbs to 2. It will return to level 3 the Thursday after that. Optionally, characters can have non-renewable Wealth that indicates a fixed amount of cash that isn't making money for itself. The Wealth reduction from spending in this case is permanent.

The potential downside of Wealth is responsibility. The wealthy must maintain their fortunes, taking at least some interest in their holdings. Tax audits and lawsuits may also be targeted at wealthy characters.

• ADDICTION

The character is psychologically or physically addicted to something. It might be drugs, it might be adrenaline, it might even be sex, but he needs regular doses of it. The character is considered either *dependent* or *addicted* to a drug. Characters "addicted" to an activity (sex, danger, etc.) are considered dependent on that activity, with a Dependence Rating of 5. For more details see *Addiction*, section 6.3. Note that a character can be both addicted and dependent on the same drug.

This Flaw also covers any kind of physical or mental deficiency (such as ulcers, heart condition, severe depression or paranoid schizophrenia) that must be controlled through regular use of medication. Failure to take regular doses can lead to symptoms similar (in terms of game modifiers) to an addict going through withdrawal. The player and Gamemaster can decide whether this version of the Flaw is permanent or if it can be cured.

• AGE

The character is either unusually young or old, which may impose limits on his freedom of movement and on how seriously others take his opinions. Young characters are considered to be teenagers (13-16 years for humans) or younger, and will have a great deal of trouble being taken seriously by adults, may have to attend school and may not be able to get into adult establishments like bars. Old characters are considered senior citizens (65+ for humans), may also have problems with respect and may have health problems. The potential upside of Age is attitudes: juvenile misbehavior may be forgiven, and older characters may benefit from some respect from the young.

Young characters may have a maximum BLD and KNO of 0 and may not have any Skills beyond Level or Cpx 3. Old characters may have a maximum AGI and FIT of 0.

• AMNESIAC

The character has no recollection of his life up to a few days or weeks ago. This Flaw should be severely monitored by the Gamemaster, because it can easily play havoc with a campaign. The potential upside of Amnesia is unknown allies or even Skills (which can be paid out of the XPs given for the session). Some friends from the character's past life may be willing to help them, although some enemies may well be close behind.

• ANIMAL ANTIPATHY

Something about the character is disturbing to animals, both domestic and wild. Domesticated animals are less likely to respond to commands or stay calm in his presence and he suffers a -1 penalty to Animal handling and Riding tests. Wild animals are more likely to attack the character and, even if they don't attack, will respond aggressively to his presence. Animal Antipathy has no upside; characters with this Flaw may have one Animal Companion (for some reason, the Antipathy does not work against that one particular animal).

• BAD LUCK

The character is constantly plagued by bad luck. Once per game, an opponent may reroll a Fumble. Alternatively, the Gamemaster can choose to switch the result of a die roll once — for example, turning a +3 into a -3. The Gamemaster, however, may not use this to hurt or kill the character outright, only to make his life miserable.

• BELIEFS

The character strongly believes something that is generally not accepted and can expose him to ridicule in the mainstream: the Earth is hollow and contain alien artifacts, there are ghost ships sailing in uncharted oceans, etc. This belief could even be dangerous, leading the character to take huge risks, such has heading out for a "hollow asteroid ship" with no supplies. The only upside is that the character may attract allies who share his convictions, although having delusional conspiracy theorists as allies is at best a mixed blessing.

• BLOODLUST

The character is either inherently mean and vicious or suffers from a lack of control due to desensitization or dehumanizing training. When in combat, he will attempt to kill his opponent by any means possible. He'll never accept surrender, nor will he surrender or retreat himself. When prisoners must be taken, they live only as long as they are useful. Characters suffering from Bloodlust who wish to overcome their deadly instincts must pass a WIL test against a Threshold of 5.

• CODE OF HONOR

The character lives by a code of honor. The player and Gamemaster should define this code in terms of how stringent it is and how seriously the character takes it. Note that "honor" can mean many things to many people, so it may take some time to decide exactly what this code entails. A Code of Honor's potential upside is respect: characters who behave in a consistently honorable manner — especially when it puts them at a disadvantage — may gain the trust and admiration of other honorable people.

• CRIMINAL BACKGROUND

At some point in his past, the character committed a criminal act. He may have done some prison time or gotten away free, but the incident continues to haunt him in some way. This could entail a criminal record making it hard to get a job or respect or "old friends" continuously appearing in awkward situations. Criminal Background's potential upside is contacts: at times these "old friends" can be somewhat useful.

• CURSE

The character is under a curse, whether real or imagined. Regardless, it should affect the character in tangible ways. This characteristic is more akin to a tragic destiny than to a supernatural "hex." The player should choose one particular aspect of the character's life (love life, job, friendships, finances, etc.) that continuously refuses to "work out." Curse cannot be tied to any Skill tests.

• DEBT

The character owes someone a substantial debt, which can include money but also debts of honor or patronage. The person to whom the character is indebted may be tolerant or demanding, but the debt is a recurrent drain on the character's time or resources. The potential upside of a debt is a contact: the person who the character owes may be able to be of some help occasionally, although it usually means ending up further in debt.

Financial Debts	Debts of Honor	Point Cost
20,000 credits	key favor	-1
50,000 credits	multiple favors	-2
75,000 credits	major boon	-3
150,000 credits	multiple boons	-4
500,000 credits	life boon	-5

• DEDICATED

The character is dedicated to a certain cause. He will follow its ideals whenever possible. The more extreme form of this characteristic is fanaticism. Dedication's potential upsides are contacts and respect. Others dedicated to the same cause (or who respect the cause) may be willing to help a truly dedicated character, although they may also expect such help themselves.

• DEPENDENT

The character must take care of someone: an adopted child, a relative, etc. This responsibility includes care, protection and friendship and should be quite demanding on the character's schedule. A Dependent's potential upside is aid: the other character may be helpful in certain situations.

CP/SP* total	Cost
20/30	-1
10/30	-2
10/20	-3
5/10	-4
*Character Points/Skill Points	

• **DESTITUTE:** The character doesn't have much money and has no secure source of income. Characters who obtain such a source during play will find forgotten debts catching up with them until they pay off this Flaw in XPs. Poor characters cannot afford anything except the basics without passing Streetwise tests or making arrangements through roleplaying.

• FLASHBACKS

The character has sudden flashbacks of his past, especially in stressful situations. The Player and Gamemaster should define just what these flashbacks are and what trauma they stem from. Specific triggers fro the flashbacks can also be chosen. Characters experiencing flashbacks must make a WIL or PSY test against a Threshold of 4 to act. Flashbacks have no upside.

• GOAL

The character has a powerful, all consuming goal to which he is dedicated to the point of obsession. The player and Gamemaster should define this goal, making sure that it is largely unattainable, giving the character a strong motivation. This is mostly a roleplaying Flaw, but Gamemasters may request WIL tests if a character wishes to do something that would hinder reaching the goal (such as letting a bad guy go free to help a friend).

• HEAVY SLEEPER

The character sleeps like a brick and is very hard to awaken, and has a tendancy to oversleep. Heavy Sleepers must make PER or Notice tests with a -3 penalty to see if they awake in a dangerous situation.

• INFAMOUS

The character has a bad reputation. It may or may not be deserved, but it sticks to the character like the proverbial bad penny. Infamous can denote unpleasant reputations (e.g. a notorious cheat) or something more terrifying (e.g. an underworld assassin). Infamy's potential upside is fear: those with terrible reputations may be intimidating.

• INSOMNIAC

The character cannot go to sleep or is plagued by constant nightmares. He is constantly tired (if using the Fatigue rules, add an additional -1 per missed night of sleep). Optionally, the Gamemaster may impose a -1 penalty for actions that require endurance and prolonged concentration.

• LAME

The character has a medical problem in one or both legs. This condition may be temporary, the result of an accident for example, or it may be permanent, if the character cannot have his legs fixed for any number of reasons. The character suffers a -1 modifier to movement-related Skill checks, and cannot perform activities that require jogging or faster movement.

• LIAR

The character generally does not tell the truth. Whenever he speaks, he will lie if it is practical or gets him off the hook. A more serious version of this is the full-blown mythomaniac, who cannot tell the truth and keeps inventing stories about himself and the people around him.

• MECHANICAL INEPTITUDE

The character is "all thumbs" when it comes to mechanical or electronic devices. Any task to use or repair machinery and devices is considered to be Complexity 3, regardless of the device.

• MOTION SICKNESS

The character gets sick and nauseous when exposed to feelings of movement, such as when riding in a car or floating in free fall. Whenever the character finds himself in such an environment, he gets a penalty equal to the rating of this Flaw to all tests.

• NEMESIS

The character has a long-time enemy or rival. Whenever they meet, they engage in contest of wit or plain combat. If the character gets rid of his Nemesis, another one will pop up to replace him until the point cost is paid back (a vengeful lover? younger sibling?). The player and Gamemaster should cooperate to create the Nemesis and determine how the rivalry began. Nemesis' potential upside is allies: then enemy of your enemy may be your friend.

• OBLIGATION

The character is under some kind of obligation. He may have a steady job and be required to show up on schedule, or he can have to obey certain persons. The Player and the Gamemaster should cooperate to define the scope of the obligations and the reasons why the character is under orders. Note that characters who have the Authority or Rank Perks cannot purchase Obligation tied to the same employment that confers these benefits — the obligations are just part of the territory. They can, however, have other Obligations. Obligations have a potential upside in contacts: superiors and fellow employees can occasionally be of help.

• ONE-ARMED

The character is missing an arm. This condition may be temporary, the result of an accident for example, or it may be permanent, if the character cannot have it replaced for any number of reasons. The character suffers a -1 modifier to any manipulation-related Skill checks, and cannot perform activities that require both hands.

• PARANOID

The character believes that some people are in league to cause him harm. Anything bad that comes to him is automatically the result of this conspiracy. Anyone refusing to believe in said conspiracy is automatically part of it and probably out to get the character — or so he thinks.

• PHOBIA

The character has an unreasonable fear of something. It might be a certain item, a situation, a color, or an animal. *Mild Phobias* mean that the character suffers a -1 action penalty when in the presence of the object of his phobia,

due to nervousness and distraction. *Severe Phobias* mean that the character must pass a WIL test against a Threshold of 4 to function at all in the presence of the object; even then, he suffers a -1 action penalty. Gamemasters can adjust the cost of the Perk to -1/-3 for uncommon objects of Phobia (water in a desert-based campaign, for example).

• POOR SENSES (SPECIFIC)

Hearing: The character has especially poor hearing (although he is not deaf). He has trouble distinguishing sounds that are faint or muffled. The character suffers a -1 penalty to all Notice tests related to hearing.

Sight: The character has especially poor eyesight (although he is not blind). He has trouble noticing details until they are literally right in front of him. The character suffers a -1 penalty to all Notice tests related to vision.

Sense of Smell/Taste: The character has trouble noticing odors or tastes unless they are very strong. The character suffers a -1 penalty to all Notice tests related to smell or taste. This has no upside, though the character can eat really bad food.

Blind/Deaf: It is possible the character cannot hear or see at all. This condition may be temporary, the result of an accident for example, or it may be permanent, if the character cannot have his eyes or ears replaced for any number of reasons. The character suffers a -2 modifier to his general Notice checks, and cannot perform activities that require hearing (if Deaf) or sight (if Blind).

• QUIRK

A quirk is a small personality Flaw or habit that poses only minor limitations on actions. Quirks are intended as roleplaying aids to reward players for giving their characters some life. This should not be abused, however, so players receive extra Skill Points only for their first two Quirks. Common Quirks are listed below, but Gamemasters and players should feel free to add others as long as they are not severely limiting. Note that Quirks can include good habits (such as always giving to charity or taking in strangers) as long as they are mildly inconvenient for the character. At the Gamemaster's discretion, characters who wish to suppress their Quirk temporarily (e.g. cowards who must run into danger) must pass a WIL test against a Threshold of 5.

Common Quirks include: afraid of heights, can't swim, cowardice, cruelty, curiosity, gluttony, greed, intolerance, lacking a sense of humor, laziness, miserly compulsion, overconfidence, pacifism, pride, selfishness, squeamishness, stubbornness, vengeance fixations, and miscellaneous good or bad habits.

• RADIATION VULNERABILITY

The character is exceptionally vulnerable to radiation poisoning. When making Health checks for status, he gets a -1 modifier to his dice roll.

• SECRET

The character has a dark secret in his past. The Player and Gamemaster should decide on the nature of the secret, but there should always be a good reason why this element must be kept hidden. It could be a criminal past (Criminal Background represents a *known* criminal past), a past indiscretion, a current illicit affair, or any number of other damaging information. If the secret is revealed and the player does not pay the XP to remove it, then another level to the secret, or a different secret altogether must be chosen.

• SICKLY

The character has a serious ailment that impairs him in some way. The player and Gamemaster should define the illness and its symptoms. An important (if medically inaccurate) distinction is between degenerative and chronic diseases. Degenerative diseases (such as cancer) will only get worse if untreated, while chronic disease are stable but debilitating.

• SLOW HEALING

The character heals more slowly than other people. The normal healing rules are used (see section 3.5.6), but the character needs 50% more time to heal.

• SLOW LEARNER

The character has a hard time learning in a structured or academic environment. He still benefits from teachers, but less than most. A Slow Learner must add one to the number of months required to learn a Skill with a tutor (the time can still be reduced to one week by skilled teachers, however). Those teaching Slow Learners also suffer a -1 penalty to their Teaching Skill test to reduce XP cost.

• SOCIAL STIGMA

The character is part of a social group that has a bad reputation. People will shun him and, in the more extreme case, try to harm him. The Gamemaster and player should cooperate to define the stigmatized group and the nature of the stigma.

To eliminate this Flaw, the character must spent appropriate XPs, but also either prove he is no longer a part of the group or somehow end the stigma toward the group. Stigma's potential upside is contacts: other members of the stigmatized group may be willing to cooperate for mutual benefit.

• SPLIT PERSONALITY

The character has two or more personalities. They are usually different aspects of the same person, though only one is in control at any time. What triggers the switch from one personality to the other is highly variable and depends on the individual. In general, stress is the most common trigger, but the sudden appearance of a person, object or situation can also serve as a trigger.

Each personality has its own set of mental Attributes (CRE, INF, KNO, WIL, PSY) and its own Perks and Flaws. Ideally, all personalities should have the same point cost, but the Gamemaster may diverge from this in specific cases (if needed for plot purposes, for example). Player and Gamemaster should cooperate to create all the identities.

• THIN-SKINNED

The character has a low pain threshold, putting him out of commission on even the lightest injuries. Thin-skinned characters subtract five points from their Stamina and recalculate their Damage Thresholds accordingly.

• WANTED

Somebody is currently chasing the character. Whether or not this is justified, the character will have to face relentless, often heavily armed pursuers that appear at the worst time (Gamemaster's choice). The player and the Gamemaster should cooperate to define the hunters and the reason for the hunt.

Wanted usually indicates a group hunting the character or an individual doing so for professional reasons — a personal enemy is covered by the Nemesis Flaw. Especially masochistic players can combine Wanted and Nemesis (the latter usually, but not always, being the leader of the hunter group). Wanted's potential upside is allies: others hunted by the same group may be helpful while on the run.

• WEAK IMMUNE SYSTEM

Characters with a Weak Immune System are especially vulnerable to diseases and the effects of drugs. These characters get a -1 penalty to Health tests made against the contagion and virulence of diseases, as well as the Potency of a drug or toxin (see *Disease*, section 6.3). A Weak Immune System has no inherent upside other than the fact that the character will also be less resistant to beneficial drugs such as analgesics.

Perks whose name is followed by R have a Rating, which is noted on the record sheet as an exponent-like number placed right besides the name of the Perk. Some Perks have numerous options available: list all selected options in parenthesis after the Perk's name.

• ACCESSORIES

These are systems that provide specialized bonus or abilities to the vehicle. They are affected by Auxiliary Systems damage results; if their action penalty drops to -5 or lower, the system is wrecked and cannot be repaired.

Acceleration Protection: The vehicle has been modified to reduce the strain of acceleration on its crew, either through acceleration compensators, special cockpits, or advanced flight suits. Crew have a +1 bonus whenever they have to make a FIT roll due to sharp turns or other effects of acceleration, such as rams.

Airlift Winch: The vehicle is equipped with a rugged system which enables it to airlift troops and/or cargo without having to land. The Perk's rating gives the maximum number of characters that can be airlifted per minute, or the maximum Size of any airlifted cargo. The Perk rating cannot be higher than half the Size of the vehicle. This Perk is only useful to VTOLs, since the vehicle has to be airborne, stationary and at altitude level 0.

Autopilot: These are simple devices that can keep a vehicle going in a straight line, avoid large obstacles, and steer towards a specified location. In game terms, it can be used to keep a vehicle moving in a straight line or perform 60 degrees turns. Autopilots are not affected by Crew hits, cannot fire any weapons and dodge attacks as a Skill level 1 pilot.

Catapult: A catapult is a powerful system designed to give a high initial velocity to an object leaving the vehicle, most often a carried aircraft. The catapult gives an initial acceleration equal to (Rating x 150)/mass in tons of the catapulted object, in meters/second. This applies directly for spacecraft; for aircraft and other vehicles, divide the result by ten (rounded up) and add to available MPs for the launch round (the vehicle can start at Top Speed).

Emergency Medical: This includes features like instant casts for broken limbs and stimulant/pain-killer injections to prevent loss of consciousness. In game terms, this Perk cancels one "Crew Stunned" result on the Systems Damage table. The vehicle will prevent the character from losing consciousness due to his injuries. In addition, the emergency medical features will prevent wound degeneration for up to one full day. Not everyone needs to be covered.

Escape System: An escape system gives the crew a chance to survive if the vehicle suffers an Overkill damage result (see *Ejection and Escape*, section 5.5, for more details). An ejection seat is designed to get a crewmember away from the craft to avoid being caught in any explosion which might result. A parachute (in atmospheric operations) or a rescue beacon (in space) allow for a safe rescue, although with little control over which hands the person falls into. An ejection pod is a self-contained life boat for air and space vehicles which allows for a limited amount of maneuvering and for re-entry to a planet's atmosphere. Its naval equivalent is the life raft.

Life Support: This provides the crew with a sealed and self-supporting milieu. If this system is destroyed while in a hostile environment, the entire crew become casualties (they are not necessarily all dead, just too busy surviving and plugging leaks to fight).

The limited form of life support includes contingencies for breathing and limited nutritional and excretory needs, and provides support for each crewman only up to the deployment range. The full version of life support includes complete air recycling, proper waste disposal, hygienic and nutritional facilities; it lasts indefinitely for game purposes.

Mining Equipment: Mining equipment must be specified as either light or heavy duty. Light equipment consists of one or two sampler arms, a small earth-moving blade (or bulldozer blade) and a simple winch with a cable strong enough to move the vehicle. Heavy equipment is intended for commercial mining operations: in addition to the above, it includes a large rock grinder, a shovel arm, one or two trenchers and a drill. Ore conveyors are also a fairly common addition.

If used to attack in melee combat, Light duty equipment has (Acc -2, DM x 5), and heavy duty equipment has (Acc -3, DM x 20). Items thrown in count Accuracy as +0.

Power Booster: This system can, for a short time, boost the vehicle's statistics by unleashing emergency capacitors, nitro injections, etc. In game terms, the system "spends" its rating points to gain a set of benefits. Their use must be declared during the declaration phase and does not require an action.

This allows the vehicle to increase *one* of the following Attributes by *one point* for a single combat round per rating point spent: Maneuver, Top speed MP, number of actions, Damage Multiplier or Base Range. A vehicle could spend all of its rating points in one round for one glorious burst of power, or it could conserve the points for emergencies.

It is also possible to "overburn" the system, doubling the effects but damaging the vehicle. If this option is used, each EPS point counts as two, but the system affected gets a -1 afterward. If actions drop below zero, the vehicle must "buy" back the penalty before applying the action. For example, a one-man vehicle at -2 actions would have to take extra actions (and associated penalties) to act.

Power Boosters burn themselves out during use. Therefore, they do not regenerate their rating and usually require complete vehicle overhauls.

Refueling Equipment: This Perk allows a vehicle to be refueled on the move. The refueling boom consists of enough equipment to refuel one vehicle at a time. The fuel is usually carried within a cargo bay, but the refueler can use its own Deployment Range or Reaction Mass instead. Both pilots must test their Piloting Skills vs. 4; if either fails, the refueled vehicle takes on only 1d6 x 10% of the intended load. A Fumble means a collision occurred, and the refueling equipment on both vehicles is out of service. A refueling attempt may be made every three minutes. Time for total refueling is one round per point of Size of the target (plus the three minutes for hook-up).

Gun Ports: The vehicle is equipped with gun ports from which the crew and passengers can fire while retaining the protection of the vehicle's armor. Only small arms may be fired from gun ports, not heavy weapons. Because of the design of the gun ports, the weapon is restricted to a "Fixed" firing arc and has a -1 modifier to hit in addition to the vehicular movement modifiers.

Large Doors: The vehicle's crew and passenger compartments are equipped with oversized doors that allow rapid egress and ingress. For each action spent, two crewmembers can exit the vehicle. A number of passengers equal to twice the Size of the vehicle may enter or exit each turn at no action cost.

Loudspeakers: These are powerful external loudspeakers. These can be used with sirens, audio systems, communication gear, or any other audio equipment.

Pintle Mount: An infantry weapon installed on a swivel mount just outside a hatch is said to be pintle-mounted and must be operated by one of the vehicle's crewmen. That crewman can do nothing else and is exposed to enemy fire (count as Exposed Crew, unless the vehicle is already open-topped). Pintle Mounts have a 180 degrees arc of fire chosen at the time of design.

The weapon is not protected by the vehicle's armor and counts as an Auxiliary System. Fire Control hits do not affect pintle mounted weapons. Firing penalties are equal to -1 for more than half and up to Combat speed, and -2 for Top speed, in addition to any other modifiers.

Pintle mounts are quite simple and add little to the cost of the vehicle. Any infantry weapon can be mounted on them: the cost is equal to its DM plus its Base Range plus its ROF in vehicle scale, and is added directly to the vehicle's final Offensive Threat Value.

Ram Plate: Part of the chassis has been specially reinforced to withstand impact. Each ram plate must be assigned to a ramming arc (see Section 5.4). The vehicle takes only half the normal damage in a collision in the same arc as the Ram Plate.

Searchlight: The vehicle has a powerful front-mounted lighting system. At night, treat the vehicle's Fixed Forward firing arc as if it were in daylight. Some searchlights are mounted on a swivel plate: at night, the vehicle's Front (or Right, Left, or Rear, as selected) firing arc is treated as if it were in daylight.

Any fire directed at the vehicle is also treated as if the vehicle were in daylight, regardless of the arc.

• ARMS

Arms are flexible structures that can be used to hold, grab or punch. They can lift an object whose Size is equal to or lower than their rating, though a vehicle cannot lift an item whose Size is greater than twice its own unless braced. Half the capacity of all weaker arms are added to the full capacity of the strongest arm to determine the lifting strength of multiple arms.

Arms can be reinforced to punch at no cost, Perk-wise. This attack type has a Damage Multiplier equal to the rating of the arm, and modifies the Offensive Threat Value of the vehicle (see *Offensive Threat Value*).

Battle Arm: The vehicle has a rudimentary arm, without manipulator. Battle arms can lift objects, provided these have been attached to it beforehand. They can be designed to punch opponents, ending in a reinforced battering ram or brawling weapon.

Manipulator Arm: The vehicle has an arm-like structure that can pick up and manipulate objects. Manipulator Arms can be used for fine manipulations and tasks which require dexterity. A Piloting test is required, the Threshold varying according to the task; a negative modifier equal to the difference between the object's Size (see the Size to Mass table) and the hand's rating is applied.

For roleplaying purposes, manipulators can apply pressure equal to half their Size rating, rounded up. The highest weight value for that result on the Size to Mass chart is the pressure applied in tons per square meter. Manipulator Arms can be reinforced to punch or crush opponents.

Tool Arm: The vehicle has an arm-like structure with a specialized tool attachment, such as an earthmoving scoop or a cargo handling claw. They can lift objects provided they have been attached to or are contained by the tool. Tool Arms can be reinforced to punch or crush opponents.

Tool arms are very diverse: forklift-like cargo loaders, a tow truck's winch arm, a crane's boom, an extendible blowtorch, a sensor boom or any other useful tool that can be imagined. The only restrictions are that the arm cannot handle objects with the finesse of a manipulator, and its function must be clearly defined.

• ARMOR QUALITIES

The Armor rating is an average representation of a vehicle's sturdiness. The followings are various qualities that can be attached to the armor and structure of the vehicle, to further customize them.

Ablative: one (or more) facing of the vehicle is covered with a special armor plating which shatters under kinetic stress or vaporizes when hit. This absorbs incoming damage, but the ablative armor must invariably be replaced after each battle. The maximum amount of

ablative armor that may be carried is equal to half the Armor rating of the vehicle, rounded down. Each defensive arc (Front, Sides and Rear) must be protected separately.

When the vehicle is hit, the current Perk rating is added to the Armor rating of the vehicle. Ablative Armor automatically loses 1 point from its rating per ten points of damage every time it's hit (this in addition to the normal Armor damage, if applicable). The Ablative Armor looses points on every hit of 10+ points of damage, whether the attack inflicts a system damage result or not.

All-Around: Most vehicles have thick front plates and weaker rear ones. This option spreads the protection all around, either through armor design or "watch your back" sensor systems. In game terms, the Rear Flank defense penalty is 0 and the Rear defense penalty is -1.

HEAT Resistant: The vehicle's armor is designed to deflect and dissipate the intense energy delivered by weapons like shaped-charge warheads, particle beams and lasers. The maximum rating is equal to half of the vehicle's base Armor rating (rounded down); it is added to the base Armor when attacked by HEAT-based weapons.

Location: One of the vehicle's locations has better armor than the rest of the vehicle. When the vehicle is hit in a reinforced location, the rating of this Perk is added to the base Armor rating of the vehicle before determining damage. This Perk cannot be taken more than twice.

Reinforced: The vehicle has one or more facings (arcs of defense) with better or thicker armor than the rest of the vehicle. When the vehicle is hit in an arc that is reinforced, the rating of this Perk is added to the base Armor rating of the vehicle. Four possible arcs can be reinforced: Front, Rear, Right Rear Flank and Left Rear Flank. Up to three of these arcs can be reinforced on a single vehicle.

Brittle: The vehicle's armor and superstructure are either of poor quality of just badly fitted. The vehicle looses twice the usual Armor points from damage: two points at Light Damage and four at Heavy.

• COMMUNICATIONS

If a communication system is available, chose the quality and basic range (in kilometers). A generic military system has a score of 0; poor (civilian) systems are rated with negative values (minimum is -5), while high quality systems (frequency-hopping, encryption) have positive ratings (max. +5). Keep in mind that range can be extended by supplying more power to the system, but makes the emitter more visible on sensors (see section 5.3).

A Communications system allows the vehicle to receive coordinates for indirect fire, transmits a correct IFF signal to friendly minefields and automated systems, and can be used to control remote drones. If not equipped with a comms system, a vehicle cannot stay in contact with teammates and cannot act as spotter for indirect fire. It may not benefit from Command Points.

Airborne Comm: Line of sight is usually easier to obtain in the air. When in the air, the comm range is multiplied by ten (e.g., a plane with Comms of 2 km range on the ground, has a range of 20 kilometers away in the air). This is free.

Spaceborne Comm: there is little to block communications in space. When in space, the comm range is multiplied by one hundred (e.g., a spaceship with Comms of 2 km range on the ground, has a range of 200 kilometers). This is free.

Satellite Uplink: this is a specialized add-on that boosts range and can patch into man-made satellites, or transmit messages over great distances in space. The Communication range of a vehicle equipped with a Satellite Uplink is multiplied by one thousand (flight or space range multipliers, above, still apply on top).

One Way: The system can either receive or emit, but not both. Only receiving Communication systems allow the unit to use Command Points, and only emitting systems allow forward observing.

• FEATURES

These are surface features or large pieces of built-in equipment that provide a specialized benefit to the vehicle. They do *not* count as Auxiliary Systems for damage purposes.

Accomodations: Proper living and sleeping quarters are a necessity for long range vehicles. There are two levels of accommodations available. *Military* accommodations are spartan in design and provide little privacy or comfort. *Luxury* accommodations include private sleeping quarters, a small private lounge, and personal hygienic facilities.

Accommodations can serve as makeshift cargo bays if the furniture is removed (one minute per cubic meter of space). Civilian vehicles can have military-grade accomodations to cut costs (like the sleeping cab on many long-haul trucks).

Airdroppable: The vehicle is equipped with a parachute or an equivalent device that allows it to be dropped from high altitude onto a battlefield. The suspension and drive train have been specifically designed to absorb the shock of landing without suffering damage. See *Airdropping*, section 5.6.

Airlift Ready: The vehicle is equipped with quick-connect hardpoints and is reinforced in a manner that makes it easy to airlift by VTOLs. An airlift-ready vehicle can be prepared for take-off in half the time normally required to do so. See *Airlifting*, section 5.6.

Bio-energy Powerplant: A campaign may use machines that feature an energy converter that uses the crew's own psychic or life energy for power. When this option is chosen, Movement Speeds and Deployment Range count as zero for Threat Value calculations. Instead, the maximum speed in MP (adjusted for air and space) is equal to twice the pilot's WIL scores (the weak-minded fool who tries to steal the prototype will find that it just doesn't seem to work for him for some reason).

A bonus equal to the absolute value of the PSY Attribute is added to the WIL before multiplying (hence, a -3 PSY would count as a +3). The Deployment Range of such a craft is equal to the Stamina of the pilot times ten. The rating of the Perk is added to the Willpower of the pilot for speed calculation purposes.

Cargo Bay: This is a large hollow place to put miscellaneous material. It's only the actual space dedicated inside the hull of the vehicle, not an increase in the power of the engine: the cargo's weight counts as "towed" material for game purposes.

Cargo bays are rated in terms of their volume in cubic meters. The intended type of content of each cargo bay must be specified: solid, liquid or gaseous (although specialized cargo bays often cost more to design and build, their inherent lack of flexibility cancels this — thus no extra points are charged for them).

Cargo bays have a minimum dimension of one meter, square or cubic. Vehicles and items are assumed to occupy a volume roughly equal to (Size/2) x (Size/2) x (Size/2). This is doubled to include some servicing and access space around it, or multiplied by ten to get full maintenance and service capacity (including gantry, ample spare part stocks and fuel).

Cargo bays are enclosed within the vehicle; open-topped decks are also possible, but material carried in such a bay is counted as a separate target for damage location purposes (randomize hits with 1d6: 1-4 vehicle, 5-6 cargo).

Diving Wings: Fixed wing aircraft with this Perk have their wings in a distinctive shape which enhances its ability to pull out of a dive. Any such plane gives a +1 bonus on Piloting tests for pulling out of Dives, Stalls or uncontrolled falls. Only Flying vehicles can take this Perk.

Easy to Modify: One (or more) of the vehicle's subassemblies is designed in such a manner as to be easy to repair or replace. A +2 bonus is added to all Skill tests to modify and repair this particular subassembly. The subassemblies that can be covered by this Perk are: Movement, Structure, Crew stations, Fire Control and Auxiliary Systems.

Fire Resistant: The hull is made of fire-resistant materials and provides adequate heat protection for the crew. In game terms, the Intensity of any incendiary attack against the vehicle is halved (round down) before damage is determined.

Fuel Efficient: The engine and systems are extremely efficient. As long as the vehicle remains at Combat Speed, each point of Deployment Range provides more kilometers of distance. One and a half, twice and three times the range are possible multipliers.

Glider: The vehicle possesses the abilities of a thermal glider and only lose one Altitude Level or MP of speed when gliding. In addition, the pilot can ride hot air currents to actually gain altitude levels, by making a Piloting test

versus 5; each point of Margin of Success allows the craft to gain one Altitude Level, without losing speed. This Perk can only be taken by Flying vehicles.

Haywire Resistant: The vehicle is specially designed to shrug off massive electrical charges through isolated circuitry and grounded structure. This Perk allows the vehicle to reduce the effects of weapons with the "Haywire" effect. On a Light Damage result, the second damage roll is ignored. On Heavy Damage results, the second damage roll is treated as a Light Damage roll.

High Towing Capacity: The vehicle is equipped with a high torque, heavy duty powerplant and transmission. Its towing capacity is doubled or tripled. If the vehicle has the "Walker" movement type, this yields higher damage from kicks and stomps — add +1 to the kicking Damage Multiplier for double towing capacity, and +2 for triple towing capacity.

Laboratory: Some vehicles are equipped with "laboratories" to help the crew in specialized tasks. Each laboratory is dedicated towards one particular Skill or Specialization, with the exception of direct combat Skills (including all Piloting and all Gunnery). They can be used to represent specialized rooms such as tactical command centers (Leadership), galleys (Craft: Cooking) or even theaters (Performance Arts: Theatrics).

Laboratories are rated upon their quality (minimum of +0); this is added as a modifier to any test performed using the laboratory, and eliminates any penalty caused to missing tools and proper equipment.

Lighter-Than-Air: The vehicle uses lighter-than-air gases to stay aloft. Such craft doesn't fall when their movement systems are disabled, though their horizontal movement will be determined by wind alone. Lighter-than-air craft can gain or lose one level of altitude per round without using MPs.

Light damage to Structure will cause a one-level altitude loss per round, without the possibility to gain them back. Heavy Structural damage will cause a two-level loss per round. The envelope can be designed to be self-sealing; airships with this option will suffer the loss of altitude only once instead of every round.

A lighter-than-air craft occupies three to five times as much physical space as its Size would indicate. Craft with this Perk are considered VTOL.

Low Profile: The vehicle has a very low profile which make it easier to hide and conceal — for obvious reasons, bipedal mecha generally cannot be designed this way. The vehicle gets +1 to Concealment while in cover (terrains with an Obscurement value of 2 or more).

Nap-Of-Earth Flyer: The NOE flight system gives a -2 modifier to any roll on the Aircraft Control Loss Table (see Section 5.2) if the aircraft is at altitude level zero.

No Fuel Required: The vehicle's main powerplant does not require regular fill-ups with fuel or reaction mass. It draws its energy from the environment around it (a solar-powered or sail vehicle, for example). The vehicle still has to undergo basic maintenance from time to time, though. This is what the Deployment Range rating represents in this case.

Solar sail and magsail vehicles use this system. The sail itself is so thin (or insubstantial, in the case of the magsail) that it causes no damage to anything that comes into contact with it. Solar sails are damaged as normal during collisions. Sails damaged by any means will reduce the vehicle's thrust by 0.01 MP for each ten points of damage suffered. If the thrust falls under half its original value, the sail collapses and is unusable. For game purposes, solar and magsails have a diameter equal to half the Size of the vehicle (round up), in kilometers.

Off-Road Ability: The vehicle can handle rugged terrain even better than military ground vehicles. In game terms, the vehicle pays one less MP for any terrain type that requires more than one MP. For instance, a Ground vehicle with Improved Off-Road Ability would pay 3 MP instead of 4 MP when crossing Swamp, but would still pay 1 MP per Clear or Sand. The Perk must be bought separately for each movement type.

Reentry Systems: The vehicle has been specially reinforced to withstand the high temperature and stress of atmospheric reentry. Every five turns, the pilot must make a Piloting test against a Threshold of 2 to keep the craft correctly oriented or suffer one Fire attack as per normal reentry rules (see Section 5.2). Modifiers due to damage apply in full.

Sick Bay: Some large vehicles have an infirmary or sick bay. These facilities have no direct value in combat, but are considered to be constant medical aid for healing purposes in roleplaying sessions. Sick bays are rated by their maximum number of patients.

Stratospheric Flight: This allows climbing past the habitual flight ceiling of 12 km, going into the stratosphere up to an altitude of 50 km. Actually moving into orbit requires the Space movement type and sufficient reaction mass, however. Vehicles in the stratosphere double their Flight MP because of the rarefied atmosphere. Only Flying vehicles can take this Perk.

• HOSTILE ENVIRONMENT PROTECTION

The vehicle is designed for prolonged exposure to one or more hostile environmental conditions. The protection includes any accessories directly associated with the environment (for example, airlocks and sealed hull for a vacuum-proof vehicle, though life support needs to be bought separately). The following options are available.

Desert: The vehicle can withstand extended exposure to desert conditions without needing special maintenance to avoid sand build-up. This Perk includes air filters, modified heat exchangers, and cloth coverings on delicate mechanisms.

Extreme Heat: The vehicle is designed to withstand exposure to scorching temperatures, often well into the hundreds of degrees Celsius, without taking severe damage. If combined with the Fire Resistance Perk, the vehicle is effectively immune to incendiary attack.

Extreme Cold: The vehicle is designed to endure freezing cold temperatures, such as those found in Earth's arctic and Antarctic regions, without freezing up or otherwise breaking down. Heaters, special lubricants and other modifications are part of this Perk.

Pressure: The vehicle is designed to endure the pressures of locations like underwater, up to a depth equal to (Armor x 5) meters. Vehicles capable of Submarine movement automatically possess this Perk at no cost.

High Pressure: The vehicle is designed to endure the great pressures of locations like ocean depths and the upper layers of gas giants, up to a depth equal to (Armor x 25) meters.

Extreme Pressure: The vehicle is designed to endure the most extreme pressures, such as those found on ocean floors or within the atmosphere of gas giants; up to a depth equal to (Armor x 250) meters.

High Gravity: The vehicle is designed to withstand very high gravity environments (3+ g) for extended periods. This does not, however, guarantee that the crew can do the same.

Vacuum: The vehicle is designed to withstand a total lack of pressure. This Perk doesn't, however, grant the ability to perform atmospheric re-entry.

Radiation: The vehicle is designed to withstand high radiation levels and protect its sensitive systems (especially the crew). The rad protection level, in rads/hour, is equal to ten to the power of the rating (e.g., a rating 3 system would give 10^3 rads/hour of protection).

All: The vehicle can go over land, in space, underwater, etc. It possesses all the above abilities at no additional point cost, except Radiation and High/Extreme Pressure protections (which must be bought separately).

• INFORMATION WARFARE DEVICES

Decoy System: This projects phantom images of the vehicle or another object by using inflatable decoys, holography or electronic signal imaging technologies. In game terms, the Decoy system can create as many false images as its rating. The attacker must make a Notice Skill test against the rating with a modifier of -3 in order to hit the correct target. Both Sensor and active ECCM system add their rating to this roll.

Visual decoys only affect visual detection and are automatically identified as decoys by Active Sensor rolls. It is also possible to create false sensor targets with no visual images — these are automatically identified as phantom echoes once in visual range, but have their rating boosted by the rating of active friendly ECM.

More advanced decoys can imitate both the visual aspects and the sensor signature of the vehicle they emulate. Guided, Smart and Sensor-homing weapons are just as likely to go for a sensor decoy, though they won't be fooled by a visual one.

Electronic Counter Measures: Also known as ECM, these devices are used to jam sensors and communication systems, and are especially useful to prevent forward observing and drone operations. Rules for using ECM systems can be found in section 5.3.4.

Electronic Counter Counter Measures: Also known as ECCM, these devices are used to block jamming systems or punch through their effects. Rules for using ECCM systems can be found in section 5.3.4.

Holofield: The holofield allows a vehicle to blend in to its surroundings by using both limited scope holography and photoskin technology; it is the visual equivalent of the Stealth Perk. In game terms, the holofield adds its rating to the vehicle's Concealment. It only affects visual detection and does not affect Active Sensor tests.

Stealth: These are features that make a vehicle difficult to detect with sensors: heat baffles, radar-absorbing skin, silent systems, etc. In game terms, Stealth adds its rating to the vehicle's Concealment value when opponents use Sensors to detect it (see Section 5.3). Stealth systems have no effect upon visual detection.

• REINFORCED SYSTEMS

Part of the vehicle has been designed to absorb considerable punishment, either through additional armor, rugged mechanisms or numerous backup devices. All can be used once (unless purchased multiple times) and are then crossed out when hit. The Perk's effect can be restored by normal repair.

Ammo/Fuel: The ammunition and fuel bays are equipped with armor or blast-control panels. They completely absorbs the first hit when an "Ammo/Fuel Hit" result is obtained on the Fire Control Damage Table — there is no further effect beyond the lost Armor points. Divide remaining Deployment Range and ammunition in half.

Backups: Extra systems and automatic rerouting absorb the first hit on communications, sensors, or any information warfare Perk.

Chassis: The frame of the vehicle is designed to absorb considerable punishment. The vehicle may ignore the first Structure hit on the Systems Damage Table.

Crew: The crew compartment is layered with additional armor and fitted with crash-absorbing material. The vehicle may ignore the first Crew hit on the Systems Damage Table.

Movement: This protection is due to the inherent strength of the drive system's design, or a built-in redundancy. The vehicle may ignore the first Movement hit on the Systems Damage Table.

• SENSORS

Sensors represents the resolution and processing speed of the vehicle's detection systems and is crucial for battles in confused or dense environments. A generic military sensor array has a rating of 0. Poor or incomplete sensor systems are rated with negative values (minimum value is -5), while quality (or numerous) sensors have positive ratings (max. +5). The Base Range (in kilometer) is also chosen at this point; it can be extended by supplying more power to the system (see Section 5.3.2), but this makes the emitter quite visible to hostile sensors.

If no sensors are present, the vehicle cannot perform an Active Sensor check and must rely entirely on the Detection rating of its crew to acquire its targets.

Airborne Sensors: sensors mounted on a flying vehicle benefit from a higher vantage point, allowing them to reach further. When in the air, the sensor range is multiplied by ten (e.g., a plane with Sensor of 2 km range on the ground, it detect other objects up to 20 kilometers away in the air). This is free.

Spaceborne Sensors: sensors work even better in space, since there's no atmosphere to distort readings. When in space, the sensor range is multiplied by a hundred (e.g., a spaceship with Sensors of 2 km range on the ground, can detect other objects up to 200 kilometers away in space). This is free.

Aquatic Sensors: these are underwater sensors such as sonar, magnetic anomaly detectors and specialized cameras. Aquatic-only sensors ignore Obscurement while in water, but don't detect targets out of it. Chose whether sensors are standard or aquatic; this is free.

Counter-Battery: This is a set of specialized sensors designed to locate enemy units based on the trajectory and signature of their fire missions. When an indirect fire attack is incoming, an attempt to locate its origin can be made if within half sensor range of the target point.

A successful Sensors test locates the last known position of the firing unit. A failure does not yield any information. On a Fumble, the operator gets a phantom echo — any counterattack automatically deviates by (3d6 x 50m).

Defective: The sensor system has a tendency to go on the blink in a random manner, rated from 1 to 5. In combat, one die is rolled before attempting to use Active Sensors. If the roll is equal to or less than the Defective Sensors rating, the Flaw's rating is applied as a negative modifier to the Sensor test.

TELEPORTER DEVICES

Teleporters are devices that allow the transportation of matter over distance without actually traveling it. They are a potentially campaign-breaking piece of equipment ("we're in trouble — beam us out!"), so the Gamemaster needs to put some thought into this before introducing them.

Teleport Self: This system allows the vehicle to move to any location within a radius in hexes equal to or less than the rating, instead of using its normal movement. Teleporting cost two actions, one to prepare and one to do it — teleporting is a pretty complex act, and most people do not want to end up materializing within another object by being hasty. The pilot has control over which direction his vehicle is facing when it appears.

Teleport Others: This system allows the vehicle to move any other item (person, object or vehicle) within a radius equal to the rating of the Perk in hexes to any other location in range. The teleporter can send the object a thousand times further, provided it first spends an action and remains immobile and has no energy shield in action (unless they are permeable to weapon fire). The item to be moved must have a Size rating less than or equal to the rating of the Perk.

If the item materializes in the same location as something else, the transported item must make an Agility or Piloting test against a Threshold equal to (Size of all units present)/5, or collide with a random occupant. If the item materializes in the same location as an inmoveable object (such as a boulder), it automatically suffers an Overkill result unless the large object is hollow (in which case the result is left to the Gamemaster's discretion).

• THOUGHT INTERFACE

Mind-machine interfaces allow the crew to react at the speed of thought rather than lose precious fractions of a second waiting for the order to go throught their hands to the controls. The interface may be a brain-wave scanner or a surgically implanted jack, but the result is the same.

The number of actions gained is equal to the number of actions the crew which is interfaced would normally receive on their own. This is in addition to the natural number of actions which the entire crew has. For example, a corvette's crew of 36 has six actions. The captain and his three personal aides are then all hooked up to a Thought Interface system, granting the ship two more actions, for a total of eight actions per turn.

Thought-control interfaces often put undue strain on the pilot and his central nervous system. Certain interfaces are more primitive than the perfect control option listed above. Some cannot filter the feedback signals they send back, others require absolute mental concentration for the entire battle. This, of course, reduces the cost of the interface system; whenever one of the option call for an interface cost, it refers to the Thought-Interface Perk cost.

Invasive Interface: the computer gives hints and plot out the paths of targets directly into the crew's minds, giving them a tactical edge. A PSY roll must be performed when the system is activated. If failed, the information totally overrides the crew's mind, causing them to lapse into catatonia in a number of rounds equal to the roll of one die. If Fumbled, the interface is too much and the crew is knocked out. The cost of the interface is reduced by the PSY Threshold.

Mind Link: the nervous reflexes of the crew are directly transferred to the vehicle, which effectively becomes an extension of the crew's own body and mind. A WIL roll is made every round the system is used: if it is failed, the system confers no action bonus for that round. If Fumbled, the system picks up a stray thought and acts on it (GM's call). The cost of the interface is reduced by the WIL Threshold.

Unshielded: damage can surge back into the minds of the crew. Such a system costs only half the normal point cost, but requires a Knockout test every time the vehicle receives damage. Light damage to the vehicle causes a -1 penalty to the test, while Heavy damage causes a -2. There is a -1 penalty for each consecutive test during a single turn.

Sentient: the control computer has been patterned after an animalistic mind. It must be dominated with a WIL roll during the first interface, or it will refuse to obey the crew. If the machine is damaged or the crew emotionally strained (GM's call), a WIL rolls is required or the mecha goes Berserk: it will move directly toward its attacker and attempt to engage it in melee combat. It may not take any kind of defensive action, but gains a +1 modifier to melee attacks. The cost of the interface is reduced by the WIL Threshold.

• DIMENSIONAL TECH

Dimensional Technology is a catch-all name for the systems that allow access to other realities. This feat allows all sort of special functions, such as the ability to store items or additional mass in a nearby pocket dimension for later use. It also allows, by the same token, voyage to parallel universes. This is a potentially campaign-breaking piece of equipment, so the Gamemaster needs to put some thought into this before introducing it.

Dimensional Mass: Some vehicles have the strange ability to grow or shrink in size, putting on or shedding mass without any visible means. This can be done through dimensional storage of additional mass, variable-sized molecular structure or atmospheric processing, but the game effect remains the same.

The game effect of this perk allows a vehicle to add or subtract from its Size a maximum number of levels equal to the rating of the perk (particularly useful when the snub-fighter grows to the size of a battleship just before impact on a ramming run). A maximum of five Size levels can be shed or gained per round, regardless of the overall capability of the vehicle.

Dimensional Storage: This often happens in animation: vehicles and mecha suddenly pull out additional weapons or pieces of equipment that just were not there a second ago, or they sprout additional pieces that could not possibly fit within their mechanisms/structure.

This perk allows the vehicle access to some prepared equipment from an extra-dimensional space with a volume limited by the rating of the dimensional storage. The amount of "cargo" volume supplied is equal to the rating squared, in cubic meter.

► E. Reference Section: Vehicle Flaws

• MOVEMENT FLAWS

These are Flaws that put limits to a vehicle's movement, either by slowing it or by restricting the terrains it can go through.

Cannot Glide: The vehicle has little or no wing span, and cannot gain lift without thrust. Should the engines fail, or be cut off for any reason, the aircraft will automatically enter an uncontrollable fall (see Section 5.2). Only vehicles with the Flying movement can take this Flaw.

Decreased Maneuver: This Flaw only applies to vehicles with two or more Movement Types, and must be linked with one of them. When the selected Movement Type is used, the Flaw is applied as a penalty to the vehicle's Maneuver.

External Power: The vehicle doesn't have a powerplant and draws its energy from wired or beamed power. Its Deployment Range represents the maintenance interval. External Power is not strictly a Flaw, but is a liability even though it reduces the vehicle's weight and cost.

External power can be beamed in, a collector receiving the energy and converting it for use. The vehicle must remain in line-of-sight with the power supplier. If the collector is destroyed (counts as an Auxiliary Systems), the vehicle will suffer total power failure.

The energy may be wire-fed instead. A Piloting test must be made every turn against the highest MP cost for the terrain traveled to avoid snagging the cable (need not test for terrains with MP cost of 1). Flying vehicles must test also — use the overflown ground's MP cost; Space vehicles are not affected. Failure means the cable is stuck and the vehicle must halt for the next round to free it. A Fumble means the cable is severed. The cable has a Damage Point Capacity equal to the vehicle's Size when attacked.

Maximum Ceiling: The vehicle cannot climb past a certain altitude. The rating is subtracted, in kilometers, from a height of 12 km to give the aircraft's maximum ceiling. Only Flying vehicles can take this Perk.

Maximum Climbing Angle: The vehicle must move forward before they can climb one altitude level; the rating of the Perk gives the number of MPs. Only Flying vehicles can take this Perk, but VTOL craft cannot.

Muscle-powered: The vehicle relies on muscular energy to move (it may not take the "No Engine" Flaw): animal-drawn carriage, bicycle, or even lightweight submarine or flyer. It requires a minimum of (Size x Size) human crew. Crewmembers can be replaced by animals, though BLD must be equivalent (e.g. a single 140 kg animal equals two 70 kg men).

Movement Speeds and Deployment Range count as zero for cost purposes. Instead, the maximum speed in MPs (adjusted for air and space) is equal to the average Strength, plus three. The Deployment Range of such a craft is equal to the average Stamina, times two. One point is added to the average Strength and Stamina for each doubling of the crew's size. Speed cannot be greater than the maximum speed of the slowest member, if the vehicle is directly pulled or pushed. The stats are recalculated if the vehicle takes casualties.

No Engine: The vehicle has been designed without an engine or transmission system and must be towed or catapulted. If flying, the vehicle cannot have a Stall Speed lower than 1, unless it also has the Lighter-than-air Perk. Movement hits are ignored, though Armor is lost as usual.

Poor Off-Road Ability: Whenever entering terrain that costs two or more MP (not including elevation changes), the MP cost is increased by one. The vehicle may ignore this penalty, but must make a Piloting test for each terrain segment against a Threshold of 4 + terrain MP cost. If failed, the vehicle suffers Light Movement damage or is stuck for 1d6 rounds; if Fumbled, Heavy Movement damage or is stuck permanently and must be towed out.

Poor Towing Capacity: The vehicle's powerplant is too small for towing, or its transmission system is not up to the task and overheats all the time. The vehicle's towing capacity is halved.

Requires Airstrip: An airstrip or straight portion of highway in good condition (Road terrain) is required for a safe landing. Else, the pilot must make a Piloting test vs. (3 + MP cost of terrain) to avoid crashing. Only Flying vehicles can take this Flaw.

Unstable: The vehicle is hard to control at high speed, either because it's top heavy or badly designed. A -1 modifier applies to all Piloting tests at Top speed or in terrain with a MP cost greater than one.

• NEGATIVE FEATURES

These are things that cause problems for the entire vehicle.

Difficult to Modify: The vehicle's innards are a nightmare of intertwined machinery and cables. Pieces must be specially machined for it, bolts and nuts are not standard, the color coding is wrong, etc. A -1 modifier is applied to all repairs and modifications attempts on a particular subassembly: Movement, Structure, Crew stations, Fire Control (systems) and Auxiliary Systems.

Problem-prone: Tighten one bolt, and two come loose. For some unknown reason, problems seem to crop up everywhere on the new design. One die is added to the Lemon roll, regardless of the chosen production type.

Fuel Inefficient: Each kilometer traveled adds the rating of this Flaw for Deployment Range purposes. For example, a vehicle with this Flaw at a rating of 2 will count each kilometer traveled at Top Speed as six for fuel purposes (1+2, times two for Top Speed consumption).

HEAT Vulnerable: The armor and structure cannot withstand high energy attacks such as lasers or shaped-charge warheads. Subtract the rating of this Flaw from the Armor rating of the vehicle when submitted to a HEAT attack.

Highly Flammable: The vehicle is built with flammable materials, or is sensitive to excessive heat. All incendiary attacks have their Intensity doubled. If the vehicle is destroyed, it will keep burning at Intensity 10 for an additional number of turns equal to its Size.

Inefficient Controls: The vehicle's control mechanisms are numerous, complex or poorly organized, causing the crew to waste precious time in high-stress situations. A vehicle with Inefficient Controls requires an Action per turn to operate and move.

Large Sensor Profile: The vehicle is very visible to sensors: a large structure, a high infrared signature, a poorly shielded, overly powerful electronic suite, or a significant radar trace. The Flaw's rating is subtracted from the vehicle's Concealment value versus sensors (not for Obscurement).

Overheating: The vehicle is prone to overheating. It gets Light Damage if it does any of the following for three rounds in a row: move and fire a weapon, fire three or more weapons, or use Space movement, and Heavy Damage if it does the same for five rounds. Extreme Overheating is the same, though the effects take place faster.

Random Shutdown: Whenever strained (each round of combat or every 15 minutes of moving at Top Speed), the vehicle's pilot must roll two dice vs. (1 + Rating) to avoid shutting down (no movement or actions) for a number of rounds equal to the roll of one die.

Sensor Dependent: The vehicle doesn't provide a direct view of the surroundings. In game terms, the vehicle relies on its sensors: if they are damaged or destroyed, the vehicle cannot attack, nor move. Any such attempt is automatically randomized (i.e., direction and target are determined by chance instead of the player). If the environment permits, one or more crewmembers may open a hatch and peak out, negating the sensor penalty but acquiring the Exposed Crew (Partial) Flaw.

Trackable Emissions: The vehicle leaves behind a large amount of residual heat, smoke, radiation, etc., and is thus easily tracked down. Sensor tests to spot the vehicle have a bonus equal to the rating of this Flaw. Guided weapons automatically lock-on without need for a designator.

Vulnerable to Haywire Effects: The vehicle is highly vulnerable to electrical attacks. Haywire weapons get three damage rolls instead of their normal two. For roleplaying purposes, the Intensity of any electrical attack directed against the vehicle is doubled.

• WEAKNESSES

These Flaws are weaknesses in the physical design of the vehicle. They usually make it more fragile in regard to damage.

► E. Reference Section: Vehicle Flaws

Exposed Auxiliaries: The vehicle has all sorts of equipment attached to its hull with little or no protection. Whenever an Auxiliary Systems effect is rolled on the Systems Damage Table, the damage is one stage worse (i.e. Light Damage is treated as Heavy, and Heavy Damage means all Auxiliary Systems destroyed).

Exposed Crew: This Flaw represents the open tops of jeeps and convertible vehicles. Whenever a Crew effect is rolled on the Systems Damage Table, the damage is one stage worse (i.e. Light Damage is treated as Heavy, and Heavy Damage as all crew killed).

If only part of the crew is exposed, the vehicle is considered to have the Flaw only until all exposed crewmembers have been eliminated. For example, a vehicle which has three crewmen in an enclosed cockpit and four gunners on open mounts will have the Flaw until the four gunners are casualties. The cost would be (4 / 7) x -5, rounded off to -3.

Exposed Systems: The vehicle's offensive and defensive systems are inadequately protected: weapon sensors are exposed, barrel elevation mechanisms are unarmored, and so on. A +1 modifier is added when rolling on the Fire Control Damage Table.

Exposed Movement: The motive systems are too large, project too far away from the chassis, or are completely unarmored. Whenever a Movement systems effect is rolled on the Systems Damage Table, the damage is one stage worse (i.e. Light Damage is treated as Heavy, and Heavy Damage as movement impossible).

Fragile Chassis: Civilian vehicles normally feature lighter, less expensive chassis to cut costs. These perform just fine under everyday, normal use, but they are more vulnerable to weapon fire and physical damage. A +1 modifier is added to the die when rolling on the Structural Damage Table.

Hazardous Ammo/Fuel: The vehicle's fuel tanks and/or ammunition bays are placed in a prominent place, lightly armored, or both. A +1 modifier is added when rolling Light Damage on the Fire Control Damage Table, +2 when rolling Heavy Damage.

Weak Facing: The vehicle has a weak facing (arc of defense) because of incomplete armor coverage, shoddy design, or weak materials. When the vehicle is attacked on that side, its effective Armor is halved. This Flaw cannot be taken more than twice per vehicle.

Weak Point: The vehicle has a weak point. When a specific system/location is targeted and hit, the base Armor is reduced by the rating of this Flaw before applying damage. This Flaw cannot be taken more than twice per vehicle.

Weak Underbelly: The underside of the vehicle is either unarmored or otherwise poorly protected. The vehicle's effective Armor is halved against all attacks coming in directly from below, such as minefields.

ADHESIVE: Adhesive systems stick to the target before acting. It places a -1 modifier on the attack roll, but, if successful, the system (or its shots) becomes attached to the target. If desired, it can be detached at any time by the attacker at the cost of one action.

To detach an adhesive system, a Piloting Skill test is made versus the attack's (MoS + DM). If the defender has manipulator arms, a bonus equal to half the rating of the largest one (rounded up) is applied to the Piloting test.

ANTI-INFANTRY: The system is specially designed to affect character-sized targets. It can be swung around very fast and its tracking system can register faint readings. It does not suffer the normal -2 modifier when targeting Personal Scale targets, such as characters.

AEROSOL: The system discharges a gas mixture with mirrored metallic particles in suspension, forming a mist which diffuses any energy attempting to penetrate it. Any energy weapon or target designator firing in, through or out of an affected area has its range band increased by one (for example, Short becomes Medium) for every hex crossed, for both targeting and damage purposes. The mist dissipates at the end of the next turn. Aerosol has no effect against Armor.

ANTI-MISSILE: This characteristic is used by anti-missile systems and chaff/flare/decoy launchers to counter incoming missiles, either by misleading them away from the vehicle or destroying them outright. The weapon does not suffer the usual -6 modifier when used for Anti-Missile fire (see section 5.4).

ANTI-STRUCTURE: The system has been designed to damage inert structures, such as buildings, roads and bridges. Whenever this type of ammunition is used against something with Structural Damage Points instead of Armor, the damage inflicted is doubled.

AREA EFFECT: The system affects a large area around the target point. Area Effect systems always cause their base DM in damage within the affected radius, regardless of whether or not they "hit" their target. An Area Effect of 0 affect only the target hex.

These systems are rated in Area Effect (AE). Area Effects greater than 75 m in radius are possible, but expensive. Mass-destruction weapons, such as nuclear warheads, have special Area Effect values to accurately model their destructive capabilities; see the "Mass Destruction" System Perk.

AREA EFFECT COST	
AE RADIUS	PERK VALUE
0	1
1	2
2	3*
*Add one for each additional hex of radius after 3.	

ARMOR-PIERCING: The system is highly efficient when penetrating armor. The target's Armor rating is halved (round up) to determine damage. If the attack is successful, the target doesn't lose any Armor points (the entry hole is too small), but takes system damage as usual. Armor-Piercing never Overkills — additional damage after Heavy is lost.

ARMOR-CRUSHING: The system is highly efficient when destroying armor plating and structures. The target loses twice the usual Armor points (2 for Light Damage and 4 for Heavy Damage) in addition to the usual system damage. If the damage is more than half (round up) the target's Armor rating but less than the Armor, the target loses one Armor point with no additional effect. If combined with Armor-Piercing (to represent cutting blades, for example), it never Overkills.

ATTACK/TARGET: This Perk allows systems in one environment (underwater, land, air, space) to attack targets in other environments (for example, a surface-launched anti-sub torpedo, noted as such: Land/Underwater). Use the biggest hex size available for attack purposes (for example, a gun with the Land/Air Perk would use 250-meter Air hexes for range when firing against aircraft; a plane-mounted Air/Land gun would use the same). A system's "native" environment is free (Land/Land, for example); additional combinations count as one Perk.

Systems that attempt to affect a target in another environment than the one they've been designed for get a -2 modifier to hit (for example, the torpedo above attempting to hit a surface target).

BIO/CHEM: The system dispenses a short-lived biological warfare agent, such as an airborne virus, or a chemical agent, such as a nerve gas. The disease's infection sphere or gas cloud covers a one-hex diameter, unless the system has an Area Effect — in that case, add one to the AE. Bio/Chem has no effect against armor; enclosed vehicles and infantry in sealed suits are not affected by Bio/Chem.

Characters and vehicles with the "Exposed Crew" Flaw are affected by Bio/Chem if hit (although the vehicle itself suffers no damage). For each ten points of damage, a penalty of -1 is applied to all actions attempted by the target. If the penalty goes to -5 or worse, the affected unit becomes a casualty. Lethal bio-agent victims will die immediately after the battle, while semi-lethal bio-agent victims can survive if provided with medical attention.

CONCEALED: The system is normally hidden within a concealed bay in the hull of the vehicle and pops out only when used. Such a system may use ammo clips, but they can only be changed when it is deployed. The system cannot be detected while in its retracted position, and can ignore *one* damage result if retracted. Unfolding or retracting a Concealed system requires one action for each, unless it has been designed to "pop-up" (this type of Concealed counts as *two* Perks).

DISINTEGRATOR: Disintegrators destroy the structural integrity of an object at the atomic or subatomic level. In game terms, a disintegrator will completely destroy anything it achieves a Light Damage result against. If the disintegrator fails to do Light Damage but still hits, each point of damage inflicted reduces the Armor of the target by one point. Characters hit by a disintegrator are considered casualties. Targets with Structural Damage Points take five times normal damage from disintegrators. Disintegrator counts as *six* Perks for costing purposes.

ENERGY-HOMING: The system uses the target's electronic emissions to lock-on. If the target made an Active Sensor roll, used communication or has any kind of ECM or ECCM active during the combat round where the attack takes place, the system gains +2 to hit.

ENTANGLE: Entangling systems can be designed as either Melee or ranged (ranged systems can be used in melee). A target that is hit either receives damage or is ensnared and unable to move/fight; the decision (attacker's choice) must be made before the attack, openly.

To escape an Entangling attack, a Piloting Skill test is made versus the attack's Margin of Success, modified by the difference between the Damage Multiplier of the system and the Size of the target. If the target has arms, half the rating of the largest arm (rounded up) is applied to the Piloting test.

FIRE-FIGHTING: The system dispenses a fire-fighting compound that cancels one die's worth of Fire Intensity points per ten points (or part thereof) of "damage" (attack roll result x DM). It has no effect against armor; the compound is non-toxic, harmless to people and dissolves in water.

GRAVITIC: Gravitic systems can manipulate gravity itself. Single-function Gravitic systems can be designed to either pull or push (but not both); this counts as *two* Perks for costing purposes. Dual-function systems can switch between pull and push at any time but counts as *three* Perks for costing purposes.

As weapons, Gravitic systems do damage normally (the damage comes by ripping off or crushing part of the target). They can also be used to push or pull the target, or, if the attacker is lighter, drag itself forward at the same rates as "Winch" systems. A Gravitic system can be escaped by making a Piloting Skill test versus the MoS of the attack, modified by the difference between the DM of the system and the Size of the target.

GUIDED: Guided systems have the ability to correct in mid-attack, and they can use targeting information supplied by a friendly unit. Guided provides a +2 modifier to attack rolls versus targets that have been "tagged" by a Target Designator. Guided attacks versus targets marked by a target designators don't need forward observers if indirect.

HAND-HELD/HARDPOINT: The system is built into a rifle-like mount or self-contained pod for quick-swap versatility and repairs. It can be exchanged for any system of the same or lower point cost, subject to its availability. It takes about ten minutes to replace a hardpoint system with another one.

Rifles can be picked up or put away at the cost of one action, as long as the manipulator is still functional. It costs no action to drop a rifle. If the Manipulator Arm is destroyed, or if the rifle is dropped, the rifle can be picked up by another manipulator-equipped unit with a free hand.

HAYWIRE: The system's delivers a massive electrical discharge. In game terms, the system gets two rolls on the Systems Damage Table instead of just one when it scores Light or Heavy Damage on a target. If used against characters or other living beings, the system's second damage result is treated as an electrical attack with an Intensity equal to (DM + MoS).

ILLUMINATION: The system releases an intense burst of light. A normal attack is made: if successful (i.e., at least Light damage), the target is blinded for a number of rounds equal to the Margin of Success, but may still use Active Sensors. If the system also has "Area Effect" or "Wide Angle," the illuminated area is counted as being in daylight. The effect lasts one round per (DM/10, rounded up).

INCENDIARY: Incendiary systems ignite and burn their targets (this can also be used to model cold-based systems). They do not do damage normally: they cause a fire with an Intensity equal to (MoS + DM). Incendiary is often used with the "Persistent" System Perk.

INDIRECT FIRE: The system can work indirectly: it does not need a direct line of sight in order to work, only a forward observer to tell it where to aim. Indirect fire rules are described in *Mechanized Action*, section 5.4.

KNOCKBACK: The impact causes knockback. The target must make a Piloting test (Agility for character targets) against (DM + MoS), modified by the difference between the DM and the Size of the target (e.g., a Knockback x8 water cannon vs. a Size 10 vehicle lowers the Threshold by 2). Characters with BLD of +1 or more count as Size 2, otherwise they count as Size 1.

If the test is failed, the target is pushed back (MoF/2, rounded down) meters. Walker targets are automatically knocked to the ground (need 1 MP to get back up). Other targets may be overturned; roll one die: on a result of 1-5, the target remains upright; on a 6, the target is overturned.

LIQUID: The system dispenses some kind of liquid; double the target's Armor since the energy is not concentrated. Sprayed liquid splashes everywhere: the spillover area is a 360-degrees circle centered on the target. For each ten points of damage caused, the radius increases by one meter. Anything in the spillover area is automatically hit, but suffers only a quarter of the system's original damage (round down).

LOCATION-SPECIFIC: Because of their design, some systems can only affect one location on targets (e.g., dropped mines cause damage to movement systems; EMP guns knock out sensors and comm devices). When the system is used, the location is not rolled randomly but applied directly to the proper system: Fire Control, Structure, Movement or Auxiliaries (Crew is not available as an option -- see "Bio/Chem" Perk).

MASS DESTRUCTION: Mass destruction systems includes special items like nuclear warheads, neutron bombs and antimatter death rays. All systems of mass destruction have massive area effects equal to (DM/4) hexes (round down). In that zone, the DM is ten times normal. In a radius up to (DM/2) hexes, their Damage Multiplier is five times normal. In a radius up to (DM) hexes, their Damage Multiplier is normal. In addition, these doomsday systems always cause their base DM in damage, regardless of whether or not they "hit" their target. Mass-Destruction counts as *twelve* Perks (for costing purposes).

MINEBUSTER: These systems can attack buried warheads, such as mines, and neutralize them. Each point of MoS reduces the Saturation Threshold by 1 of a zone affected by a Persistent+Area Effect attack, within the area affected by the Minebuster System.

PAINT: The system disperses a brightly colored paint (practically any color can be ordered, but day-glo pink and orange are favored) or similar effect. Paint causes no damage but provides a bonus for visually spotting a target hit, equal to the highest MoS of any Paint attack that hit it (multiple hits are not cumulative).

PARRY: The system can be used to deflect blows in combat; only Melee systems may use this option. A Parry system requires one action to deflect an attack within the system's arc; the target may roll a new defense. If successful, the target is still hit, but the system subtracts a number of damage points equal to (DM + parry's MoS) from the attack.

If a target suffers Light damage after having successfully parried, the system's DM is halved (rounded down). If a target suffers Heavy damage after having successfully parried, the system is destroyed. In either case, no further damage is applied to the target. Overkill results still destroy the vehicle. When not used to parry, the system takes damage as normal.

Shield (Solid): this a specialized Parry system and uses the same basic rules. When not actively blocking, the shield adds one-third of its DM (rounded down) to the vehicle's base Armor in its arc. It counts as one more Perk for cost purposes.

Shield (Energy): this a specialized Parry system and uses the same basic rules. An Energy Shield can be switched on and off at the cost of one action; for every round off, it regains one point of DM (if previously damaged). A destroyed system cannot regenerate.

An active energy fields prevent weapon fire and system uses by the protected unit(s), unless the shield is designed to allow it. Energy Shields with the "Area Effect" Perk allow other units within the AE radius to benefit from its protection.

Energy Shield counts as *two* Perks (for costing purposes) if capable of parrying just one of either Matter, Energy or Exotic system types; three Perks if it can block all attack types; or four Perks, if it allows weapons and systems to be used within its envelope. If the Energy Shield is designed to be used against only one type of attack, then it cannot parry the others -- they pass right through.

PERSISTENT: Persistent systems cause the target to suffer the attack's effects for a number of combat rounds equal to the original Margin of Success of the attack. Damage is calculated using the original MoS, minus one for each additional turn after the first one. For example, a MoS 4 attack would use MoS 3 on the second turn to calculate damage, MoS 2 on the third and MoS 1 on the fourth and final turn. Persistent counts as *two* Perks (for costing purposes).

REDUNDANT: The system has armor or multiple redundant components. It ignores the first damage result on the Fire Control Damage Table and is then marked off. The effect can be restored by repair later. This option can be taken multiple times.

REMOTE: The system can be activated by remote-command. This requires either a line-of-sight to its location, a satellite uplink or a forward observer in contact. An Information Warfare test is made against 2, modified by the system's Accuracy and the Comm system's rating. A success means immediate activation, a failed or Fumbled result means the signal was not received and nothing happened.

SCATTER: The system fires salvoes of smaller projectiles rather than one sudden attack. The system can spread its salvo over a larger beaten zone if required: it can increase its Area Effect by one, halving (round down) its Damage Multiplier in the process (if the system doesn't have Area Effect, it gains an AE of 0 by halving its DM).

SEEKING: The system can try to affect a moving target more than once (e.g., missiles which turn and twist back, or systems that won't fire until locked-on). If the attack fails, the attacker may reroll it. If the target has already spent action(s) to either shoot down, parry, block or dodge the attack, it can defend itself again with the same method at no additional action cost.

Such a system can also be designed to attack over multiple turns. Unless the weapon has been destroyed, it may attack again at no action cost; each additional attack counts as *one more* Perk (i.e. attacking over two rounds means Seeking-2 equals to three Perks).

SMART: The system can operate by itself (e.g., a self-targeting defense gun). Its Skill level is equal to the number of Perks it counts as, plus two (so a Skill of 2 would make Smart-2 count as four Perks); no system can have a Skill higher than 3. Smart has one action per turn (additional uses per round are possible by using crew actions).

SMOKE: The system dispenses a volatile gas mixture that vaporize into thick smoke of whatever color desired (usually black or light gray). The smoke covers an area one-hex wide, both horizontally and vertically (if the system has "Area Effect" as well, add the radius) and has a Concealment value of 2. The mist will dissipate at the end of the next turn. Smoke has no effect against armor; only visual and passive detection are affected by the Obscurement modifier. Active Sensors are not affected by smoke.

Hot Smoke: this version disperses smoke but also chaff, flares and electronic dummies. It works as Smoke, but all types of detection are affected by its Concealment, including Active Sensors. This option counts as *two* Perks instead of just one.

STEALTH: The system has been designed with stealth in mind (e.g., flash suppresser, silencer, counter-noise emitter, etc.) Its use does not subtract from the attacker's Concealment when fired.

TARGET DESIGNATOR: Target designators are used to lock-on Guided systems. To lock-on, the attacker hits the target using the designator: any successful attack "paints" the target for incoming guided munitions. The target remains designated until the end of the round. Target Designation has no effect upon armor.

WIDE ANGLE: The system's effect covers a wide area, affecting multiple targets at once. A single attack roll is made, but any unit within the arc and range must defend against it. Solid terrain features like hills and structures will absorb direct fire wide angle attacks (see *Hull Down*, section 5.6.4.), but not indirect fire ones.

WIDE ANGLE MULTIPLIER	
ANGLE (DEGREES)	COUNT AS... PERKS
10	1
60	2
180	5
360	10

WINCH: Winch systems are attached to a high-strength cable and winch. The maximum weight that can be handled by the cable is equal to a Size rating equal to the DM (e.g., a x3 winch could drag Size 3, or 1.1 tons); more will cause the cable to snap. The cable itself has Damage Points equal to the DM before being severed. Ranged attacks have a -3 penalty to hit; Melee attacks on the cable have no penalty.

The target will be dragged towards the winch at a rate of (Size of target/Size rating of winch) x 10 m/round (round down) if the target is smaller. The winch will move towards the target at a rate of (Size rating of winch/Size of target) x 10m/round if the target is larger. If either is braced, counts as being 1.5 time its Size. A target actively resisting adds its towing capacity to its weight.

► **G.** Reference Section: System Flaws

ATTENUATING DAMAGE: The system loses a portion of its damage potential over distance. The value is subtracted from the Damage Multiplier for each range band beyond Short. For example, a x12 weapon with Attenuating Damage (2) would be x10 at Medium, x8 at Long and x6 at Extreme range. This characteristic isn't counted as a one; rather, the value is subtracted from the Damage Multiplier for cost purposes (the above x12 weapon with AD2 would count as a x10 weapon when designing it).

CLUMSY: The system is extremely large or unwieldy. This causes maneuver problems for the vehicle as it cannot compensate for the increased moment arm and/or unbalanced weight. The system causes a -1 penalty to the Maneuver rating of the vehicle when used (count as *one* Flaw) or always while carried (count as *two* Flaws).

DEFENSIVE: The system has a defensive purpose and makes a poor offensive tool. The DM is halved (round down) and -2 to hit is applied when using the system to attack. Defensive measures such as Parrying, Blocking and Anti-Missile don't count as attacks.

FLICKER: Some systems require so much power that they are alternatively turned on/off to reduce the overall energy requirements. Whenever a Flicker system is used, one die is rolled: if the result is 3 or higher (counts as *one* Flaw for costing purposes) or 5 or higher (counts as *two* Flaw for costing purposes), the system is powered at that particular instant and may be used.

HEAT: These systems rely on energy transmission rather than impact to affect their target. They thus take less space and are lighter, but they can be counteracted by special armor and defense systems.

HEAVY: The system is extremely cumbersome and causes a -2 MP penalty to the Top Speed of all movement types (Combat Speeds are recalculated accordingly). This penalty is removed if the system is dropped or destroyed.

MINIMUM RANGE: The system is unable to affect a close target (e.g., a mortar that fires in a high arc, or a missile that arms at a certain distance). In game terms, the system's Short Range modifier is -1 instead of 0 (count as *one* Flaw Flaw for costing purposes) or -2 (counts as *two* Flaw for costing purposes).

NON-LETHAL: Non-lethal knocks out characters without killing them (e.g. mild discharges, rubber bullets, choke gas, etc.) The Threshold of a Health test to avoid unconsciousness is equal to (DM + MoS). If failed, the target is incapacitated for a number of minutes equal to its MoF. If the roll is failed by between 5 to 8, the subject gains a Flesh wound; by between 9 to 12, a Deep wound; and by 13 or more, the target goes into a coma.

Non-lethal has no effect on armor; only infantry and vehicles with the "Exposed Crew" can be affected. The system's DM is halved, but damage is applied as normal (vehicles are only affected on "Crew" hits). Casualties are dead on a roll of 6 instead of 4-6 as normal. On a roll of 1 or 2, they are not even harmed.

POWER-HUNGRY: The system requires an inordinate amount of power and/or attention before use, and can't be used until fully charged. A number of actions must be spent to use the system, with any penalties for multiple actions in a turn being applied cumulatively. Actions can be paid over multiple rounds, if need be. For costing purposes, Power-hungry counts as as many Flaws as it requires actions to function, plus one (so a weapon requiring six actions to fire would count as *seven* Flaws for costing purposes).

RANDOM: The system has an unpredictable Accuracy, Damage Multiplier or Base Range (pick one). Every time it's used, the attacker makes a PSY test against a Threshold equal to the number of negative characteristics Random counts as, plus one. If successful, the system functions normally. If unsuccessful, a penalty equal to the Margin of Failure is applied to the system's affected Attribute.

RECOIL: The system cannot be used on the move; otherwise the attacker is pushed back a number of meters equal to (DM - Size), with a minimum of one. If this occurs, Walker attackers are knocked to the ground (must spend 1 MP to get back up). Other vehicles may be overturned — roll one die: on a result of 1-5, the vehicle remains upright; on a 6, the vehicle is overturned. In freefall, an acceleration equal to 1 MP is applied *opposite* per ten points of damage.

TIME DELAY: The system activates on its own after a pre-set number of rounds (write it down when the system is triggered). The process cannot be stopped unless in physical contact with the system.

UNRELIABLE: Some systems are badly designed or built with low quality material; others are highly experimental and not quite ready yet. The system overheats, jams or otherwise fails: whenever it's used, the attacker must first roll a die and add the number of Flaws Unreliable counts as, for costing purposes; +1 is applied for each point of ROF used. Check the result on the *Unreliable Effects* table below.

Overheating: an overheated system can be used but immediately re-test with a +2 modifier. If the system fails, it cannot be used again until cleared or reset (requires one action). This allows another test; if failed, it remains jammed. A system that explodes is useless.

1D6+RATING+ROF	PROBLEM
2	System overheats for one round
3	System overheats for two rounds
4	System jams (requires one action to clear)
5	System jams (requires 1d6 action to clear)
6	System jams; lose 1d6 shots of ammunition in clearing it
7	System damaged; -1 Accuracy or add one to Unreliability rating
8+	System explodes; DM times (MoF-5) vs. half Armor (rounded down)

■ Reference Section: System Perks

1off

SKILLS:

Name	LVL	Cpx	Name	LVL	Cpx

PERSONAL DATA:

Name:	
Profession:	
Nationality:	
Year of Campaign:	

PERKS/FLAWS:

ATTRIBUTES:

Agi:		App:	
Bld:		Cre:	
Fit:		Inf:	
Kno:		Per:	
Psy:		Wil:	

SECONDARY TRAITS:

Str:		Hea:	
Sta:		Ud:	
Ad:			

WEAPONS:

Name	ACC	DAM	RANGE	AMMO	ROF

EQUIPMENT:

PHYSICAL STATUS:

INJURY	UD AP	AD AP	SS
Flesh Wnd.		-1	
	-1	-2	
		-3	
	-2	-4	
		-5	
Deep Wnd.	-3	-6	
		-7	
	-4	-8	
		-9	
	-5	-10	
	Instant Death		

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Accuracy: the precision and ease of use of a given weapon, system or tool. Accuracy is a zero-average attribute.

Action: an activity in which the character engages, such as firing a gun, deactivating a lock, solving an equation, and so on.

Actual Size: the final Size rating of a vehicle after all design steps are done.

Agility: one of the Character Attributes, this represents the character's hand-eye coordination, nimbleness, and reflexes. Agility is a zero-average rating.

Ammunition: the number of charges or shots carried in a weapon or system. Once all ammunition points are gone, the weapon or system can no longer be used unless reloaded/recharged.

Appearance: one of the Character Attributes, this represents the physical attractiveness of the character. Appearance is a zero-average rating.

Arc of Fire: an arc through which a weapon or system can be aimed and used.

Area Effect: the area covered by a weapon's or system's effect(s). The radius is expressed in hexes for the mechanical rules and in meters for roleplaying.

Armed Damage: the damage caused by a character when wielding a melee weapon or tool of some sort.

Armor: the general resistance of a vehicle to damage. This statistic includes the armor itself, the angle at which it is mounted, and the vehicle's general structure.

Attribute: a number defining the relative strength or weakness of a character or vehicle in a particular field.

Automatic Action: a task that require little time or concentration and doesn't require a Skill test.

Build: one of the Character Attributes, this represents the character's size and body frame. Build is a zero-average rating.

Burst Fire: a concentrated attack against one or more targets using a rapid-fire weapon.

Campaign: a series of scenarios that features the same cast of player characters, or that are linked together to shape a larger story.

Character Improvement: a gradual increase in a character's game abilities to reflect both learning over time and personal experience.

Combat Speed: the cruising speed of a vehicle, i.e. the speed at which it normally moves when traveling or engaging in combat.

Combat Unit: a single vehicle or a group of characters.

Complexity: the breadth of knowledge of a character in a particular Skill. By default, Cpx is 1.

Creativity: one of the Character Attributes, this represents the character's ability to use his knowledge in innovative ways. Creativity is a zero-average rating.

Crew: the number of person required to operate a vehicle. Having more crew aboard allow more actions to be undertaken at once.

Damage Multiplier: the minimum damage caused by a weapon. This is multiplied by the Margin of Success to yield the total damage caused. Many systems use it to gauge effectiveness.

Death: once a character has received more damage than twice his Stamina statistic, he is dead.

Deep Wounds: a serious wound which incapacitate a character. Deep wounds are often life-threatening injuries and cause a -2 to all actions performed.

Default Cost: the original cost of a vehicle, before adjustment for Size and production level.

Default Size: the original Size of the vehicle, before design adjustment.

Defense Threat Value: an abstracted measure (point value) of the vehicle's defensive abilities, mostly its durability, maneuver and speed.

Delay: this is the same as Readying, except that the character does not need to identify a particular action they wish to take; however, this also means they can not pre-empt another's action.

Deployment Range: the maximum distance covered by a vehicle before needing refueling or maintenance.

Detection Rating: the amount of Concealment that can be ignored for line-of-sight purposes.

Die Roll: a method for generating random numbers using dice. In Silhouette, six-faced dice are used. The highest number counts; if more than one six (6) is rolled, each additional six after the first one gives +1 to the total.

Emergency Dice: extra dice bought with Experience Points to improve the odds in a difficult situations. It represents the character using his experience to find a way out of a difficult situation.

Experience Point: an abstract measure of the experience gained by a character during his life. Experience points are awarded for roleplaying and experience after a game session. They can be used to improve a character or buy Emergency Dice.

Final Cost: the monetary cost of a vehicle after all calculations are completed.

Fire Control: the equipment used to direct and control the weapon systems on a vehicle. Fire Control is a zero-average attribute.

Firing Arc: the zone in which a specific weapon can fire.

Fitness: one of the Character Attributes, this represents the character's cardiovascular endurance and muscle tone. Fitness is a zero-average rating.

Flaw: a weakness or shortcoming in the design of a vehicle, either planned as a cost-cutting measure or acquired through faulty engineering.

Flesh Wound: a non-life threatening wound which is nevertheless very painful and debilitating. Each Flesh wound causes a -1 penalty to all actions.

Full-Round Action: an action that takes up so much time, it's the only thing that can be done during the round.

Fumble: a Fumble occurs when all dice come up "1". Fumbles introduce game complications advocated by the Gamemaster, and are best avoided if possible.

Gamemaster: a specialized player that referees the game, rather than play a single character.

Gunnery: the Skill of controlling vehicle-mounted weaponry. Used in attack rolls (as many dice as the Skill level).

Hazard: a non-combat event that is potentially life-threatening.
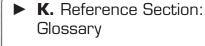
Health: one of the Character Attributes, this represents the character's health and general physical status. Health is a zero-average rating.

Impossible Action: an act that is doomed to fail because it's logically impossible or just incredibly challenging.

Influence: one of the Character Attributes, this represents the character's charm, wit, and persuasiveness. Influence is a zero-average rating.

Information Warfare: the Skill needed to operate Communications, Sensors, ECM and ECCM equipment.

Injuries: injuries are divided into scratches (which are ignored for faster game play), Flesh wound and Deep wound.

Knockout: loss of consciousness caused by a failed Health test after a hit.

Knowledge: one of the Character Attributes, this represents the character's ability to learn and recall information. Knowledge is a zero-average rating.

Leadership: the Skill used to lead and command combat groups on the battlefield. Used to determine initiative at the start of each round.

Lemon Roll: one of the final construction steps, this roll determines if the vehicle was correctly designed and put together. Failure results in a certain number of defects which reduce the capabilities of the design.

Line of Sight: a clear, unobstructed view of an intended target.

Maneuver: a rating of a vehicle's handling and overall reaction speed.

Mapboard: an hexagon-covered map used to advocate vehicle movement and combat (optional — positions can be roleplayed instead).

Margin of Success: the difference between the Attacker's roll and the Defender's roll. Used to gauge damage total and test success level.

Miscellaneous Threat Value: an abstracted measure (point value) of the vehicle's miscellaneous abilities, mostly its specialized equipment.

Non-Player Character: a game character controlled by the Gamemaster.

Obscurement: something that blocks line-of-sight and otherwise interfere with attacks.

Offensive Threat Value: an abstracted measure (point value) of the vehicle's offensive abilities, mostly its weapons.

Perception: one of the Character Attributes, this represents the character's attentiveness to detail and overall alertness. Perception is a zero-average rating.

Perk: a special advantage or system installed on a vehicle.

Piloting: the Skill used to control the movements of a vehicle. Used in defense rolls (as many dice as the Skill level).

Player Character: a game character controlled by a player.

Player: in the context of the rules, a person that controls a game character.

Pre-Production Cost: the calculated cost of a vehicle, without taking the production type into consideration.

Production Type: the stage of development that a particular vehicle type has reached.

Psyche: one of the Character Attributes, this is an abstract measure of the character's karma, happiness, sensitivity and love of life. Psyche is a zero-average rating.

Range: the distance(s) at which a weapon or system can be used.

Rate of Fire: a rating that shows how fast a weapon or system can fire/be used.

Readying: a standard action that allows the character to do something even after his turn

Record Sheet: a form used to record game data and stats.

Refocus: this is a full round action, in which the character collects himself and catches his breath.

Saturation Fire: a method of attack using fully automatic weapons firing at high rates.

Scenario: an adventure or mission within the game, analogous to an episode of a television show.

Secondary Attributes: like Attributes, but derived from them and some Skills.

Sensors: a measure of the detection systems installed on a vehicle, in quality and range.

Session: a short period of time, often around two to four hours, that is allotted to play. The length of a session is determined by the schedules of a gaming group‚Äôs players.

Simple Action: an action that doesn't need a test but takes time.

Size: a rating of the bulk and mass of a vehicle. Size is an exponential rating.

Skill: a learned ability possessed by a character. Expressed in Levels and Complexity.

Stamina: a rating of the character's ability to resist injuries.

Standard Action: an action that could either fail or succeed and requires an Action test consisting of a modified dice roll which is compared to either a Threshold value or an opponent's own dice roll.

Strength: a rating of the character's brute physical force. Strength is a zero-average rating.

System Shock: a rating of the character's abilities to sustain multiple injuries without going into shock.

Test: any action that calls for a dice roll.

Threat Value: a rating measuring the overall worth of a vehicle or military unit.

Top Speed: the maximum speed that can be achieved by a vehicle over open ground (some can go even faster on roads).

Tutors: an experienced individual who can teach a character a new Skill, or otherwise help him improve himself.

Unarmed Damage: the damage caused by a character with his bare hands.

Unit: a single vehicle or a group of characters.

Walking Fire: a method of attack using automatic weapons to hit multiple targets.

Willpower: one of the Character Attributes, this represents the character's self-discipline, determination, and pain threshold. Willpower is a zero-average rating.

Zero-Average: a rating or attribute that is used to modify the dice roll. Zero (0) is considered an average rating, with lower than average ratings being negatives and superior ratings positive numbers.

► K. Reference Section: Glossary

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