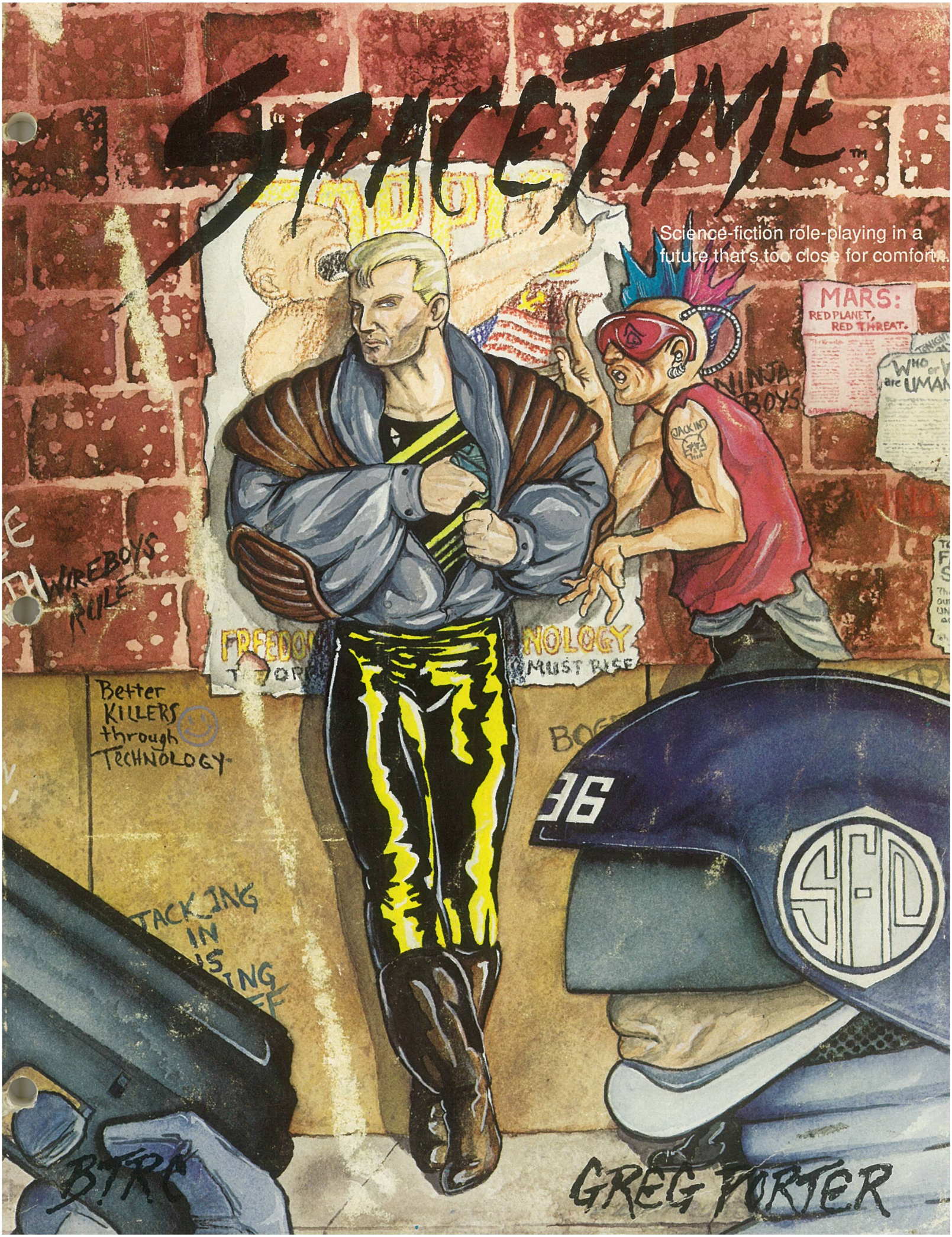
SPACETIME™
Science-fiction role-playing in a future that's too close for comfort...
MARS:
RED PLANET,
RED THREAT.
NINJA BOYS
WIREBOYS RULE
Better KILLERS through TECHNOLOGY
NOLOGY
MUST RISE
36
B.T.R.
GREG PORTER

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1 2 3 4 5 6 7 8 9 10

Dedicated to Cathy, who was always there when I needed her.

I would like to thank the following people who took part in the playtesting, organization and abuse of these rules: Cathy DeMott, Peter Donald, Beverly Higgins, Mike Higgins, Rob Hofrichter, John Kennedy and David Pulver. Their assistance is greatly appreciated.

Shameless plugs...
If you like SpaceTime, but prefer a less futuristic setting, try TimeLords. A time and dimension travel RPG, it is fully compatible with SpaceTime, but includes more detail on archaic weapons, and allows you the dubious distinction of being able to accurately design a character representing yourself, thrust through unknown time and space by forces beyond your control. All the futuristic weapons in SpaceTime were designed with 3G™, the universal gun design system, which allows you to accurately design firearms for *any* role-playing system. These and other BTRC products are available at your local hobby shop or direct from the BTRC.

Table of Contents

Introduction

Introduction - Obviously enough, this is **SpaceTime**, the science fiction role playing game of the not-too-distant future. In it, you will play the part of some adventurer, mercenary, investigator, pilot, punk or any other role you choose. With the advent of faster-than-light travel, you can visit other worlds, or find adventure on the rebuilt, but still dangerous ruins of the planet Earth.

SpaceTime is one of a large number of literary works that fall under the broad heading of interactive fiction. More specifically, it is an RPG, or role-playing-game. In it, you as the player will control the destiny of your character, a creation of your imagination, whose abilities and attributes are listed on a piece of paper called a character sheet. Another factor in this destiny is luck. Not everything you do will work out the way you want. The roll of dice compared to your attributes and skills will determine whether an action is successful or not. Last in this chain of destiny is the Game Master, or GM. He runs the game and sets up the plot and situations the characters encounter. The GM has to tread a fine line between overpowering the characters, or not even challenging them. The GM should keep the characters (and players) on edge, making sure they know just enough to keep them going, but not enough to truly know all the answers.

Designer's Notes - This is the second game in the **TimeLords** system of role-playing games. For those who are familiar with **TimeLords**, these rules should be very familiar, and characters from these campaigns can be easily integrated into a **SpaceTime** campaign. If this is your first encounter with the **TimeLords** system, you are holding in your hands what I feel is the most realistic system available. Once you have learned these rules, you should be able to play any game in this system with ease. **SpaceTime** adds something that has been needed for quite a while for this system, a good future history reference, with locations and technology descriptions. **TimeLords** can be run as a subsidiary campaign of a **SpaceTime** campaign. Futuristic characters might stumble across time-travel technology as easily as anyone else, and a likely place to have adventures might be an alternate universe setting. You get the idea.

There is one thing you will notice about the **SpaceTime** combat rules. The weapons of the future can be extraordinarily nasty. I think that weapon technology is going to get more lethal as time goes by, and the damages for future weapons reflect this. This is partially offset by advances in medical technology, but as always, it is easier to destroy than to create. Keep the following in mind. You don't have to be incredibly violent to get things done, and there is always someone out there who is nastier than you.

Things to notice - The **SpaceTime** rules are broken into large chunks covering various subjects. These are listed in the table of contents, and are also a large header at the top of the page. You can quickly find most sections by flipping rapidly through the rules and checking the left side of the book, or find the pages by checking the right side. *There are also italicized blocks. These show ways to simplify rules or speed up play. This usually sacrifices some realism, though.*

Things you'll need - To play this game, you will need several things that are not included. Among them are pencils, paper, perhaps a calculator, and dice. The rules are drilled so you can put them and any other material you use in a three-ring binder.

The Gamemaster - The gamemaster (or GM) makes it all work. He creates the worlds the characters adventure upon, describes the sights they see and the things they encounter. The GM is God as far as the characters are concerned. He has the final say in everything. He runs the creatures they meet, puts words in the mouths of the people they encounter, and generally serves as the senses of all the characters.

The Player - The player is the person who sits at home while their alter ego (i.e. character) goes adventuring through the exciting and dangerous world of the future. The character is the puppet of the player. The player determines the responses of the character when confronted with what the GM says is happening. The GM needs to know the personality and abilities of the character, to best create challenges and obstacles to be overcome.

The Character - The character exists only in the imagination of the players and the GM. The character does all of the actual work in the game. It is the character who gets sore muscles, stabbed, shot, beaten, and bruised. Unfortunately, it is only the character who gets to see sights never seen before, gain untold riches, and travel to exotic times and places. So it balances out in the end, I guess. The character is defined by the parameters of their attributes, skills, and personality. The first two are shown on the character sheet, and the last is determined in one form or another by the player, whether written down or played from a conception in memory.

The Rules - The world is governed by physical laws that determine how (or how well) certain things work. The rules try to quantify these so their effects can be determined by dice rolls and comparisons. Every last contingency cannot be included in the rules, but they should be flexible enough to allow modifications.

There are also situations where consequences are determined by words instead of actions. While just as important, not as many rules are included, for this is a situation best left to the personalities of those involved, and specific circumstances of the encounter.

History - In a few pages, you will find the character generation system for **SpaceTime**. Before you get there, however, you should read a brief history of the universe you are about to enter. This will be followed by descriptions of technology and the commonplace events and items people encounter in their daily life. This should give you a feel for the opportunities and hazards that will cross the path of the future adventurer, information vital to the design of a good character.

History

Background History

1989 Soviet shuttle reaches operational status.

1993 Soviet Mars probe takes samples of Martian moons, returns in 1993. Analysis confirms presence of hydrated minerals, opening possibilities for refueling of further trips.

1994 First permanent US space station Phase I complete. No offensive capability installed.

1995 First generation orbital ABM systems in use by US and Soviets.

1996 US *Seeker* 1 and 2 probes land on Mars. Two crawlers and two flyers conduct extensive surveys of surface. Most important discovery is that of ancient ruins on the surface. Communication is lost with one crawler due to artificial interference from a site in the city. Its limited AI programming takes over and contact is regained several days later when it leaves the area. Five sites are discovered before dust storms cause mechanical failure or breakdown of the probes. No life of any type is found. Funding for space technology becomes unlimited.

1997 Fusion research accelerates. Meanwhile, all major powers begin work on nuclear engines for manned Mars missions. Missions must be ready before planetary positions make return mission impractical.

1997 US space station now 1000 metric tons. US Mars probe, nicknamed the "Flaming Deathwish" by its construction crew, is severely damaged by small meteor strike. Sabotage is suspected, but nothing is ever proven. Tensions escalate.

1998 Soviets and Chinese/Japanese launch manned Mars probes on optimal launch date. NASA/ESA mission is delayed by previous damage. The Flaming Deathwish is launched a month later, but catches up by passing within 100km of the Moon on its slingshot maneuver.

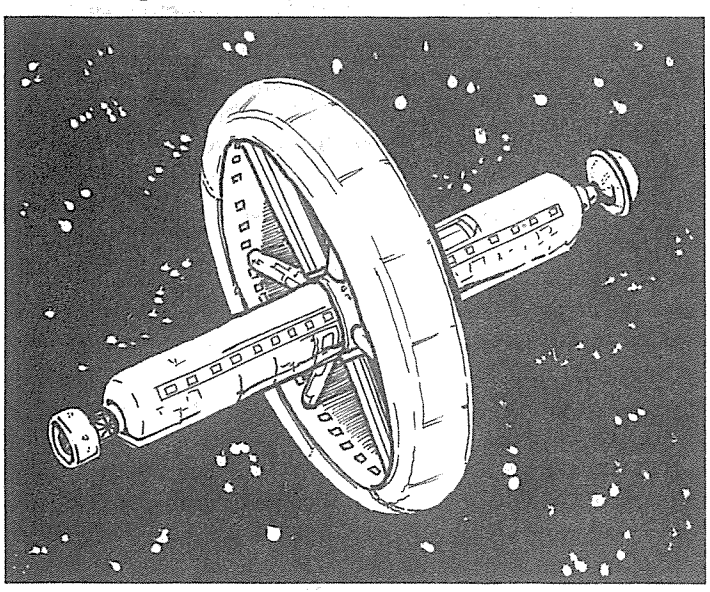
1999 Respective Mars missions arrive. By unspoken arrangement, each nation sets up base camp at a different city. Phobos and Deimos are neutral territory, and used for refueling purposes. US and Soviets begin work on lunar staging bases, while China sets up in low Earth orbit. Official word from all nations is that the cities are entirely deserted. They are millions of years old, and were apparently bored into the mountains. Mostly true. Portable nuclear generators have been found at various sites, as has various technology you would associate with a medium sized city. Most equipment appears to have been installed long after the city was originally built. The generators are usually installed near individual residences, which appear to have been used for several hundred to several thousand years longer than the rest of the city. Backdating the generators from their isotopes, they are at least 20,000 years old. Examination of artifacts reveals advanced technology, but mostly within the levels currently obtainable on Earth. Examination also shows that the users of this technology were humanoid in form.

1999 Solar flare activity causes temporary communication blackout 2 months before return window opens. When static clears, all base camps report that their ships have taken heavy radiation damage, especially to computers, and return in them is impossible. In actuality, all three ships were armed and the military crews of each took action. No crews survived due to radiation, although the *Flaming Deathwish* remained marginally operational. The technical and scientific ground crews, in a rare display of unity, banded together to form a united community and cover the incident, while still appearing to follow the wishes of their respective governments.

2000 First breakeven fusion plant built.

2003 Lunar bases complete. Nuclear rescue/colony ships of all major nations preparing to leave. Martian Colonies have repaired the Flaming Deathwish and hidden it in a excavated cavity inside Phobos. Remains of other ships cannibalized and used to form a small base inside Phobos and augment the perilously low supply margin of the surface bases.

2004 Increasing tensions continue as orbital ABM systems improved. US, Soviets, and China now have orbiting warships and battle stations. Rescue/colony missions are launched, each with a "military escort" to protect that nation's "vital interests". In-flight refueling and more advanced nuclear engines allow ships to arrive by 2005.



2005 Relief ships arrive at Mars. In a well-rehearsed attack with homemade weapons, all ships are seized in surprise move by original colonists, who declare independent Martian republic. Short battle ensues (First Battle for Mars, 2005), in which 27 personnel are killed, most during the self-destruction of the Chinese ship, apparently caused by a command from Earth. Martian Republic breaks all ties with Earth and vows to defend itself. The few malcontents are allowed to return home in one of the colony ships. Martian calendar begins at 0 NB (New Beginning).

2006 Conventional warfare breaks out in Middle East. Nuclear missiles are launched between orbital bases, but all are intercepted. Limited peace breaks out.

2007 First commercial space station.

2008 US launches first fusion powered spaceship.

2009 Soviets launch fusion powered spaceship.

2012 Peoples Republic of China launches fusion powered spaceship, with Japanese-designed rockets.

2013 Martian Republic, using translated documents, constructs crude fusion reactor. This discovery combined with caches of relict technology will play a key role in the Second Battle for Mars in 2016.

2014 Tensions on Earth mount again as grain blight and disease cause widespread death in less developed nations, and austerity programs in others. Rumors blaming Martian sabotage (unconfirmed) cause widespread anti-Martian sentiment. Major nations, aware that Mars is a key location to further expansion of the Solar System, use this as an excuse to prepare ships for the invasion of Mars.

2016 Multinational Earth Fleet arrives at Mars, and is destroyed by fusion augmented Martian Fleet. Martian forces and Phobos base suffer heavy losses. Nuclear and biological war breaks out on Earth for reasons that have remained unknown. Both hemispheres, all orbital fleets, and Lunar bases are decimated. Nuclear winter sets in. Earth will take hundreds of years to fully recover.

60NB All orbital and lunar hardware salvaged.

62NB First Earth landing made. A total of 92 new colonists are picked up. Subsequent runs add needed new blood to Martian Colony.

80NB Population of Mars reaches 10,000.

87NB Mars terraforming begins with refurbishment of ancient fusion reactors at poles, followed by placing iron reducing bacteria in the environment.

93NB Exploration of solar system by scout ships reveals several small bases (deserted) on moons of outer planets. These appear to be built by humans.

100NB Martian Centennial celebrated with inaugural run to Proxima and Alpha Centauri. Survey mission finds no sign of intelligent life or any habitable planets.

102NB Asteroid 1983TB is predicted to pass very close or collide with Earth in year 110NB. Plans for orbit diversion with hydrogen bombs fail when survey ship is attacked by unknown force operating from the asteroid. All ships capable of being armed are sent to neutralize the threat. Defenses are overwhelmed with nuclear missiles, leaving very little to investigate. What remains indicates the presence of a non-human computer controlled outpost. It was placed there in the distant past, presumably for the sole purpose of wiping out any developing civilization on Earth. This is mankind's first recorded contact with the race that will eventually be called the Bogeymen.

15NB Martian Republic scientists deciphering ancient texts stumble across key to interstellar travel, but are unable to use it due to more pressing needs of colony. They also discover that the equipment found here was brought in when the city was already ancient, something that was already suspected. While humanoid form of inhabitants was known, these translations conclusively proved that humans were the previous inhabitants. These dwellers, however, had no idea of who the original inhabitants were either.

45NB First Martian warp ship undergoes trial in outer solar system. Earth-Mars run using conventional ships is successful. Opportunity is taken to salvage any orbiting hardware that can be found, as indigenous production is still nearly non-existent.

103NB It becomes possible to walk in some areas of the Rift Valley wearing only a respirator and winter clothing.

141NB Most surface areas of Mars now at a pressure equivalent of 6,000 meters Earth altitude. First window broken by snowball fight. Within 50 years, atmospheric pressure with eventually taper off at about 3,000 meters of Earth altitude, and equatorial summer temperatures will be near 10^{0} Celsius.

143NB Martian scout ship finds once-habitable moon orbiting Barnard 1. It was heavily devastated by atomic weapons, and mildly radioactive hulks in orbit show evidence of highly advanced technology. Scout ship suffers major damage when it wanders too close and is hit by still-active point defense weapons, but is still able to jump home. All Martian extra-solar exploration halted for 47 years.

History

149NB Martian population reaches 100,000

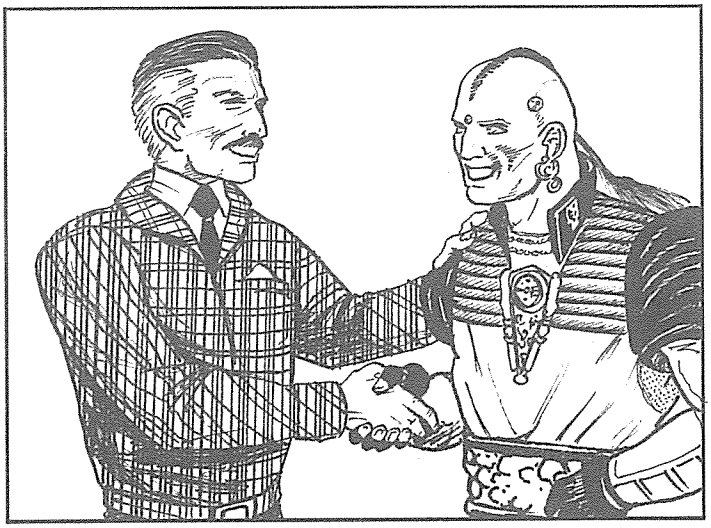
159NB Martian government takes control of now-recovering Earth. Opposition is great, but the distasteful though effective technique of "Surrender or we'll bomb you back into the Stone Age" wins out in the end. Under Martian rule, Earth will be under limited self-rule, and rise to a space-faring civilization within 30 years. Mars realizes that Earth will eventually grow out of Martian rule, and starts early at keeping both sides on good relations.

190NB Mars once again starts extra-solar exploration, using larger and faster ships, armed to defend themselves. Martian population now 500,000.

200NB Habitable planet found in Epsilon Indi system. No evidence of previous habitation is found. News causes much commotion, but there is no pressure to cause mass migration from the home system. Permanent research base is set up in 202NB.

209NB Civilization found in Tau Ceti system. Survey ship reports habitable planet, and orbital reconnaissance shows human settlements. Further work shows remnants of more advanced civilization and massive destruction. Contact with inhabitants shows them to be *homo sapiens*, stagnated at a medieval level of technology, enforced by religion and taboo. Eventual translation/interpretation shows that orbital weapons platforms laid waste to early atomic level civilization, and blasted any resurgence of technology over the next millennia or so. With few exceptions, the culture will remain rabidly technophobic for centuries.

220NB Martian expedition encounters alien ship in Procyon system. After much cautious observation of each other, it is determined that both ships are crewed by humans. Other race is from LP658-2, and call themselves *Umanus*, which translates out as people/men/humans. Similarity to *Humans* is not coincidental, with other language similarities dating back thousands of years. They have a several hundred year lead in most technology, as well as an immense industrial base. They currently lay claim to several dozen systems, and have also encountered evidence of Bogeymen, both in relict ships and bombarded worlds. Cultural and technological exchanges occur immediately. Earth gets better hyperdrive and the new antigrav technology, while the Umanus get advanced superconductors and better fusion technology. Relationships start friendly and stay that way.



232NB Martian population reaches 2,000,000. Earth population now 500,000,000. Permanent space population near 100,000.

251NB Earth asks for and is granted independence from Martian rule. Transition is smooth. Earth soon overwhelms Mars in all forms of production and exploration. Mars remains in the lead on most space-based technologies, and has the best planetary research facilities.

265NB Earth-Mars-Umanus sphere of influence extends 10 parsecs in all directions.

290NB Umanus long range scout ship crippled by unknown attackers in V-371 Orionis system. Analysis of battle tapes show evidence of Bogeyman technology. System has habitable planet, status unknown.

295NB Human controlled space now has over 50 habitable planets, most of which remain nearly empty. Aside from the Earth-Mars-Umanus group, there are 6 human inhabited worlds, none of which have space technology, although some have reached Industrial Revolution levels, and all are being brought up to modern levels as fast as is possible without totally disrupting society.

World Descriptions - In order to flesh out this outline history, here is a short background on local history and the current state of affairs for the major worlds. All of the minor, sparsely colonized or uninhabited worlds are left for GM's to flesh out, as best suits their particular campaign.

Earth - After The War in the 2016, Earth was a battered shell of its former self. The loss of life was greater than all other catastrophes in the history of mankind combined. Fortunately, most of the world's nuclear arsenals had never been tested in a wartime environment, and the failure rate in launch, guidance and detonation systems was appallingly large. Orbital defenses worked slightly better, due to lessons learned from actual use in 2006.

Those that the warheads spared faced nuclear winter and genetically engineered plagues. The southern hemisphere, which had suffered only a minor sprinkling of nukes on strategic targets, was already going into natural winter. Combined with the nuclear effects, the weather was a major disaster, with freezing cold lasting well into what should have been the next summer. The northern hemisphere fared little better. Crops that had been planted that spring died in the fields, either from radiation, blight or summer frosts. Ironically, areas with the best technology suffered the worst. The machines and computers that drove the food industry were useless, while those who were less reliant on technology had an edge. By the time the nuclear Fimbulwinter ended, 90% of Earth's population was dead, mostly in the densely populated northern hemisphere, although the southern hemisphere took a pounding as well.

Over the next century, a thin coat of civilization was painted over what was left. Whether it was any better than the previous coat was debatable. Major cities that were spared became new capitals, although the concept of nations became somewhat watered down in the struggle for survival. Those who had forces left at their control, or were able to gather them, placed themselves in charge. Over the decades, reasonably stable governments evolved, mainly based on commercial lines. No one area had the resources to push reconstruction fronts at once. Only through exchange or trade could an area hope to compete. The fact that most areas could not afford war with anyone helped force this relatively peaceful cooperation. No one could afford the material or manpower to wage war on an enemy across an ocean. The largest corporation acted as the government of the area it was in. For the average person, life returned to a semblance of normal. Everyone had a regular job, which in turn meant regular meals and a roof over their head. Work was not mandatory, but then again, no one had time to keep you from starving, either. There was no surplus to provide the luxury of a welfare system. The governments look mainly at the large scale. Laws are enforced on request, but often the victim as well as the criminal ends up on the short end of the stick. This may or may not be an effort to get people to take care of their own disputes. Regardless, the population has a strong streak of vigilanteism, and the police (such as they are) deal mainly with those foolish enough to attempt crimes against the corporation, largely ignoring street crime.

By the time of Martian intervention in 159NB, the situation had become relatively stable. Earth had reached the point where space exploration was starting again. Mars politely but firmly told everyone that Mars was in charge. What this essentially boiled down to was global trade agreements, and Martian permission to snoop on any Earth activity they wanted to. Opposition was great at first, but the Martian government held all the cards, so there was little actual choice.

The new infusion of technological developments gave a boost to Earth reconstruction, and to Martian advancement. Mars could supply brains and technology, while Earth had the manpower and industrial base to produce in quantity. While life on Earth was still appalling in many cases, the overall picture began to look better. By the time Earth asked for (and was granted) independence from Martian rule, the average Earthling was well-fed, reasonably educated and had a life expectancy nearly that of pre-War levels. Of course, advances in technology meant that a chosen few would have advantages that pre-War rich could only have dreamed of.

Cultural Overview - The following section gives brief descriptions of different sections of the globe. The back of the book contains basic maps, and will have information of the various Tech Levels (p.11) available to civilians, and the basic oppression and corruption of the government (p.14).

Overview: U.S./North America - The U.S. suffered badly in the war, first from the massive bombing, and then from the year-long winter. The least affected sectors were the American Southwest, Mexico and Northern Canada. The East Coast and Great Lakes areas were literally paved in some areas, and are still uninhabited for the most part. By the time of Martian Intervention, the Southwest was firmly entrenched as a chemical supplier, especially petrochemicals and their by-products, and home of a burgeoning computer industry. With introduction of Martian optical computers, this particular niche is fairly solid, although smaller companies occasionally make major breakthroughs.

Canada is sparsely populated, although it is connected by several overland routes and air linkages to major cities. Now that the climate has warmed again, Canada is a major food producer, largely with the help of Asian heavy machinery.

Mexico dissolved into hundreds of feudal states shortly after The War, and has resisted all attempts at unification, preferring to fight amongst themselves rather than cooperate with anyone else. They have no exports or major industry except precious metals, which are used almost solely to purchase black-market weapons, or maintain the few large war machines left, like destroyers. Travel in or near the area is considered very hazardous. Areas near the current border are usually fortified and heavily armed, and crossing in either direction is usually cause for being shot by one side or the other. However, trips across the border can be made relatively safely if you know (and pay) the right people.

World Descriptions - Earth

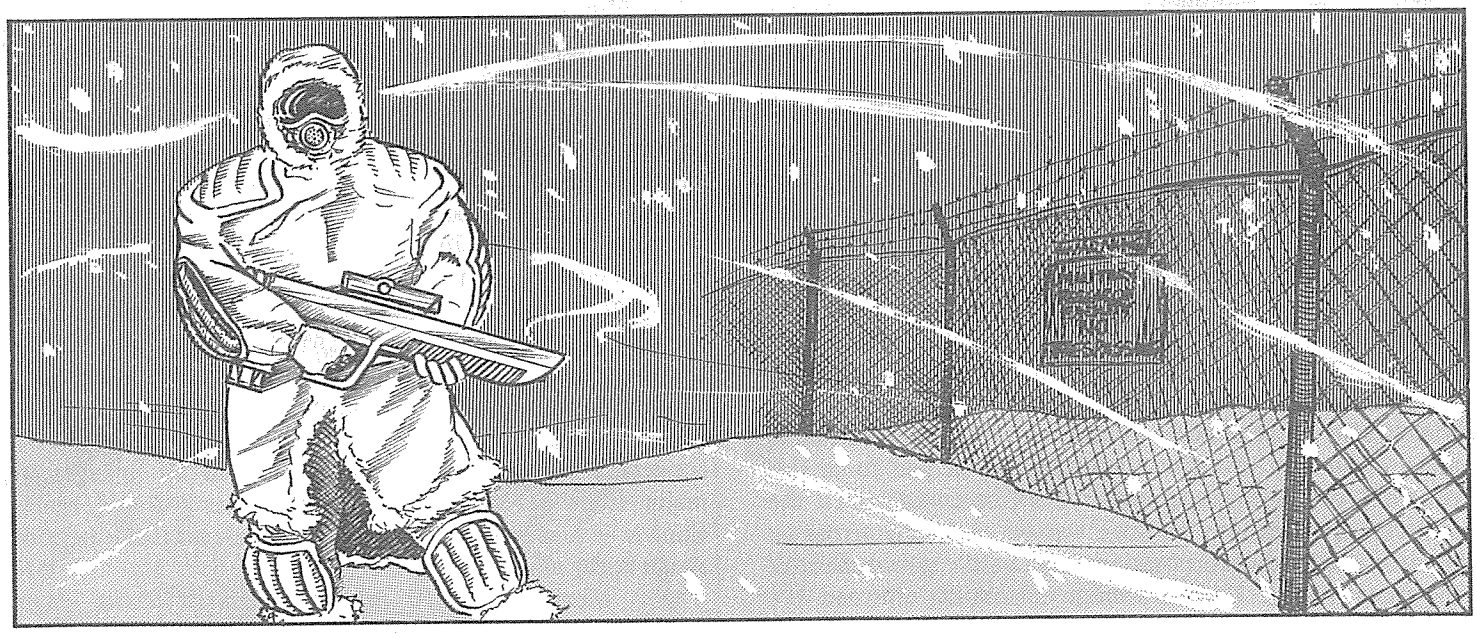
Overview: South America - The generally unstable conditions in South America were not helped by The War. It simply provided an excuse to settle grudges and implement "reforms", without any interference from the major powers. After centuries of bickering, things have returned to some degree of normalcy. It is said that the major corporations keep the area unstable, to facilitate use as a testing ground for new weapons. These rumors have not been disproved. Travelers are strongly urged to stay in the "approved" areas of cities, and armed escort outside the cities is recommended.

Overview: Europe - Europe was even harder hit than the U.S. in the war. Several countries were completely obliterated by nuclear, biological and chemical exchanges. The only real survivors were the French and the Swiss. The French pulled through because they have a large number of nuclear power plants, not all of which were hit. This remaining electrical capacity allowed a great deal of industry to continue in what was left of the country. This in turn allowed them to consolidate large amounts of what was left of Europe, although the Spanish and Portuguese are still very unhappy with French rule. The Swiss suffered few direct hits, although they did catch a lot of fallout. Their isolation and preparedness made them impossible to take by conventional means, and their large hydroelectric power reserves gave them an advantage similar to the French.

Overview: Russia - Like the U.S., Russia was hard hit by direct nuclear strikes. The Russian "economy of scale" industrial policy meant that their sole sources for many items were obliterated. Attempts at totalitarian restructuring of the State failed due to widespread discontent and an insufficient power base. The nation has split into several large countries, based roughly on geographical, historical or ethnic boundaries. Some are at war with each other, while others are attempting an independent version of the system the rest of the world currently uses. It is expected they will eventually join the other nations, although at the moment they are about a century behind everyone else.

Overview: China - China and the USSR pounded each other severely during The War. Almost all of China's industry was destroyed in the exchange. Smaller communities and a more self-sufficient people resulted in a much better survival rate during the nuclear winter period, although casualties still numbered several hundred million within the first 6 months. China has evolved into a global breadbasket and labor pool, and with some Japanese help, is working on bio-engineered life for specific environments.

Overview: SE Asia - SE Asia was relatively untouched by direct effects of The War, but more so by the indirect ones. Heavily industrialized, its sources of raw



Most of the northern European countries were especially hard hit by the nuclear winter, and weren't really repopulated for several decades. Currently, they have a small industrial base, and a large scrap and salvage industry. Many areas near Warsaw Pact countries were heavily hit, and reconstruction was hampered somewhat by the large amounts of military equipment lying around, some of it automated or booby-trapped.

France is the major supplier of all nuclear or nuclear-related technology, while the Swiss excel in production of precision machinery and optics.

material collapsed overnight. The area nearly became feudal, like Mexico, but enough government power remained intact to prevent this. After many hard years, it did start to return into the global network because of its ability to produce nearly any kind of durable heavy machinery, machinery much needed by the reconstruction efforts of other areas. Maintaining this lead after the Martian Intervention, they quickly cemented it by producing naval and spaceship hulls designed to accept French engines, to the benefit of both. Most spacecraft in use are currently produced by Asian-controlled shipyards in Earth orbit.

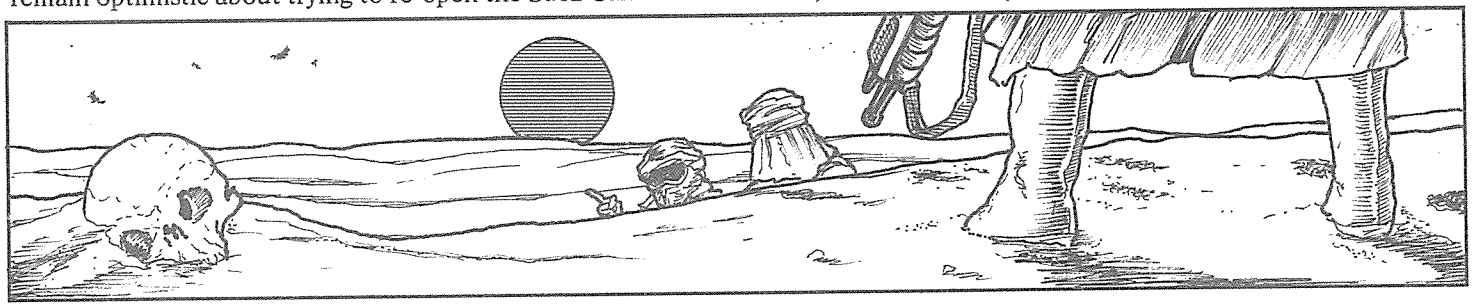
Overview: Japan - Japan fell directly in the path of a lot of Chinese and Russian fallout, which was the major cause of death during The War for this island nation. Like other nations, their recovery was slow and painful. Their semiconductor industry was more heavily crippled than that of the U.S., and their lead was never recovered. To reliably support the population during the recovery, the adjacent area of China was annexed. Minor bloodshed at first was quelled when advanced agricultural techniques began to show results. Leading in genetics before The War, they were able to engineer radiation-resistant plants to help cover fallout zones and crater areas with erosion-resistant ground cover. After the Martian Intervention, Japan quickly made a name for itself by bioengineering plants and animals for the barely habitable Martian climate. This was followed by biological breakthroughs in the human field as well.

Overview: Africa - Africa was still very much in the Third World at the time of The War, and conditions there deteriorated to the worst in recorded history. South Africa was the only area to survive as a nation, but just barely. Invaded from the north, it used its small stockpile of nuclear weapons to wipe out the invaders. Shortly after this, the current governmental system was overthrown, with massive genocide on the part of both races. With a self-sufficiency learned through long embargoes, and vast stockpiles of materials needed for high-tech industry, South Africa was able to start recovery faster than most countries. However, its small size has hampered development on a global scale. Currently, South Africa is a major exporter of specialty metals needed for advanced metallurgy and atomic applications. The rest of Africa has reverted to pre-industrial levels, with isolated centers of culture on the coasts.

Overview: Middle East - When war broke out, everybody converged on the Middle East. Major powers wanted oil, the Arabs wanted the Israelis, and the Israelis weren't too fond of the Arabs. As a result, Israel was forced to use its stockpile of several hundred atomic and hydrogen bombs, and the Libyans and others returned the favor. Other atomic nations like Iran and Iraq took the opportunity to settle old scores with each other, leaving many areas a radioactive desert. Consequently, the entire oil-producing ability of the area is either radioactive or burned out. Many areas are still uninhabited, and the remaining population consists of desert nomads. With the introduction of cheap fusion power after Martian Intervention, most interest in fossil fuel (and hence the area) was removed, although a few remain optimistic about trying to re-open the Suez Canal.

Overview: Australia - Australia only took direct hits in The War due to attacks on U.S. nuclear vessels in port at the time. Northern Australia took some fallout, while Southern Australia was especially hard hit by the nuclear-enhanced cold of the winter season. Largely dependent on foreign oil, the economy ground to a halt. Self-sufficiency in all other areas suffered as a result. Civilization never totally died, but on areas that fringed the interior, bandit attacks were common, and food shortages and cold rivaled Stalingrad for severity. As soon as it was feasible (several years), expeditions were sent to see how other areas fared. The unfortunate result was that Australia was in the position of being all dressed up with no place to go. The vast mineral reserves lay untouched for want of projects and power. Eventually, radiation in the Philippines and associated areas dropped to where these oil reserves could be exploited again, and this is where they met representatives of SE Asia, who were more than happy to find a source of raw iron for their dormant heavy industry. Soon after that, communications opened with South Africa, which began trading in the few strategic resources it didn't already have, as well as capitalizing on the larger Australian and Asian industrial bases. Japanese-engineered animals are used to take advantage of the barely habitable Australian interior, and because of this, Australia provides a great deal of the world's meat supply.

Overview: Orbit - Every last colony, space station or manufacturing plant in Earth orbit was damaged beyond habitability during The War. Many facilities were stripped bare by the technology-hungry Martians in the early years of self-sufficiency, while others made a one-way trip to Earth because of decaying orbits. In the early years of Earth's reconquest of space, many orbiting hulks were refitted or repaired and used for various purposes. Eventually, these too were abandoned as the ability to build new and better ones was achieved. They finally became the home of "space squatters", those who cannot afford the cost of space on a new facility. These could be entrepreneurs who need null-g for research, criminals not wanting to be found, independent space jockeys looking for a cheap docking space, and anyone who can make a living catering to these types. The idle rich occasionally visit them for thrills. Not all of them come back. The hulks aren't fancy, and they aren't totally safe, but they do work (most of the time). Each will usually have its own society, economy and pecking order. A huge amount of illegal activity goes on inside these relics, but since it usually doesn't affect anyone outside, no one wants to waste the time, force and money it would take to clear them out.



Those with the money use the modern spaceports and industrial complexes, 100,000+ ton behemoths of metal and composite that serve almost every need. Some are giant factories, while others might be living quarters, recreation facilities for the rich, corporate headquarters, research facilities, spaceports, etc. There are various services for regular spaceships, like transfer buses from the ground to low or high orbit, refueling stops, ship repair, brokerage services, warehouses, and of course, passenger service to any point in civilized space.

Overview: The Asteroids - The asteroid belt is a larger area than any other place claiming to be inhabited, and also the most sparsely populated. A single small asteroid will meet the Solar System's need for space-based metals for years. An icy chunk from the rings of Saturn will keep Mars in water for just as long. Aside from a few small ships exploring this area for especially valuable asteroids, derelict Bogeyman ships, or chunks of rock that may be a threat to normal space traffic, no one bothers this area of space.

Overview: The Moon - The Moon is used mainly as a mining base, transit point and communication facility. Much of the lunar soil can be refined and processed into materials needed for space travel. The extra cost of getting the material from the Moon instead of Earth is outweighed by the lower cost of getting it to orbiting construction facilities, even with cheap space travel. Likewise, it cheaper to make occasional runs from lunar orbit to Earth, than to make ships crawl all the way in and out of Earth's gravity well. There is a thriving business at the Earth-Moon L-5 point that does just that. The far side of the moon makes an excellent deep-space communication facility, as it is shielded from most of the emissions from Earth and the near side of the Moon. Massive kilometer-wide dishes dot various craters, and are used for most communication with deep-space research vessels, incoming starships and scientific bases on moons of the outer planets.

The total population on the Moon and its environs is several thousand people. Most are involved with mining or industry. Another large group is in communications, and the rest are mainly support personnel.

Overview: The other planets - Aside from a few research bases, scout ships or unmanned probes, the outer planets are deserted. Alien ruins have been found on some moons of outer planets, and research stations at these comprise many of the permanent outposts past Mars. The rest would be deep-space relays or early-warning stations in the event of hostile visitors. There are plans for an ultra-luxury resort at Saturn, but it is still at the planning stage.

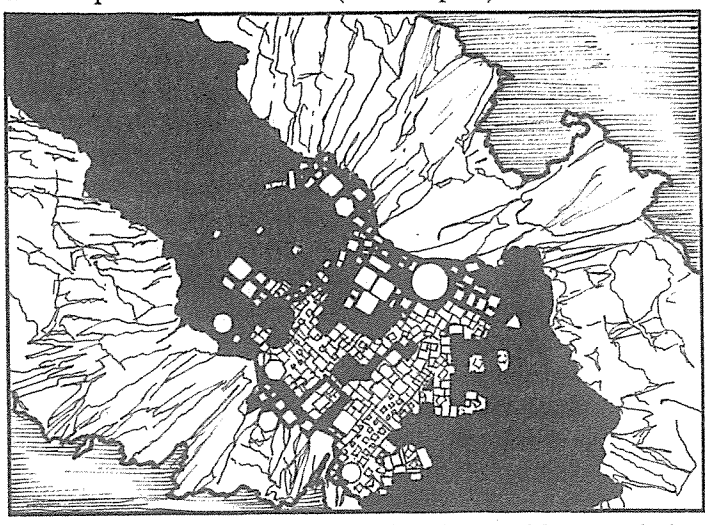
The other permanent stations are at the fringe of the jump zone for starships, out past Saturn. Many interstellar ships never come further in, but unload their cargo here, and pick up outgoing loads. A variety of companies, small and large, have a "warehouse district" here, and of course there are amenities for in- and outbound passengers. There is also a small military presence, and terminals for message ships.

Overview: Mars - Mars is the fourth planet in the Solar System. 6,800 kilometers in diameter, it has a surface gravity about four-tenths that of Earth. The length of the Martian day is 24.5 hours, which causes little inconvenience. The Martian year is 687 Earth days, and most Martians refer to their age in Martian years.

By the time of the game, the surface has been terraformed enough that one can walk on some parts of the surface in normal clothing. The temperatures range widely across the planet.

	Autumn	Winter	Spring	Summer
Equator	0°C	-10°C	0°C	10°C
Temperate	-10°C	-20°C	-10°C	0°C
Arctic	-20°C	-40°C	-20°C	-10°C

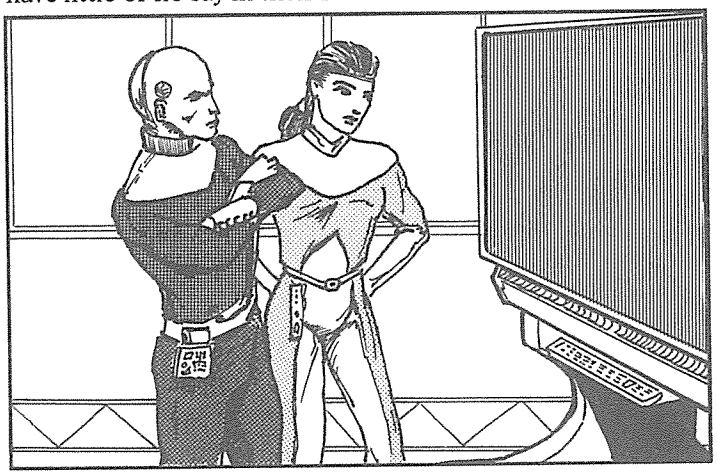
Night temperatures are generally 10 degrees less than day temperatures. The Martian winter is still severe enough in places that frozen carbon dioxide snow will fall, although it is not stable under surface conditions. The atmosphere is breathable in the lowlands and valleys, although just barely. The equivalent atmospheric pressure is like that at approximately 4,000 meters on Earth. Simply walking up a flight of stairs under these conditions is exhausting, and any manual labor is impossible without an air tank, drugs, or biological enhancement. It is impossible to climb any of the substantial Martian mountains without a full atmosphere suit or pressurized vehicle. Most settlements are in the Rift Valley, whose 6 kilometer depth increases the air pressure to a more tolerable 3,000 meter equivalent height. Even so, all dwelling areas are usually pressurized to Earth normal pressure for comfort (also see p.88).



The largest city on Mars is Primus, with a population of 500,000. It is spread across the floor of the Rift valley, which swallows it without any problem. Smaller communities dot the surrounding landscape, and independent colonies and homesteads dot the Martian landscape. Government policy allows personal claims to areas of 3 square kilometers, if the claimant has been there for a Martian year and is making use of the land. Certain areas are off limits due to Martian ruins or natural resources that the government has laid claim to for future use, but security is not airtight.

World Descriptions - Uman

Martian government is a computer-moderated democracy, with a very strong emphasis on personal rights and freedom of action. The major laws are very general, and interpretation of them is left to the people. For example, one morning your personal computer might flash that there is a question of interpretation on the qualifications for Martian citizenship. You could ignore it, answer yes, no, or look into the matter in further detail to see the background behind the question. The next day, you might be asked to vote on a minor change to that law. The public has access to all government records to verify that there is no tampering with data. Elected officials only carry out the majority opinion, and have no power otherwise. The only reason this system works is that Martians are generally highly educated and level-headed, and are taught objectivity and logic from an early age. Otherwise, the system would break down into mob rule. For this reason, Martian citizenship is not a right, but a privilege, a somewhat elitist system which has its own disadvantages, like a large underclass of non-citizens who have little or no say in their future.



Mars has two moons, Phobos and Deimos, which are little more than pebbles as far as astronomical bodies go. The escape velocity of Phobos is 11m/sec, and on Deimos it is 6m/sec, which means that a careless person can literally run off into orbit (or beyond). Both are irregular, Phobos being 28 x 20km, and Deimos being 16 x 10km. Their orbital periods are 31 hours and 7 hours, respectively. They are visible from Mars only as bright star-like points, with no features discernible to the naked eye. There is an underground base on Phobos, which serves communication, docking and some defense purposes for Mars. Deimos currently has no inhabitants and no facilities except for a navigation beacon or two.

The ancient ruins of several Martian cities are scattered across the planet, predominately within the "temperate" zone, and with some regard for what were once rivers or other bodies of water. Barely recognizable from the surface, their full extent is realized only when one moves underground. While artifacts have decayed for the most part, many structures still remain in place, with hundreds of kilometers of tunnels and passageways still intact. Ruins are off-limits not only because they are unsafe, but also because their full extent and content is unknown.

Overview: Uman - Uman is an Earth-type world orbiting a K-type star, with the Earth designation LP658-2, approximately 6 parsecs from Earth. The system has 4 planets, an inner planet, much the same as Mercury, Uman, and two small gas giants with attendant moons. The system has the usual share of asteroids, comets and other transient phenomenon.

The axial tilt of the planet is very small, so the seasons show little variation. Hot areas stay hot, cold areas stay cold. The gravity of the planet is about 10 percent higher than Earth gravity. The year is roughly 386 Earth days, and the day is 29 hours long. The day length takes a few weeks to get used to for Earth visitors, as does our shorter day to Uman visitors.

Another technological human race pounded upon by the enigmatic Bogeymen machines, they recovered swifter than Earth, and were able to make use of their own prehistoric writings and relics to bootstrap themselves into space. It was in space that they fought their first and only atomic war, sometime during our Dark Ages. The nature of the war spared much of the planet from destruction, although ground casualties from conventional warfare remained high. The winners absorbed the territory of the losers, and became the undisputed rulers of the globe. Reconstruction took many decades due to a dependence on space-based technology, and artifact knowledge, and it left a deep-seated dislike of nuclear weapons on nearly everyone. Smaller nations retained their sovereignty and international squabbles continued, but progress was not slowed down. Almost all space travel is now undertaken by the main power bloc of the planet, although minor countries have scientific contingents on the larger space bases, and their own tiny space fleets. They plot intrigue and occasionally get into violent squabbles, but not where "Big Brother" can see them.

Uman society has a lot of variation, and is best described by looking at modern Earth nations. The main power bloc is a generally open society with many freedoms and opportunities, but far from perfect. Other countries vary from oppressive to corrupt to peaceloving to idealistic. A full guide is available at any spaceport.

The Uman claim most of the habitable worlds and systems in the direction away from Earth, although this is not strictly enforced, and many systems have little or no Uman presence other than navigational beacons or small manned stations for deep-space warning systems.

Trade relations with Earth are generally good. Both planets can generally manufacture all of their own goods, and have little need for shipping, unless an item is new and demand is worth importing it rather than waiting. Most interstellar trade is in the form of luxuries or specialty items, like some people today might insist on French champagne or German cars. Of course, there is also a smaller trade in illegal items like drugs, banned electronics or weapons.

Transactions are usually by electronic credit transfer, money being subtracted from a bank on one planet, and added at another. This requires coded transmissions delivered by special courier ships, and major transactions will usually take a few weeks because of the time delay.

World Descriptions - Bogeymen

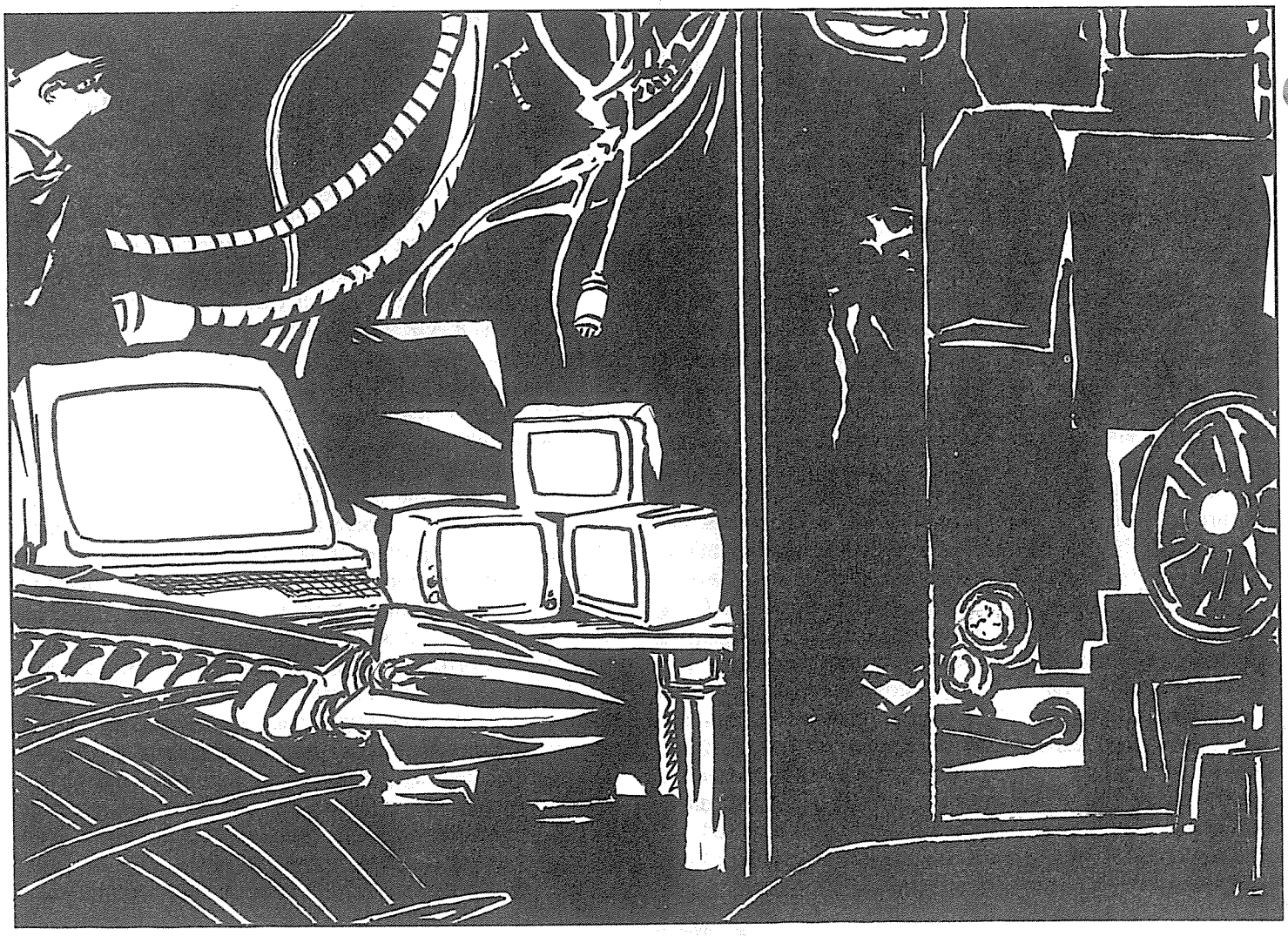
Overview: The Bogeymen - Little is known about the race Earth calls the Bogeymen. The other inhabited worlds have different names for them, usually with implications of ancient dread or evil.

All that seems to remain are their machines. Highly advanced, what little that has been obtained intact shows no signs of being beyond human capabilities, although some minor discoveries have been made, and relics fetch a high price. Some of the machines are crude, others highly complex. Many are made without any regard to appearance or standardization. They had warp engines, but some ships still used sub-light drives. Some theories maintain they simply used anything available that fit their purposes, including equipment of their adversaries. The only consistent feature of any Bogeyman device, ship or machine is efficiency at killing, and an infinite amount of patience.

Some Bogeyman installations are still partially intact, and have not been destroyed by human space forces. Usually this is because they are in remote or uninhabitable locations. There are no pressures to exploit or colonize the area, so the problem is left to whomever wants it. Or, the installation was discovered only recently, and plans are still being made. In either case, such areas are always off limits, and remote satellites constantly monitor the area for activity.

The currently accepted theory is that the Bogeymen entered human space some tens to hundreds of thousands of years ago, depending on which solar system you look at. At this time, it seems that humans already had some form of interstellar society, or at the very least were on several different worlds by one means or another, maybe not their own. The Bogeymen proceeded to pound these worlds into rubble, despite the efforts of human fleets to defend them. Some worlds were blown up, others bombarded with meteors or comets, others were hit with biological weapons that literally ate the products of advanced technology, and almost all were hit with nuclear weapons. Then, on the brink of mankind's extinction, they left, were defeated or disappeared. Before leaving, many of them left long-term plots behind, designed to hamper or destroy any rebuilding of civilization. Waiting silently for hundreds of millennia, they would strike without warning, leaving destruction in their wake.

No one has ever seen a Bogeyman, or been able to find pictures or representations of them, except perhaps as the combination of the cave paintings, legends and prehistoric writings of a half-dozen worlds. It is assumed they are somewhat humanoid in form, and between 2 and 3 meters tall. Specifics other than this depend on which expert you talk to or which legend you read.



Technology/Culture - What follows is a short background on the various aspects of life and culture the players will need to be familiar with.

Tech Levels - This term allows comparisons between items in a category or class, based solely on the advances that have occurred through time. Tech Levels in **SpaceTime** are abbreviated TL, like TL11 for an item manufactured at Tech Level 11. A higher TL almost always means better efficiency. Many geographical areas will be partially described by their TL, but remember that this is not entirely homogenous. A TL7 feudal state could be ruled by a dictator using TL10 vehicles and TL13 hand weapons.

TL	Year equivalent	Hand weapons	Communication	Medicine	Transport	Power	Money
1	Prehistoric	Wood	Speech	Bind wounds	Human	Human	None
2	10,000BC	Stone					Barter
3	3,000BC	Bronze	Writing		Animal,ship	Animal,wind	Precious metals
4	0AD	Iron	Heliograph				
5	1400AD	Matchlocks					
6	1700AD	Flintlocks					
7	1800AD	Percussion	Telegraph	Germ theory	Steamship,train	Steam	Paper money
8	1900AD	Cartridge	Telephone		Airplane	Electricity	
9	1940AD	Auto weapons	Radio, TV	Antibiotics	Jets	Fission reactor	
10	1960AD		Microwave				Credit card
11	1970AD	Auto burst	Laser	Transplants	Supersonic jets		
12	2000AD	Caseless ammo		Replacement	Orbital shuttle	Fusion reactor	Debit card
13	2100AD	Mag weapons	Neutrino	Implants	FTL, antigrav		Computer credit
14	2200AD	Lasers		Regrowth		Portable fusion	
15	2300AD	Particle beams		Aging stopped		Antimatter	
16+	?						

Computers - Computers have been revolutionized by the perfection of computers that work on light rather than electricity. They are faster, less prone to interference, and orders of magnitude smaller. A wristwatch will now hold as much circuitry as a computer that takes up a desktop, and is substantially faster. It can store the full contents of a large textbook, in print, audio or video form. In most civilized areas, they can be directly linked to major computer networks by short-range radio, allowing global access to information. They aren't cheap, though. The cost is high, and monthly usage charges add up as well. The average person only has a home computer that gains them access to the public networks, like most of us have a phone. This computer will serve the same function as the watch, but is less portable, and a bit more flexible. Major computers are complex enough that some are considered intelligent. This generally worries most people, as a computer that can break its programming can wreak global havoc faster than humans could react to it. Such computers are usually very isolated from the main networks, simply to prevent such occurrences. Most major networks are in private or corporate hands, and are not accessible by the public. This of course leads to attempts to break into them, either for information or electronic funds. Since some people deal with computers so complex that they cannot actually be understood in a literal sense, the internal architecture of a computer is "programmed" to allow representations of the real world. Once hooked into a brain-computer link, the operator can "go" to the area they need to, "riding" programs along the communication networks. Hackers using cheap black-market brain taps try to crack the computer security around the monolithic blocks of the corporate computers, hoping to score big and get out with secret information or electronic funds. Small-timers settle for pilfering small businesses or trying to pirate new software from "The Net". The danger of this is that heavy security programs can actually trace you back to the real world and fry your brains before you can cut a connection, or at the very least, find out who you are. After that, enforcers can be put on your tail.

Power - Almost all power is generated by fusion plants now, and even small vehicles can be powered by the technology. Personal devices are powered by conventional batteries, solar power or superconductor loops. The first two are for low power applications like radios, watches, or other low-powered electronic equipment, and the latter for energy-intensive applications of short duration, like weapons. Chemical and electric power still see some use, especially in the low-budget personal transportation areas.

Weapons - The advent of room-temperature superconductors in the late 20th century made possible the storage of power needed for portable energy weapons. The current could be pumped in, flowing in an endless loop until needed, when it was drawn off all at once. It wasn't until after The War, however, that the practical aspects of making the superconductors resistant to external interference were perfected. By 200NB, the technology used in starship laser weapons was scaled down to hand weapon size, mainly by Earth corporations, but also crudely copied by the black market and used in the less civilized areas as a testing ground. Early tests against pre-War weapons worked out most of the problems, and lasers are now the weapon of choice amongst spacers, and anyone else who needs to worry about recoil. For crime, they have a major advantage in that a laser burn cannot be traced to a particular weapon.

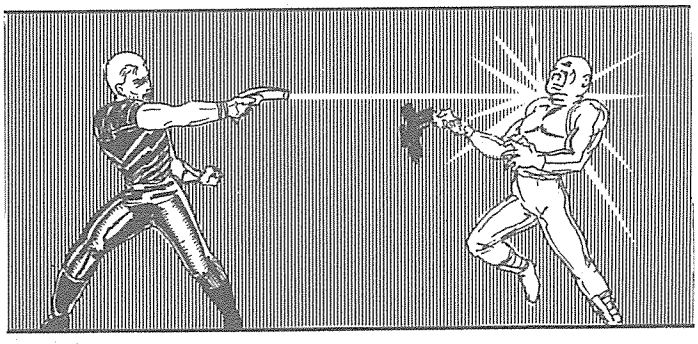
Using the same power storage technology, portable particle beams have also been manufactured. Heavy and bulky, their only advantage is that they penetrate atmosphere better than lasers, and the beam moves at nearly the speed of light. While this is good for anti-aircraft defense, it is little help to a foot soldier. So, the weapons are uncommon, but still available, just in case a situation arises that would make them the weapon of choice.

Another modern weapon is 'mag' guns, this term describing any magnetically accelerated projectile. Also powered by superconductor loops, they are a favorite in areas where there is a lot of atmospheric interference like dust, fog or smoke. Not as silent, and not recoilless, they still pack a nasty punch, and usually have a better rate of fire than lasers.

The next rung down on the technological ladder is advanced conventional weapons. These are the direct descendants of modern weapons like the G-11 and Benelli CB-M2. They will be made predominately of plastics, and fire caseless ammunition or use liquid propellants. On Earth, they are mostly leftovers of The War, or built on similar lines. They are still popular in less civilized areas, and are common as surplus weapons in the less developed nations of Uman, whose main power bloc has moved to use lasers and gauss rifles made with imported Earth-Mars technology.

Last are conventional weapons, such as are found today. These have the advantage that no high-tech industry is needed to produce the components. The tradeoff is relatively high weight and low efficiency compared to more modern weapons, although they will still kill you quite dead. They are very popular in repressive societies due to strict controls on other technology.

Other weapon developments are stunners and vibroblades. Stunners rely on a high-voltage, high-frequency electrical shock to overload the nervous system. This is delivered from the weapon via a path of ionized air made by a relatively low-powered laser, which usually leaves a tiny patch of burnt flesh to mark the hit. The damage is non-lethal, but very painful and impairing nonetheless.



Vibroblades have an ultrasonic transducer built into the hilt of the weapon, which allows the weapon to cut like an ultrasonic carving knife. The damage of the weapon is not increased, but it counts as armor piercing for purposes of penetrating armor. A vibroblade will eventually cut through anything softer than the blade. Vibroblades are favored by street gang types. While major efforts may be made to track down a crime committed with modern weapons, blades draw much less attention from authorities, and are easily available.

Weapon enhancement - Most weapons of TL12 of better will contain some amount of electronics. Almost all weapons will have laser sights, activated by light trigger pressure. Combat rifles will have night vision scopes, thermal sights or provision for mounting them. Hand weapons can be "smart", with sensors to detect a particular target type, like body heat, human shapes, etc. These give the firer a significant edge in poor conditions.

Many police weapons will be "keyed" by worn or implanted electronic tags, making it impossible for the weapon to be used by anyone other than the group or individual it was assigned to. Some special purpose weapons are gyrostabilized, a modification that makes it much easier to fire while moving. With the level of technology, a camera can be built into a weapon, and the output sent directly to a helmet-mounted display. This would allow you to stick the weapon around a corner and fire with some accuracy, while keeping your body concealed. Implant technology would let this be done with no wires, signals being transmitted from weapon to hand, and directly to the visual centers of the brain. This is *very* expensive, however.

Armor - Personal protection has advanced as well. A suit of armor that would be obvious and encumbering today is concealable and significantly lighter. The simplest form of modern body armor is several layers of high-tech fabrics, providing a degree of protection against all known forms of attack. High strength fibers to stop projectiles, cut-resistant synthetics to stop shrapnel and blades, and ablative or absorptive layers to reduce the effect of laser weapons. Another standard item is anti-laser goggles or glasses. These protect the wearer from the blinding effects of low-power lasers, although they will not stop any damage from a weapon strong enough do internal damage (3 points). For an additional price, sensors can be woven into the fabric of body armor, alerting the wearer if they are targeted by spotting lasers or other active targeting devices. Combat armors cover the entire body, and function as simple environment suits. Advanced versions of these have proximity sensors, hooked up to a special plastic weave in one of the layers. This senses incoming projectiles, and locks the electrically active plastic into a rigid state milliseconds before the impact, cushioning blunt trauma, while still allowing a flexible suit.

The next advance (TL14) is automatic camouflage, or the chameleon suit. This adjusts to blend with any background, both visually and thermally, making the wearer difficult to spot. This gives the wearer camouflage benefits both to be hit by weapons or to use of Stealth skill (p.39).

The next advance is the idea of powered armor. This is not used often, as the expense makes them obvious targets. However, they do have specialized uses, such as assault teams, commandos or ultra-elite security guards. A suit of powered armor is about 3 meters tall, and has the firepower of a modern APC. They are almost always hooked directly into a brain-tap, and have computer enhanced skills and reflexes. Able to categorize threats instantly, it has several point defense mechanisms to prevent such simple counter measures as anti-tank rockets.

Spaceships - By the time of the Second Battle for Mars, fusion technology was well into a practical working stage. Used for both electrical power and thrust, fusion reaction engines were used exclusively by Earth and Mars until the technological trade with the Umanus that allowed antigrav technology to start. The plasma exhaust is used for low-g acceleration and fuel economy, like interplanetary runs, or drives that vaporize water are used where high short-term acceleration is required, like planetary liftoff and military vessels. The cleaner grav technology is preferred for any ship that can land on a planetary surface. Many old fusion powered ships became obsolete with the introduction of antigrav, and while almost all were retrofitted, they are not as efficient, and are less expensive than might be expected. "Less expensive" is likely to be a relative term to characters, when the cost for even a small ship will be in units of megacredits...

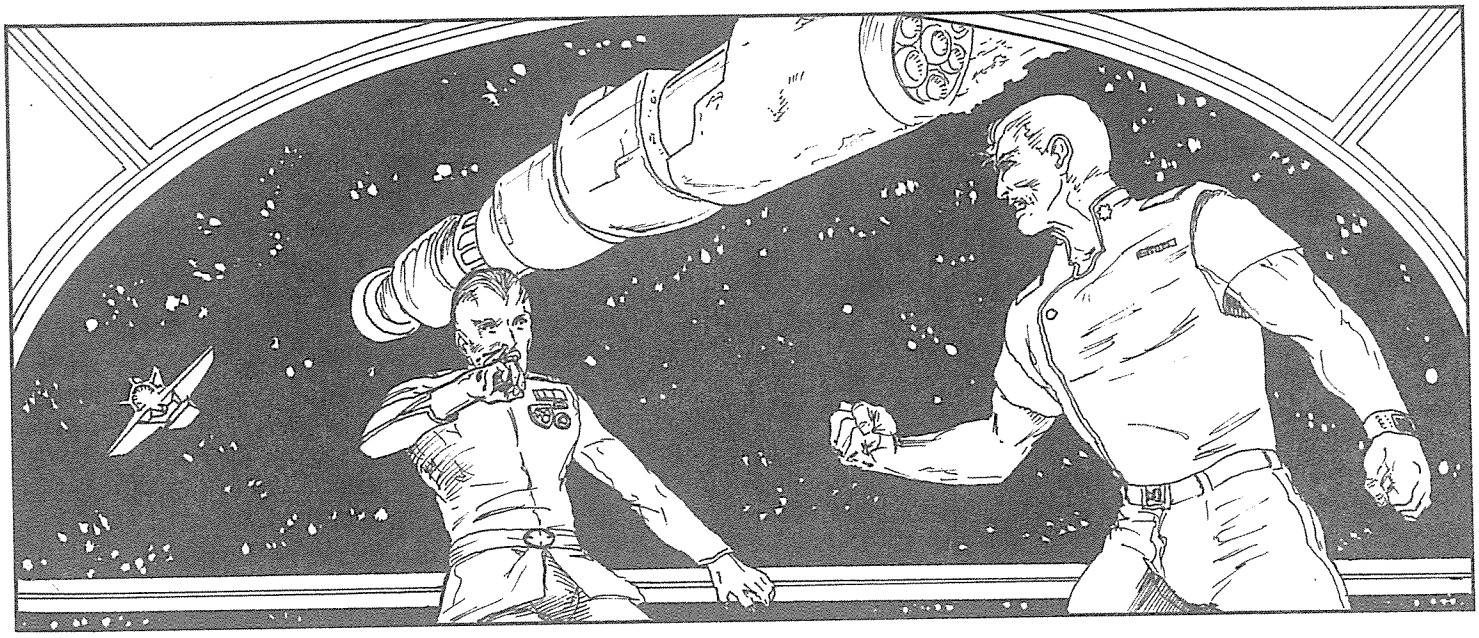
Mars developed hyperdrive from deciphered ancient texts, as did the Uman. Once the theory was understood, the drives themselves were built. The drives work on a tunneling principle that bypasses the speed of light, allowing ships to travel interstellar distances in reasonable amounts of time. As drives improved, power consumption and transit times decreased, but the major limitation on the drives remained, that of sensitivity to outside gravitational fields. Anything with a positive or negative gravity field of greater than roughly a millionth that of Earth will distort space enough to keep the drive from operating. In our solar system, this means that you have to go out to nearly the orbit of Uranus before your hyperdrive will kick in. It also prevents ships larger than about 50,000 metric tons from using jump drive due to their own gravity fields. While in-system ships can be larger than 50,000 tons, there are no interstellar behemoths. In comparison, the Soviet *Typhoon* class nuclear submarine is about 30,000 metric tons. One side effect of this sensitivity is that with Umanus grav technology, one side can force a battle by creating a small, but sufficient gravity well, preventing opponents in a certain radius from jumping out.

At TL15, jump drives reach a plateau of efficiency, which may or may not be an ultimate limit. Since no known human race has discovered jump drive independently, there are no other viewpoints. Even much of current knowledge is simply using ancient designs the way they were meant to, rather than the early attempts to just get something that worked. Rumors of TL16 technology is like a holy grail for explorers, but none have returned with it. Of course, if they had, it would be one of the best kept secrets in history anyway, as it would doubtless have incredible profit potential.

Navigation of starships is a matter of "point and shoot". A ship is brought up to velocity, aimed at the destination, and the drive engaged. Since ships in "hyperspace" are blind, you must know when to cut the drive off, based on your "speed" and distance to destination. Since interstellar travel is simply a matter of time spent in "hyperspace", there do not need to be set jump routes. However, the error introduced over long trips can be substantial, and both overshooting and undershooting are expensive in time (and money), as is popping in and out of hyperspace to take bearings. Most ships travel pre-determined routes, whose paramaters are constantly updated. They may be slightly longer in distance, but this is made up for by the reliability of the travel. Besides, there are usually profit opportunities at any habitable system.

Given the relative inexpensiveness of fusion power, it is not difficult to build a starship. However, any spacecraft will be expensive, and beyond the reach of all but the wealthy, a state the characters are not likely to achieve for a while. Anyone who today could buy a private jet could own a small starship or spaceship, and anyone who could buy a tramp steamer could own a similar quality starship capable of paying for itself in cargo runs over a period of 5-10 years.

Detailed rules on space combat will be covered in a supplement. Most space combat is unlikely to provide much role-playing, as most decisions will be made by computers. If you think about it, a SFRPG needs spaceship rules no more or less than a modern RPG needs rules for naval combat.



Wars - Mars is not expansionist, so it seldom conflicts with anyone else's desires, and of course is adjacent to its big blue brother, the Earth. Earth is run by commercial interests. War is not profitable, therefore Earth avoids them. Rivalry and competition is usually kept to an individual level. Most market changes and new technologies are usually under the control of a few key people, and they are the ones that count. Those that are in charge are usually invulnerable, but there are countless important people who cannot be so fortunate. Kidnaping, blackmail, extortion and assassination are the Earth way of warfare, and are seldom, if ever made open knowledge, although everyone "knows" that is the way things are done. Small cadres of specialists and free-lancers are the troops in the behind-the-scenes corporate wars.

Of course, there are still areas on Earth where corporate interests do not go, and areas that refuse to come out of the War-imposed Dark Ages. These are minor nations and kingdoms, who are still squabbling over century-old disputes and meaningless racial differences. Any of these can usually be considered a war zone, although full scale conflicts are rare due to manpower and material limitations.

Organized crime is probably the second most powerful influence on Earth, and is trying to extend its reach to the stars. While organized crime as a whole has as much influence as any mega-corp, it is split up by territoriality, and personality clashes within. So, it usually has a high local influence, but is unable to extend that beyond the domain of the local leader. While corporations may rule by using credit, organized crime may also rule by intimidation. Many "enforcers" are genetically or electronically augmented, and are bad people to antagonize. The local syndicate is also the usual source for any illegal augmentation of player characters, as they have access to the equipment and talent needed for complex operations. Of course, results are not guaranteed...

Umanus is on good terms with Earth and Mars, as they do not compete for anything. There are more habitable planets and resources available than there are people to take advantage of them, so compromises are easily made. The minor Umanus nations are another matter. Somewhat like current South America or various African states, they seem to argue just for the sake of it. The main Uman power bloc watches from the sidelines, not wanting to get involved with conflicts it cannot resolve except by force, because a militarily imposed peace would only cause resentment on all sides. They do engage heavily in espionage, to ensure that nothing big can happen without their knowledge. For their part, the minor nations are content to try and keep their disputes away from the watchful eye of the main government, and engage in more subterfuge than actual warfare.

On the other worlds with indigenous populations, most are still in a very nationalistic phase of development, and Uman, Earth and Mars have neither the manpower or material to enforce global peace on low-tech worlds. Rather, they try to choose the best country to uplift into the modern age, and try to keep it from being mobbed by the rest. It is hoped that once everyone sees the benefits of technology, they will settle down. Anyone who uses advanced technology for belligerent purposes has their supply cut off, which usually is a effective deterrent if smuggling can be kept to a minimum. Until global uplift is achieved, however, there will be hostilities and warfare between countries, and sometimes off-planet interests are involved as well.

The Law - Like Tech Levels, areas may also be described as having a certain level of government. Again, any large area will have local pockets of variation, and different countries will almost always differ in some respect. The scale ranges from 0 to 5, on the scales of oppression and corruption.

Example - A Law Level of 1/2 would mean an oppression index of 1, and a corruption index of 2.

Oppression 0 - There is no law to speak of. The area is too sparsely inhabited to have any settlements or government, or a state of total anarchy reigns. The only law and order is what an individual can force upon their local surroundings. Anything is available, either taken by force or by money.

Corruption 0 - Corruption in the normal sense does not apply. There is no one to be corrupted, or local loyalty is a matter of fanaticism or belief, with very few corruptible individuals. However, any transaction resulting in profit for an individual or group is common, so anything can be had, for enough money.

Oppression 1 - The government is barely in control, and probably rules by force. Armed soldiers are a common sight in the streets, as are armored vehicles. Citizens have no rights, and all weapons are illegal. Arrests can be made on any pretext, and suspects detained indefinitely. Human rights are unheard of, and justice does not exist.

Corruption 1 - The government is very lax and corrupt. Anything appropriate to the TL of the location can be purchased illegally, and the only reason to be arrested for a crime is if you don't have money for a proper bribe. Any illegal activity can be done openly if the proper people are paid off. The government is a puppet of the highest bidder.

Oppression 2 - The government rules by force. Citizens have some rights, but these are regularly ignored by the government if the need arises. Travel is restricted, weapons ownership is restricted to household items like knives, and there is an active secret police force with nearly unlimited power.

Corruption 2 - The government is in control, but very lax, corrupt or both. Private interests hold great sway over the central government, but do not have enough power to topple it or assume outright control. Most items can be purchased illegally. Many non-violent crimes can be committed openly, including carrying weapons of some types (varies with locality). The only crime that can't be bought off is any threat to the current government (treason).

Oppression 3 - The government rules by the will of the people, either by consent or election. Opposition to the government is permitted, but possibly discouraged by various legal means. Citizens enjoy basic rights of speech, press and expression, although they may be arbitrarily censored

without recourse on subjects the government does not wish to make public. The government enjoys great power to control and monitor the lives of individuals, with or without their consent, but does not make these means common knowledge. Ownership of weapons is by permit only, and is restricted to weapons less effective than used by the local policing force. (Will your characters qualify for permits?)

Corruption 3 - Corruption is officially discouraged, and sometimes prosecuted. Any such dealings are usually done less openly, or through intermediaries. Enough officials are honest enough that prior investigation is a good idea. Openly illegal activities are restricted to "victimless" crimes. Most items can be bought on the black market, but any military equipment of the current TL will be very scarce.

Oppression 4 - The government rules by the popular will of the people. Opposition to the government is allowed in any form except violence. Basic rights of speech, expression and travel are highly regarded, although they may be curtailed arbitrarily in time of emergency. Justice is well developed, and usually considered fair and equitable, although the powerful and rich usually find it fairer than the average person. Weapons ownership is usually by permit, and private individuals of good standing may own modern hand weapons, and older (at least 2 Tech Levels lower) vehicles, but probably with heavy fees or taxes. Citizens with demonstratable need may get permits to publicly carry concealable hand weapons.

Corruption 4 - Corruption and bribery is scarce, but still operates. Many times it requires using loopholes in existing laws, or insulating intermediary steps. Certain corrupt practices may exist in approved form within the government, but these are strictly defined, and usable only by certain government officials (pork barrel politics, etc.). The government is strict enough that shortages of dangerous items are noticed, so modern military equipment is very difficult to find on the black market, and commands a high premium.

Oppression 5 - The government is almost an extension of the people's will. Officials govern only as much as they must, and the government is run like an efficient business, by ability rather than seniority, wealth or power. Personal freedoms are virtually unlimited, and policy is designed to protect the individual. Citizens without criminal records may carry weapons openly, although it is still frowned on. Anything except current military equipment may be bought if you have the money, but the government keeps elaborate records tracing all purchases. Nearly a Utopia, and almost requires a tolerant and informed populace to succeed for any length of time. This may lead to some degree of elitism, or a sub-class of "non-citizens" who are more oppressed than others.

Corruption 5 - Corruption is actively discouraged and very uncommon. Stiff penalties and vigorous enforcement make it very difficult to bribe any government officials. Private individuals are somewhat easier to bribe, but to be caught accepting a bribe may be a lifelong social stigma, and most people will have little trust for someone with that reputation.

You will see that some of these ratings go very well together, while others require a special rationale. For instance, the stereotypical banana republic would be a 2/2. The US might be a 4/4, while Britain could be a 3/4, Russia a 2/3 and China a 2/5. Beirut might be a 0/0. The numbers for an area represent the effects on the majority of the people. A richer or more powerful sub-class would probably be less oppressed by one level, and a despised minority might be more oppressed by a level. It is more difficult to have a country that has a higher oppression index than its corruption index. How many countries can rule equitably with rampant corruption? It is much easier for an oppressed society to move to illegal means of getting things done. However, many governments in **SpaceTime** do seem this way, because the governments are corporations or conglomerates. Everything is done on the basis of the eventual financial return. If lax law enforcement in the streets allows a thriving black market, that may keep the populace happy, and save on law enforcement costs. It also provides a ready pool of "talent" for tasks the corporations don't want to be directly involved in. Corruption is controlled by the simple expedient of computerized tracking. If you knew the government kept track of every credit you earned and spent, *and* every time you went "outside" (to the streets), you would be wary of cheating.

In general - Through most of Earth/Mars/Uman space, laws or enforcement is usually lax on the "commoners", and while the governments might not stress individual rights, there is much freedom of action. The government has certain rights and privileges, and rules on what can and cannot be done, but for the most part, these are to preserve the continuity of the government through such means as taxes, certain mineral rights on new planets, etc. For personal actions, if you can demonstrate a need for your actions that doesn't infringe on someone else's rights, you can probably do it. If you carry a sub-machine gun down the street, it might be legal...if you can give a reason why you need to. Usually this needs to be backed by the authority of someone with some pull, or the local cops (who are more heavily armed) may dispute it. A full suit of body armor is also legal, but people will probably be a little less open with you, thinking you are from the authorities. An openly displayed knife may not even bring notice, as by its nature you have to risk yourself to use it, and it is no match for any military or police authorities.

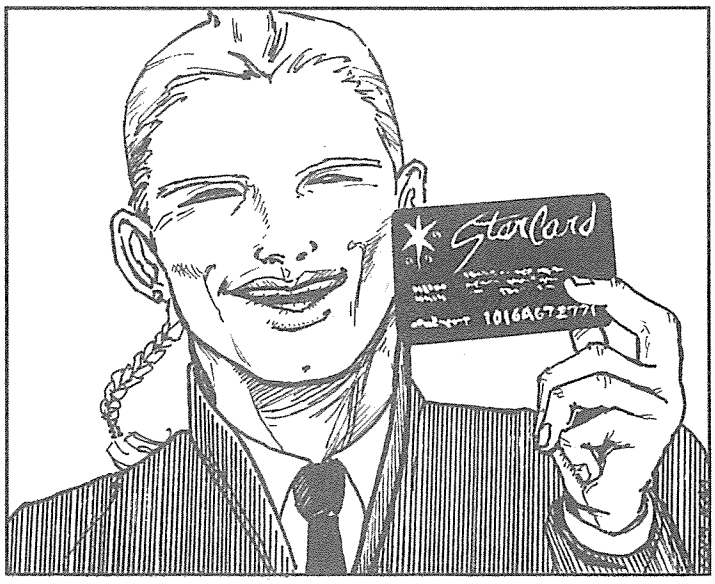
This is of course, only the average level of the law. Many private enterprises have their own codes, and the more paranoid those in authority, the less likely large amounts of force will be legal. In some places, even simple augments are illegal unless previously registered with authorities, and they are easily detectable in most cases anyway.

Getting away with a crime can be more difficult. Any traces left at the scene can be used to help fingerprint a suspect. Flakes of skin or hair can be analyzed as to their genetic structure, and computer modeling can give a good description of the person by doing the computer equivalent of a clone. Or, electronic sniffers can be set to follow the

scent of a person through even a busy city, unless precautions are taken. Any electronic traces left can be backtracked to their source, and woe be to anyone foolish enough to use their own name, or commit a computer crime from their home address. If a person is strongly suspected and can't be found, all their assets are put on hold, forcing them to surface in many cases.

Punishment depends on the crime, and the effort spent in apprehending the criminal. Guilt or innocence is quickly determinable by drugs and/or brain scans, although most who are guilty will confess to avoid having to pay back the cost. A usual punishment is to do a simple brain implant locking the person into a small geographical area and a certain job until the cost of the crime and investigation is paid for. This can easily take years, but keeps the person a productive member of society. Other crimes are punishable by death, although anyone being chased for such a crime usually doesn't make it to a formal execution, especially on Earth, where things like trade secrets are *very* strictly enforced.

Less civilized areas use more traditional methods, like imprisonment, forced labor, physical mutilation or even death...at least more openly than "enlightened" cultures do.



Money - Money in **SpaceTime** is in the form of credits, a generic unit of currency roughly equal to a current dollar in buying power for game convenience. Larger units of currency are the kilocredit (KCr) and megacredit (MCr). All official transactions are carried out through use of electronic credit or debit cards. Even among the dregs of society, card use is common, for reasons of security and accessibility. A credit card accesses any bank accounts or other items with credit value you have on reserve on a given planet, and purchases or services are automatically subtracted from your total. They can be used from anywhere that has a credit terminal hooked up to planetary computer net, which is about anywhere. This has the disadvantage that anything you do requiring money can be traced to an exact location and time, not a problem unless pursued by the law or doing something illegal.

Debit cards are identical in operation, but have a given amount of money preprogrammed into them at the bank of purchase, which is physically removed from the card's record as it is used. This can be used the same way, but does not leave a trace of the user, although detailed computer searches can usually pin down the possible users. The disadvantage is that if stolen, anyone can use it.

Last is straight money. Not legal for trade in most areas on Earth, Mars or Uman, it is the currency of the black market. Totally untraceable, it is used when you don't want to have a purchase known. Money and electronic credits can be interchanged, but there is usually a 50% loss in the laundering to cover the risk involved.

Travel - Travel is fairly cheap, although major journeys are not to be made lightly. Within a city, 5Cr will get you from one point to another using public transport, and will generally move at an average of 10kph. Station-based transport, like a subway, is more limited in its destinations, but moves at an average of 40kph. Private ground transport, like a taxi, will cost 5Cr per kilometer, and moves at an average of 20kph. Aerial point-to-point transport, like a grav taxi, will cost 25Cr per kilometer, but will have an average speed of 100kph, and can land about anywhere.

Personal vehicles will have about the same cost in credits as a vehicle today would in dollars, with additions made for compactness or performance. A car might cost 10,000Cr, but a grav car would be the equivalent of a modern helicopter, and might cost 50,000Cr. A personal jet might be 2 or 3MCr, but one with orbital capability might be 3 or 4 times that. As always, you get what you pay for.

Transport between cities is almost always by air, although freight sometimes still takes a surface route. Air transport will cost 1Cr per 10 kilometers traveled (minimum of 20Cr), and includes 50kg of luggage. The average speed is 600kph. This counts time lost due to delays and normal procedures. This is for cheap seats, purchased in advance. First class costs double, as does trying to get on a flight at the last minute. Transcontinental or oceanic flights may take suborbital shuttles, which go 3000kph, but cost 1Cr per 3 kilometers.

Transport to low orbit costs 2,000Cr going up, and 1,000Cr going down. Assume half an hour each way. This will place you at a shuttle station in low orbit, where transfer tugs can take you to various other destinations. Elsewhere in low orbit will cost 200Cr. To the lunar transfer point at L-5 will cost 1,000Cr going up, and 500Cr going down, and will take about 4 hours. This cost applies from the Moon to L-5, as well, although the travel time is halved. Martian flights to Earth or other systems start from low orbit.

From the transfer point, one can book a flight to other systems or Mars. Specialty trips not covered by normal flights require chartering a ship. Tickets to or from Mars will cost from 2,000Cr to 6,000Cr and take from 2 weeks to a month and a half, depending on orbital configuration. Tickets to other systems will generally be at the rate of 5,000Cr per parsec, and will take a while. Usually it takes about 2 weeks to reach the orbit of Uranus, where the

interplanetary shuttle drops you off. Then you board an interstellar liner, which takes about 3-5 days per parsec of distance, followed by another two weeks to get to the destination, via another shuttle. Most ships do not exceed 1-2% of the speed of light when accelerating out-system. Going faster would decrease the time spent, but fuel consumption is increased. Chartered flights can be significantly faster, if you wish to pay for the extra wear and tear on the ship.

Costs from other systems (ground, orbit, intersystem, etc.) are generally the same. The only regular travel routes are to the inhabited worlds, and they usually average a flight or two a month, although positions are available on cargo ships at irregular intervals.

As for ground travel, special arrangements like first class accommodations, extra luggage, etc. will cost extra.

Travel mode	Speed or travel time	Cost
Public transport	10kph	5Cr
Subway	40kph	5Cr
Taxi	20kph	5Cr/km
Grav taxi	100kph	25Cr/km
Airliner	600kph	1Cr/10km
Transcon shuttle	3,000kph	1Cr/3km
Low-orbit shuttle (up)	30 minutes	2KCr
Low-orbit shuttle (dn)	30 minutes	1KCr
Orbit taxi	30 minutes	200Cr
L-5 shuttle (up)	4 hours	1KCr
L-5 shuttle (dn)	4 hours	500Cr
Mars shuttle	2-6 weeks	2-6KCr
Interstellar flight	4-6 weeks	5KCr/pc

Lodging - Lodging costs vary on type and location. A "coffin" bunk will run 20Cr a night. This is a 3 meter by 1.5 meter by 1.5 meter cubbyhole with a bed and public access video terminal. A regular hotel room will cost 40Cr a night, and is equivalent to a regular hotel room, with the ubiquitous computer terminal. 80Cr a night or more gets first class lodging, with room service and other facilities (for an extra fee). Lodging in orbital facilities will cost 3 times as much, partially because of increased costs, and partially because they have a captive audience.

Lodging	Notable amenities	Per night
Coffin bunk	Vidphone	20Cr
Medium Hotel	Bath, vidphone	40Cr
First class	Sauna, gym, discreet room serv.	80+Cr

Food - Food costs are whatever the characters feel like paying. Eating out will cost a minimum of 10Cr per day, and for high class food and good service, up to 100Cr a day, but the upper limit depends on the location and rarity of the items served. As for lodging, costs in orbit are tripled.

Meal type	Per meal
Self-heat meal pack	5Cr
Fast food	3Cr
Medium quality restaurant	15Cr

Communications - No means of communicating faster than light has been developed. Messages within a system are sent by radio, comm laser or neutrino pulse, and any message going between systems must be sent by courier ship. These usually operate from remote bases at the fringe of the jump zone. Messages are sent out by radio or communication laser and saved on computer. Once every few days, a ship will depart from this base to the jump zone of the next system. There, it will drop the message off at a similar base, which radios the information to the inner system, where it is delivered. Communication costs follow:

Location	Cost per minute
On planet	1Cr
To orbit	5Cr
Within system	25Cr
Outside system	100Cr

For package delivery, there are various private companies that have regularly scheduled flights to most areas. High priority packages like personal mail, chips, etc. cost 5Cr per .01kg (2-3 pages). Cargo costs about a Cr per kilogram, but this varies, depending on the space taken, and the sensitivity to heat, cold, vacuum, etc.

Augments - Medical, computer and biotechnology in **SpaceTime** are at a very advanced level. Things are advanced enough that a person with enough money can have their body restructured almost at will, with implants to improve memory, skills and attributes without long and arduous training. However, they are only additions to whatever base level a person has. The better the person is to start with, the better the final product. Examples follow.

Brain Implants - While we of the 20th century might cringe at the idea of someone messing around inside our heads, it is done without a thought in **SpaceTime**. Advanced optical computers are small enough that the space they take is negligible, and power requirements low enough that they will run off the temperature difference between your skin and the inside of your skull. A socket is placed inconspicuously behind an ear, allowing use of various memory modules or a hookup to a larger computer. The usual limit is one socket, as the brain can only accept so much input at once, although a person could have several sockets and switch between them. A memory module is a glass-like chip about the size of a fingertip that fits into this socket. It will contain as much information as a college level textbook, all cross-indexed and instantly accessible. The basic implant sorts your thoughts, and brings any pertinent information instantly to mind.

Modules can be bought for any field, although some are only available on the black market. The net effect of using a module is to *add* 10 to any level of the appropriate skill as long as the module is in place. For skill increase purposes, only half the number of points are gained, but they add to the skill the character has *without* the module. The full addition the module gives may not be gained immediately, depending on the skill, as there may be a familiarization period. This is especially true with many

physical skills, where the mind knows what to do, but the body is not properly trained to take full advantage of the knowledge. Modules cost at least 2KCr each, usually more.

The implant itself allows the brain to use it as a microcomputer, with useful features like appointment calendar, alarm clock, important facts and figures, and the ability to store for later audio or video playback as much information as you could find in your average paperback book. The net effect of all this is a permanent addition of 2 to the Intelligence of the character.

The cost of a standard brain implant is 50KCr. The surgery, recovery, and training to use the implant will take about a week. Much of this cost is real, as it is a complex procedure. However, implants can be had through criminal or black market connections for significantly less. The discount and risks are left to the GM.

Enhanced Senses - Any sense of the body can be biologically or electronically enhanced. Sometimes this is a simple augmentation of existing senses, or for very high levels, complete replacement of some functions, like video cameras for eyes (cosmetically identical), etc. The cost is 10KCr, times the *square* of the addition to the attribute. Sight Perception is half cost, other senses are quarter cost.

Example - An *addition* of 5 to sight Perception would cost (5 x 5), times 5KCr, or 125KCr.

The maximum addition to a sense is 10 more than its current natural level. Additions to the attribute that exceed human capabilities cost double. The level of the extra-human sense is *only* the level bought.

Example - In the previous case, being able to see just as well in the dark with the additional 5 points of sight Perception would cost 250KCr, and the level of sight Perception at night would only be 5.

Other Enhanced Attributes - All attributes except Power and Intelligence may be enhanced up to 10 points, at the same cost as for the various aspects of Perception. The means to do this vary from cosmetic surgery to implanted drug injectors to replacement of nerves with superconducting cable. For some things, the increase is not obvious, like for Willpower. For others, like Strength, the addition may range from obvious to very obvious, depending on the amount of the addition and the previous state of the recipient.

Only people with lots of money or who are very valuable to someone else get high level augmentation. In the latter case, it is usually because they are very good to begin with,as no one spends a MCr on a person who is just average.

Other Augments - Almost anything can be built into the human body. How obvious or detectable it will be is up to the GM. Cost of special purpose augmentation will vary with the type, but the cost increases with the square of the effectiveness. See the samples below.

Implant	Cost	Implant	Cost
Intensifier sunglasses	2KCr	Power 2 transceiver	2Kcr
Finger blade (3I)	2KCr	Palm stunner (30V)	10KCr
Forearm blade (6I)	5KCr	Armor (per loc.)	100Cr/pt^2
Forearm gun (VS/2)	8KCr	Optic nerve HUD	50KCr
Biomonitor w/radio	5KCr	Alloy vibroteeth	10KCr

Medicine - Medicine in SpaceTime is advanced almost beyond imagining to us of the 20th century. If a person gets hospital or paramedic attention (And has the credit to pay for it) before brain death from oxygen starvation, they will live. Period. The only thing that can't be repaired is a destroyed brain. (In game terms: A fatal result to the head is a one-way ticket to a new character.) Just about anything else can be regrown, repaired or replaced with a matching biological or mechanical replacement. However, the cost is staggering. Lost function on the whole body can be replaced at the same cost as an augmented sense or attribute, without the limit on maximum addition. Partial loss of function, like loss of a limb is proportionally less. A limb would be at one-quarter cost, while a hand might be an eighth. Replacement of organs could easily be 100KCr each.

Example - Reed Quetzal has the bad luck to fall on a grenade. This blows out all his internal organs, rips out his spine and riddles his arms and legs. Fortunately, he had a built-in biomonitor, which broadcasts a signal on the hospital band. The hospital checks his credit rating and sees that he is worth picking up. A mop-up (sorry) crew gets there within minutes and plugs what is left of him into a life-support unit. He's alive. Now the bad news.

Figure it will cost him a MCr to have his organs replaced. If he had a Strength and Dexterity of 10, it would cost 2MCr to have these Attributes raised back to normal levels. Touch Perception will cost a few hundred KCr to raise back to 10. In addition, you can assume his Appearance went to 0, so throw in another 1MCr to cover the scars. You could say that since this is whole body damage it will take four times as long to heal and figure out the time needed for an impairment of 20, or just keep him in the hospital a few months and let him out when you think he is ready. The bill so far is about 5MCr, and this doesn't cover things like damaged ears or eyes (Sight and sound Perception). The hospital will know how much money he has, and not give him a credit more than they can get from him.

First Aid - First aid or emergency room treatment can also put a character back on the streets fairly quickly. Basic medical attention costs 50Cr, times the *square* of the impairment.

Example - An impairment of -1 would be 50Cr, a -2 would be 200Cr, and a -3 would be 450Cr.

The effect of such treatment is that the character is stitched up properly, stuffed with drugs to promote healing and fight infection, and kicked back onto the street. As long as the character does not injure the location again or subject it to poor conditions, they will be counted as getting trained medical attention for a number of days equal to the TL/3(d). The impairment may actually be reduced temporarily by drugs, but in such circumstances the character is more likely to strain the injury again, a factor which the GM will need to deal with on an individual basis.

First aid/med kits will be rated by the bonus they give to First Aid or Medicine skill. On a successful Medicine or First Aid roll, The appropriate part of the kit's bonus(u) may be used as a modifier to Constitution for healing purposes. This must be repeated each day.

Terms and Conventions

Conventions - Before we get into character generation, you may need to familiarize yourself some terms that will be used frequently in these rules. The most common ones are below. Whenever a die roll is indicated has a number in front of it, like 1d6, it means to roll that quantity of the given die type and add the results together. If it has an addition or subtraction after it, like 1d6+1, it means to add or subtract the amount to the final total.

Term	Meaning
d2	Roll 1d6, 1-3 equals 1, 4-6 equals 2.
d3	Roll 1d6, 1-2 equals 1, 3-4 equals 2, and 5-6 equals 3.
d4	A 4-sided die.
d6	A cubical 6-sided die.
d8	An 8-sided die.
d10	A 20 or 10-sided die with numbers 1-10(0)
d20	A 20-sided die with numbers 1-20, or roll 1d6 and 1d10. On the d6, 1-3 means 0, and 4-6 means add 10. This is the most common die used in the game.
d50	Roll as d% and divide tens digit by 2(d).
d%	Roll 2d10. The first die is the tens digit, and the second is the ones digit.
(u)	Round up. Round the number up to the nearest digit indicated. If none is indicated, round to the nearest ones digit.
(d)	Round down. As round up, but numbers round down instead.
(n)	Round nearest. As above, but round to the nearest digit. .5 or larger rounds up.
m	Meters. 1m equals 39.37 inches
m^2	Square meters.
m/sec	Meters per second. 1m/sec is about 2.2 mph or 3.6kph.
km	Kilometers. 1km equals 1000m or about 5/8 of a mile.
kph	Kilometers per hour. 1kph is about 5/8mph.
kg	Kilograms. 1kg equals 2.2 pounds.
TL	Tech Level. The level of technology need to produce a given item. Also used to describe cultures in general.
G,gee	Gravity. Either term may be used. One gee is equal to the gravity at the Earth's surface. G force will affect how much a character can lift, and special skills may be needed to move in low/high gee environments.
AU	Astronomical unit. The distance from the Earth to the Sun. About 93 million miles, or 149 million kilometers. Used primarily for planetary distances.
ly	Light year. The distance light travels in 365 Earth days. About 6 trillion miles, or 9 trillion kilometers.
pc	Parsec. Approximately 3.26 light years. This astronomical unit will be the standard for the **SpaceTime** universe. Hexes for an interstellar map will be 1pc across.
hex	One hex on the Combat Display. Maps in **SpaceTime** are based on a hexagonal grid. 1 hex is 1m across from side to side, and has an area of $3m^2$.
BP	Body Points. The amount of lethal damage a character can take.
BR	Bruise Points. The amount of non-lethal damage a character can take.
DV	Damage Value. A value representing the potential of an attack for damaging characters or equipment.
AV	Armor Value. The defense of an object. Usually an object will not take serious damage from an attack unless the AV is completely penetrated.

Other terms will be introduced in specific rules sections where they are necessary, but the terms above are used commonly throughout the game, and you should become very familiar with them if this is your first experience with role-playing games or the **TimeLords** role-playing system.

Character Generation

Character Generation - Characters in **SpaceTime** are generated by allotting points from a set total to different Attributes and Skills. Characters are assumed to start the game at an age of roughly 18 to 25 Earth years, although if a particular character background requires an older or younger character, this is up to the GM to decide. There is no advantage or disadvantage to age, except in the interplay of personalities within the game. Characters will generally start with 300 Attribute Points, or AP, and 600 Skill Points, or SP. Both attributes and skills are ranked on a 1 to 20 (sometimes higher) scale, with success in use measured as equal or less than the Skill or Attribute on a roll of 1d20. Keep this in mind when considering the abilities of your character.

Special Backgrounds - Characters may have different physical backgrounds, which may have an effect on some of their Attributes. Rigid modifiers are not enforced, as you could have spent all your life in the lower gravity of Mars, but still be stronger than the average Earthling. It is just more unlikely, and the GM should be aware of this. The guidelines do not give point bonuses or penalties. The player simply buys the character to fit the guidelines, and provides a background to cover any significant deviation from the norm.

Earth - Characters growing up on Earth are assumed to be the norm in **SpaceTime**. The only Attribute likely to be higher is Constitution, since the post-War background would have selected for a hardier constitution.

Mars - Martian characters are likely to have a lower Strength, since the Martian gravity is only 40% that of Earth. Characters growing up on Mars are likely to have a Strength and Stamina 2 points lower than the Earth average. For technically oriented Earth-based characters, Earth average is about an 8. Characters with a more physical bent will average a Strength of 10 or 11. Constitution may also be slightly lower, since the original colonists brought very little disease with them, and many Earth diseases are quarantined for. Martian characters may also be slightly taller, and automatically add 1 to rolls for character height.

Moon - For future health reasons, most children born on the Moon are raised on higher gravity worlds, or on an orbiting facility that has normal gravity. However, there are those who make the Moon a permanent home later in life. In this case, muscle atrophy would eventually lower Strength and Stamina to 3 or 4 points less than normal, unless working in a grav-compensated area. Remember that there are exercises, drugs and other treatments to give characters from a low-g background the same Strength as other characters, so these numbers are only guidelines. The characters' Constitution may be slightly lower, as for Martian characters. Characters from the Moon may also be slightly taller, and automatically add 1 to rolls for character height.

Uman - Uman-based characters come from a world with a slightly higher gravity than Earth. In general, their Strength and Stamina will be one point higher than the average for Earth. Due to the increased gravity, they are also of slightly shorter stature, and automatically subtract 1 from rolls for character height.

Primary Attributes - There are 9 major Attributes for **SpaceTime** characters: Strength, Constitution, Intelligence, Dexterity, Willpower, Perception, Appearance, Bravado and Stamina. Power is a tenth Attribute, and is used only rarely, in the use of optional mental powers. However, if it does show up, it may be important.

Each Attribute has a cost of $(\text{Attribute})^2/4$, as shown below.

Attribute Level	AP Cost	% population at or below
1	0	>.1%
2	1	.25%
3	2	.80%
4	4	1.8%
5	6	3.5%
6	9	6.1%
7	12	10.4%
8	16	17.3%
9	20	29.0%
10	25	50.0%
11	30	70.9%
12	36	82.7%
13	42	89.6%
14	49	93.9%
15	56	96.5%
16	64	98.1%
17	72	>99%
18	81	
19	90	
20	100	

and so on...

The initial 300AP will give an average attribute of 11 for 10 Attributes, and 11.5 if you will not be using any form of Psionics and delete the Power Attribute.

For each Attribute, put the level bought in the "Base" column for the appropriate Attribute. Record any leftover points to one side for later use. Character height and starting money can be influenced by leftover AP, or they can be saved towards increasing a particular Attribute by placing them in the "Attribute Bank" or "AB" column.

If you almost have enough points left to raise an Attribute, or want some extra AP to buy Attributes with, see the section on character disadvantages (p.22). These are not a way to get mega-talented characters, but will help even out leftover point totals.

Now, in the "Apt" column, write down your Aptitude with that Attribute. This is your base chance to use a skill that you are not trained in, but which is based on that Attribute, like a person unfamiliar with guns trying to shoot one for the first time, or getting behind the wheel of a totally unfamiliar vehicle. Your Aptitude is equal to 1/4 of the Attribute, rounded nearest. So, a Dexterity of 9 would have an Aptitude of 2, but a 10 would have an Aptitude of 3. This is important, because your Aptitude decreases the cost of skills based on that Attribute. Dexterity based skills would be more expensive for the character with a Dexterity of 9 than for the one with a Dexterity of 10.

Skills - Skills are bought much the same way as Attributes, but the cost of a given level of skill is the $(Skill)^2$. On the skill list, (p.33) all skills are also ranked for difficulty, and this factor may modify the cost if you wish to add the detail. For skills with a +0 cost modifier, skill cost is below.

Skill Level	SP Cost	Knowledge
1	1	Childlike
2	4	
3	9	Common sense
4	16	
5	25	Familiarity
6	36	
7	49	
8	64	Basic level
9	81	
10	100	
11	121	Competent
12	144	
13	169	
14	196	Professional
15	225	
16	256	
17	289	
18	324	Expert
19	361	
20	400	

and so on...

For each skill, subtract the "skill cost" for your Aptitude in the Attribute the skill is based on. If based on more than one Attribute, you use the one that gives the lowest skill cost. You can't have a skill less than Aptitude.

Example - Rifle skill (RIFL) is Dexterity based. A character with a Dexterity of 10 has an Aptitude of 3, so a skill level of 10 would cost the amount for a skill of 10, minus that for a skill of 3, or 100-9=91 points. Obviously, you need to have decided on the final Attribute levels of your character before buying skills. See p.29.

Skills that are related to each other also cost less. Page 30 has a chart showing skill relations. Skills enclosed by rectangles are Closely Related. A character has an automatic skill in all enclosed skills of half(u) the best skill in that block, or Aptitude+1 if half the skill is less than/equal to Aptitude.

Example - A character with a skill of 10 in Rifle also wants skill with Shotguns. These skills are Closely Related, so the character gets an automatic skill of 5 with shotguns. If they wanted a skill of 7, they would use the cost for a skill of 7, minus that for a skill of 5.

Skills enclosed by rounded rectangles are Related. A character has an automatic skill in all enclosed skills of Aptitude+1, *if* the best skill in that block is at least double the character's Aptitude.

Example - The previous character also wants Pistol skill. This is a Related skill to Rifles, so a character with an Aptitude of 3 would be counted as having a skill level of 4 with pistols. To buy a skill level of 6 would cost the amount for a skill of 6, minus the cost for a skill of 4.

Skills that are related in some way use only the best relation, not both. Related and Closely Related skills may also be used during play, whenever an occasion comes up for a character to use a skill which they did not buy, but have skill in because of related knowledge.

Example - Mike Brucato, basic shuttle pilot, is forced to use a biplane while stranded on a low-tech world. He has a Shuttle skill of 12 and a Dexterity of 11. The GM says this is only a Related skill, so instead of using his Aptitude of 3, he is counted as having a skill of 4. Small consolation, but every bit helps.

As skills are bought, list them on the appropriate area of the character sheet, and keep track of any remainder. As for Attributes, remaining points can be put towards character height or money, saved towards future skill improvement, or added to points gained for character disads, and used to improve skills that you otherwise could not.

Secondary Attributes - These are Attributes which are not bought, but are a function of the Primary Attributes or are determined by random factors.

Height and Weight - Find your Strength on the top row of the table below. Roll 2d6, add 1, and find this amount on the left-most column. The number to the immediate right is the height of your character in centimeters, and the cross-reference of your height and Strength will give your mass in kilograms. Female characters roll 2d6 and subtract 1 instead. In either case, extra AP or SP may be used to modify the roll, at a cost of 1 AP or SP per point added or subtracted to the 2d6 roll. Extra AP or SP may also be applied towards the starting funds of a character, as well (p.22).

		Strength									
	(cm)	6	7	8	9	10	11	12	13	14	15
<2	150	43	45	47	49	52	54	56	58	61	63
2	160	49	51	54	56	59	61	64	67	69	72
3	165	52	54	57	60	63	65	68	71	74	76
4	170	55	58	61	64	66	69	72	75	78	81
5	175	58	61	64	67	70	73	77	80	83	86
6	180	62	65	68	71	75	78	81	84	87	91
7	185	65	68	72	75	79	82	86	89	92	96
8	190	69	72	76	79	83	87	90	94	97	101
9	195	72	76	80	84	87	91	95	99	103	106
>9	200	76	80	84	88	92	96	100	104	108	112

Body and Bruise Points - Respectively, a measure of the lethal and non-lethal damage a character can take. BP and BR are not fixed totals that are lost if you take damage, but rather a total that damage is compared to. For instance, a character with 40BP who took 10 in a hit would take effects from damage equal to 25% of their BP. A character with 30BP would take effects at the 33% level. Additional hits are treated the same way, damage always being compared to a characters' *full* BP or BR. Taking 10BP and 10BR would make the character take effects for both lethal and non-lethal injury. BP and BR are based on the mass of the character, and are equal to the square root of their mass, times 3.3.

Mass	Body Points	Mass	Body Points
10-11kg	11	83-88kg	31
12-13kg	12	89-94kg	32
14-16kg	13	95-100kg	33
17-18kg	14	101-106kg	34
19-21kg	15	107-112kg	35
22-24kg	16	113-118kg	36
25-27kg	17	119-125kg	37
28-30kg	18	126-132kg	38
31-33kg	19	133-139kg	39
34-37kg	20	140-146kg	40
38-41kg	21	147-153kg	41
42-45kg	22	154-161kg	42
46-49kg	23	162-168kg	43
50-53kg	24	169-176kg	44
54-57kg	25	177-184kg	45
58-62kg	26	185-192kg	46
63-67kg	27	193-201kg	47
68-72kg	28	202-209kg	48
73-77kg	29	210-218kg	49
78-82kg	30	219-229kg	50
330kg	60	450kg	70
590kg	80	750kg	90
920kg	100	2070kg	150
3670kg	200	5740kg	250

This formula applies to most animals and alien creatures as well. However, genetic and other modifications may increase this, and some alien lifeforms will be more or less tolerant to damage than the Earth-normal creatures this scale is designed for.

Speed - The Physical Speed of a character is how fast they move, usually in combat situations, and is the average of Strength and Dexterity, rounded down. The Mental Speed of a character is equal to their Intelligence, and is used more for mental powers, but may also be used when speed of thought is more important than speed of action, like when using a brain tap to control a device, or when hooked up to the various global computer nets.

Personal Characteristics - Personal characteristics like skin and hair and eye color, distinguishing marks, etc., are left to the player to decide, although anything that might affect play should be made known to the GM.

Money - Characters generally need a reason in their background to be out doing dangerous things, rather than being like the other 99.999% of humanity which stays at home with a regular job and family. One good reason is either greed or lack of funds. Characters are assumed to have the equivalent of a suitcase or pack, full of moderate quality street clothing (AV2), and 1,000Cr, in any form they wish. Each extra AP or SP left may be traded in for 50Cr, or saved to help increase an Attribute or Skill. In the latter case, put the points in the AB (Attribute Bank) or SB (Skill Bank) column next to the appropriate Attribute or skill.

Character Disadvantages - Sometimes a character will be designed, and just needs are few more points to flesh out the description, or buy that last Attribute or skill level. The following disadvantages are not a way to get mega-powerful characters, but a way to get those few needed points. All are subject to prior GM approval, with a maximum of 20 AP or SP gained per disadvantage type.

Weight - A character may be lighter or heavier than normal for their Strength and height. For purposes of determining character mass, the character will get 5AP or SP for each column shift they give their Strength, with a maximum of 2 columns.

Example - A character who wishes to be lighter than usual for a Strength of 12 might count their Strength as 11 for determining their mass.

Lighter characters suffer the lower BP and BR this gives. Heavier characters gain BP and BR, but must carry the extra weight as permanent encumbrance, counting towards their maximum lift. The player should make a note of this. While conditions might change a character's weight, they will return to their normal weight when conditions return to normal. This disadvantage is relatively permanent, but may be changed with surgery that costs more than the character will be able to spare for a while.

Attribute Maximums - A character may limit their maximum potential for a given attribute. For each point lower than 20, the character gets 2AP or SP. This may be applied to more than one Attribute. An example might be for a female character to reduce the maximum Strength they could achieve for a few extra points. This disadvantage is permanent, and may not be changed. This also affects the maximum augmented ability of the character, if they choose this route at a later stage in their career.

Handicap - A character may have physical problems which limit their abilities. These could include loss of an eye, a limp that reduces running speed, partial deafness, etc. These are worth 10AP or SP. They are usually permanent, but high-tech medicine should be able to negate it in the character's future (GM figures out a cost). It is assumed the character cannot recover from them without significant outside help, or they would have already done so.

Phobias - A character may have irrational fears, or psychological traits that could impair them. This could be fear of the dark, heights, paranoia, claustrophobia or any other *reasonable* psychological problem. When a character is confronted with the situation, they must make a Willpower roll each turn to avoid making irrational actions. Making an irrational action means that the GM dictates the actions of the character, regardless of player objections. When the source of the problem is removed or a subsequent Willpower roll made, the character is once again controlled by the player. The points gained for this vary. The Willpower roll gets a minus equal to the points gained for the problem, so gaining 10AP would mean the character has a -10 to Willpower rolls for the problem. A roll of 20 on Willpower always fails. The GM may elect to put a multiplier on the points gained, if the situation is extremely common or uncommon.

Example - Agoraphobia is the fear of being outside. For a campaign set in a crowded megacity this might not be a big problem. For a campaign set on frontier worlds, or where there is a lot of outside activity (like spacewalking), this disadvantage would be worth more.

This disadvantage may be bought off in the same way that a skill is improved, except the total goes down instead of up, and the character is counted as practicing whenever confronted with the situation.

Enemies - While the characters are bound to pick up enemies in the course of play, they can also start the game with them. An enemy is someone the character is aware of that is determined to cause them harm or suffering, or at the very least, impede their progress. They are also stronger than the character, else the character would have already disposed of them. Enemies show up when the GM feels like introducing them, or they can remain behind the scenes, causing mischief without ever showing themselves. A single enemy is worth 5AP or SP. This could be an assassin, or a very irate husband. 10AP or SP will get you a small group of enemies, like a large street gang, a band of mercs, or the security forces of a small corporation. 20AP or SP will get a large group of enemies, like an entire corporation, the police of a small country, or a powerful individual with lots of connections. Enemies are permanent, and can only be bought off by using tactics that get rid of the problem. This could be anything from assassination to simply paying off your debts.

Sample Character - Brock Wilson will be our sample character. He is 23, and comes from Earth. Born and raised in one of the more recent rebuilt areas, he quickly saw the only way out of the drab life was to hitch up with one of the Earth megaconglomerates. Always looking for loyal, expendable help, a local branch was happy to give him a job in a security force. To his surprise, the entrance examiner told him he had a very limited psychic potential, and that if anyone ever offered to help him use it, he should probably turn them down. The money was nice, benefits were great, but Brock had a problem. He had too much of a sense of morality. That got him fired for "insubordination", that is, not firing at a suspected burglar, just because there was a crowd in the way. Stripped of benefits and job, he hit the streets, only to find that no one in town would have him. So, taking part of his savings, he caught a flight to the Big City. In this case, New Dallas. Here, he hopes to escape the blacklist on him, and get a job where he can use his talents, *and* be able to sleep at night.

SpaceTime™
As close to the future as you can get

Name: BROCK WILSON
Background: EX-SECURITY GUARD, RAISED ON THE STREETS, HAS LITTLE TECH. KNOWLEDGE, CURRENTLY LIVING IN N. DALLAS

Age: 23 Height: 180 cm Weight: 81 kg
Eyes: BLUE Hair: BLACK Beard: NONE
Physical Speed: 11 Body Points : 30
Mental Speed : 10 Bruise Points: 30

Primary Attributes

	Base	Adj	AB	Apt
Strength	12			3
Dexterity	10			3
Constitution	11			3
Intelligence	10			3
Willpower	13			3
Bravado	13			3
Perception	10			3
Appearance	9			2
Stamina	10			3
Power	11			3

Actions

1	X
2	-4
3	X
4	-4
5	X
6	-4
7	X
8	-4
9	X
10	X

Skills

Name	Level	Skill bank
1. AUTO WEAPON	8	
2. RIFLE	10	
3. PISTOL	9	
4. BRAWLING	11	12 PTS
5. AUTO DRIVING	8	
6. AREA KN.-BLACK MKT.	8	
7. STREET TALK	11	

Equipment

Item	Cost
1. MEDIUM BACKPACK, EXTRA CLOTHES	FREE
2. TORSO BODY ARMOR	200Cr
3. CHEAP PISTOL	190Cr
4. EXTRA CLIP	20Cr
5. COMBAT KNIFE	40Cr
6.	
7. CREDIT CARD WITH 550Cr LEFT IN BANK	-

Use of Attributes - The following section describes the general use of each Attribute and secondary characteristic, and should be referred to if there are any further questions regarding that attribute. Please check this section to confirm your Attributes are the way you want them before going on to Skills (p.29).

Strength - As mentioned earlier, Strength is a measure of your muscles and how well you can use them. The maximum amount a character can lift and move with at 1m/sec (a normal walk) is their Strength squared in kilograms. The character will usually be unable to get this mass to their shoulders without help. A character can exert a force with their legs of 3 times the maximum lift under good conditions with proper positioning, and lift half the maximum amount over their head. A character is not considered encumbered unless carrying more than 10 percent of their maximum. Using Strength may cause a temporary loss of Stamina. This depends on how much Strength is being used.

Strength used	Make Stamina Roll
1/10 to 1/4	once each hour
up to 1/2	once each 10 minutes
up to 3/4	once each turn
3/4 or more	once each phase

A roll of 19 or 20 always fails the Stamina roll, regardless of how high the Stamina of the character. Some conditions use more Strength than the weight being carried would imply, like hiking. Carrying loads up an incline will shift the time between Stamina rolls down one or more levels. This also applies to similar extra efforts like going through mud or deep snow.

Straining - A character may strain (push, if you will) their Strength. This may not be done casually. Straining may only be attempted if the character is in imminent mortal peril or needs to help a friend in a similar situation. Maiming or dismemberment might be good enough, but it usually has to be life or death. When straining, the character must make a Strength roll with a negative modifier, chosen by the player. A 19 or 20 always fails. If the modified roll is made, the character gets to *add* that modifier to their Strength for that phase. The character automatically loses a point of Stamina and must roll for another when doing this. If the roll is failed, but a normal Strength roll is made, half of the modifier(d) may be added, and the character takes half(u) of the modifier as a Damage Level on the part or parts of the body being used. If a normal Strength roll is failed, the character gets no addition to their Strength and takes half of the modifier as a Damage Level (see Damage, p.57) on the part of the body being used.

Example - A character with a Strength of 10 is pinned under a vehicle, and someone is getting ready to run over him. The player decides to have the character try a 10 point strain. The character must make a Strength roll with a -10 modifier to do so. If the character rolls a 5 or less, they get to strain for 10 points, making their Strength essentially a 20 for this phase. If the character rolled a 6 to 10, they would only get to add 5 points to Strength, and they will take a Damage Level of 5 to the part or parts of the body they are straining (Probably arms and shoulders in this case). This represents adrenalin mastering pain, but with the consequence of strained or torn ligaments and muscles. If they roll an 11 or better, they get no added Strength, and still take damage.

HTH Damage - For unarmed hand to hand combat, a character gets a Damage Value of 1 point of Type IV damage for each 2(d) points of Strength for punches, and 1IV for each point of Strength for kicks (see Damage, p.60). A Strength of 10 therefore gives a punch DV of 5IV, and a kick DV of 10IV. If shoes, gauntlets, brass knuckles, etc. are used, the Damage Type is increased a level, from IV to III, and there may be some added damage for the object itself.

Dexterity - A character's Dexterity reflects their manual coordination and agility. Most manual and combat skills have Dexterity as a Governing Attribute. Dexterity rolls should be made when the character tries to do something requiring Dexterity that doesn't fall under the province of a particular skill, like catching a thrown object, not losing their balance on a patch of ice, threading a needle, etc. Normal actions like picking up an object do not usually require a Dexterity roll unless the character is distracted, the object is slippery, or there are other special circumstances.

Constitution - Constitution covers both the immune and regenerative systems of the body. Whenever a character is exposed to a disease or drug, Constitution comes into play. If a character is hurt, their Constitution and medical care will determine how long it takes for them to recover from its effects. If a disease or drug is particularly nasty, modifiers to the Constitution roll are in order. Likewise, if a character has immunity to a particular disease, they should get a positive modifier to Constitution if exposed to that disease. Vaccinations almost guarantee immunity, and no roll is needed if the character has been vaccinated against a particular disease. Most characters will only need vaccinations before the first time they visit a world, to protect against any unusual or different diseases.

Intelligence - Intelligence is a measure of problem solving ability, the ability to put data together to form a valid conclusion, and the ability to find a way out of almost any situation the character gets into. If a character wants to make some rough estimates in their head or scribble down some equations or logical arguments, Intelligence applies. If a character is trying to remember something, an Intelligence roll is in order, modified by the importance of the item and the time since the character thought about it. If the character thought it was of little importance at the time, they get a minus. If they mentioned it or took notice, a positive modifier should apply. If they mentioned saving the information somehow, usually no roll is needed. Academic skills have Intelligence as a Governing Attribute. Remember that the player does not get the full sensory input the character does, and subtle cues can help a lot. You can see this for yourself when you find that particular sounds, smells or sights. conjure up memories of other things, which may have taken place years before.

Willpower - Willpower is a measure of your pain tolerance or single-mindedness. Characters with a high Willpower are less easily distracted and more likely to complete a task before allowing themselves to do something less important. Examples of this would be to see if you wargame before you study, or wait until you are done studying. A person with high Willpower has a greater amount of control over their body and mind, and when confronted with enough pain to cause distraction or unconsciousness, can shake it off easier than a person with a low Willpower. If a character is injured, a Willpower roll or rolls will usually be made to see the shock effects of the hit.

Bravado - The Bravado of a character is not a matter of how tough the character actually is, but how tough the character appears to everyone else. A character with a high Bravado could have absolutely no idea what is going on, but as long as the character *looked* like they had matters well in hand, no one would be able to tell.

Bravado is essentially used to make other people see things like you want them to see things. If a character has a reputation, it is used in conjunction with Bravado.

Reputations are gained through experience, and will apply more or less, depending on the audience and location. Being well-known in one area does not mean you are well-known in another. In general, reputation is gained at the GM's whim, based on character actions, and how widespread it is depends on how public the actions were, or the type of circles the information spreads in.

Example - Hijacking a starship would get you a wider reputation that hijacking an airliner. Killing an organized crime figure would get you a global reputation within organized crime and the police, but not the public.

The way to determine the effect of Bravado and reputation on others is as follows. Take the Bravado of the character, check for any appropriate reputation, and use the following *additions* and *subtractions* based on conditions at the time.

Modifier	Amount
Target is completely surprised	+3d6
Target is engaged in combat	-1d6
Target was expecting the action of the character	-3d6
Character has a device of some type to wield (depends on abilities or supposed abilities of device)	-1d6 to +3d6
Character poorly demonstrates ability	-1d6
Character demonstrates ability	+1d6
Character convincingly demonstrates ability	+3d6
Character makes poor commands or statements	-1d6
Character makes good commands or statements	+1d6
Character makes exc. commands or statements (statements or commands need not be verbal)	+2d6
Appropriate setting or at advantage	+1d6
Inappropriate setting or at disadvantage	-1d6
Character is viewed from out of the effective range of the character's abilities	-2d6
Character is viewed remotely	-3d6
Character is within 1 meter of target	+2d6
Very strong reputation	+4d6
Strong reputation	+2d6
Some reputation	+1d6
No reputation	+0d6
Weak reputation	-2d6

Characters should be careful. Inappropriate use of reputation or other factors can backfire. A hero in one area might be a villain in another, or what is a strong reputation in one area might be the opposite in another.

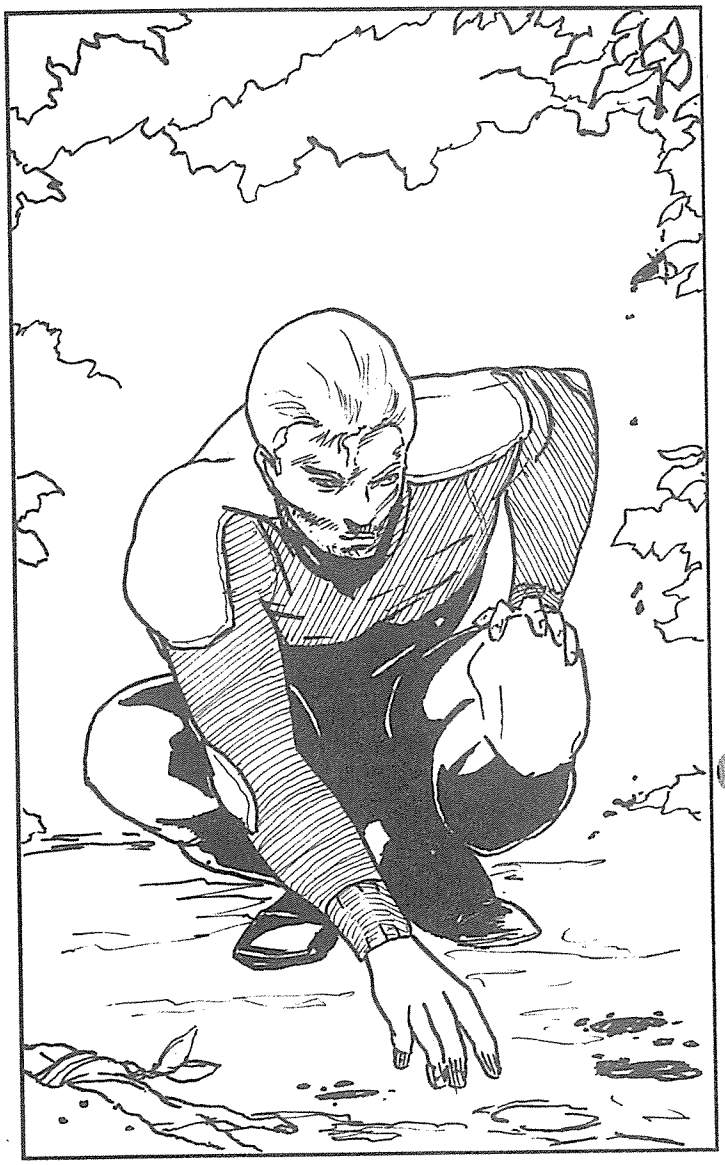
If an attempt to impress a crowd or large group is made, most of the crowd will follow the average reaction. In order to go against the grain of public opinion or take initiative, a character is treated as being at the next higher level for purposes of effect. If the crowd is at a 2x level, then for an individual to buck the trend, they would have to be able to do so at the 3x level. This tends to suppress individuals who might otherwise not be affected.

Take the modified Bravado and compare it against the Bravado of the target to see the effects.

Result	Effect
<.5 BRV	Character has little or no effect on any actions, the target feels that the character may be ignored for the moment.
.5 to 1xBRV	Character has a slight effect on actions of target, target will keep an eye on the character.
>1 to 1.5xBRV	Target is impressed or believes the character is capable of any statements made. The target must make a Bravado roll or act accordingly.
>1.5 to 2xBRV	Target is very impressed or believes the character is capable of any statements made. The target must make a Bravado roll with a -5 modifier or act accordingly.
>2 to 3xBRV	Target is very impressed or firmly believes the character can back up any statements made. The target must make a Bravado roll with a -10 modifier or act accordingly.
>3 to 4xBRV	Target is extremely impressed or firmly believes the character can back up any statements made and some that were only implied. The target must make a Bravado roll with a -15 modifier or act accordingly.
>4xBRV	Target is incredibly impressed or firmly believes the character can easily do what was stated, and will firmly believe all the wild rumors they may have heard about the character or anything the character says. The target must make a Bravado roll with a -18 modifier or act accordingly.

Level	Example
<.5BRV:	Little girl threatening a grown man with a stick.
1.0BRV:	The guy in the car behind you giving you the finger.
2.0BRV:	Threatening an unarmed man with a knife.
3.0BRV:	Threatening an unarmed man after shooting him in the foot.
4.0BRV:	Threatening an unarmed man with a flamethrower after using it on his companion.

Characters that make the Bravado roll are unaffected unless conditions change, and those that fail must roll each phase to see if the effects linger. "Acting accordingly" is a touchy statement. It *usually* means doing what the character using the Bravado would like them to do. However, if you scared or impressed a man with a gun so much that he thought you were going to kill him regardless, the appropriate thing to do would be pull the trigger anyway. Be careful.



Perception - Perception covers all of the character's senses, both external and internal. Different stimuli may affect different aspects of the character's surroundings and so alert the character in different ways. While walking in the woods, you may notice the sound of something before you see it, while in a city, the opposite may be true. Perception is what is used to spot the item, and Intelligence is what interprets it. You can easily spot something without knowing what it is, or knowing what its intentions toward you might be. If something is not immediately obvious to a character, a Perception roll must be made to spot it. Usually there are modifiers that will apply to this roll. If the sum of the modifiers is positive, the item is automatically spotted. A complete listing of modifiers is below. *This table is really only needed if the spotting is critical for the characters. With a large group of characters, someone will usually make the roll. For most purposes a base Perception roll will suffice.*

Perception Modifiers

Range	Modifier	Size	Modifier
0-.5m	+5	VS(microchip)	-4
.51-1m	+4	S(dagger)	-3
2m	+3	M(computer)	-2
3m	+2	L(chair)	-1
4m	+1	VL(person)	+0
5m	+0	EL(small car)	+3
6m	-1	HG1(truck)	+6
7-8m	-2	HG2(lg.truck)	+8
9-10m	-3	HG3(boxcar)	+10
11-13m	-4		
14-20m	-5	251-400m	-13
21-30m	-6	401-700m	-14
31-40m	-7	701-1000m	-15
41-50m	-8	1001-1500m	-16
51-70m	-9	1501-2500m	-17
71-100m	-10	2501-5000m	-18
101-150m	-11	5001-10000m	-19
151-250m	-12	10000-20000m	-20
Each 2x range	-1		

General Modifiers	Modifier
Character is distracted	-2
Character is concentrating on Perception	+2
Character is Perception impaired(helmet)	-1 to -5
Character has related skill of 10-14	+1
Character has related skill of 15-17	+2
Character has related skill of 18-19	+3
Character has related skill of 20+	+4
Character is very familiar with object	+4
Character is familiar with object	+2
Motion of object	+1 to +3
Object is at very high contrast with surroundings	+4
Object is at high contrast with surroundings	+2
Object is at low contrast with surroundings	-2
Object is at very low contrast with surroundings	-4

Sound Background	Modifier
Absolutely quiet background	+4
Quiet background(whispers)	+2
Average background(conversation)	+0
Noisy background(party)	-4
Very noisy background(lawnmower)	-7

Sound Intensity Listened For	Modifier
Extremely low(breathing)	-8
Very low(whisper)	-4
Low(low voice, laser fire)	-2
Average(normal voice)	+0
High(shout, silenced pistol shot)	+5
Very high(pistol shot, silenced rifle shot)	+10
Extremely high(rifle shot, small explosion)	+13

Use only the modifiers for the appropriate sense. For senses other than sight and sound, the general modifiers work well, but a judgment call is needed by the GM for special modifiers on the roll.

Appearance - This Attribute applies when dealing with people. Those with very high or low Appearance are likely to stand out, both because of their looks and manner. Note that those with very high Appearance are likely to be better looking than average, and vice versa. Any level between 8 and 12 (inclusive) can be accounted for by either manner or looks, but beyond that there is a component of both. Appearance varies easily. Characters who do not maintain a reasonable standard of appearance in the field can be expected to have a negative modifier of up to -10 on this attribute due to their look or smell. This will usually be negated by copious amounts of soap and water, or people that just don't care. Those with lots of spare credits can opt for cosmetic surgery to improve or change their looks, or get training on how to make a good impression on people. Badly injured characters may have a poor appearance, but those who have favorable reactions to the character are more likely to be protective, especially to members of the opposite sex.

Stamina - Stamina represents the endurance of the character. When a Stamina roll is made, it represents whether the character was noticeably tired by the exertion. If the roll is made, there was no effect on Stamina, but the next roll may have a -1 modifier to reflect the cumulative effort spent. If the Stamina roll is failed, the character gets a -1 modifier to their Stamina, Strength, and all skills to reflect the onset of exhaustion. The way lost Stamina is regained is by rest. Treat the modifier to Stamina, Strength, and skills as an injury for recovery purposes, but the time periods given are in 15 minute amounts if resting or sleeping. Characters may recover once every half hour if in an "active rest" state, like light horseback riding or driving, but get no recovery if doing any sort of work. Drugs may cause a temporary Stamina increase, but if the character's Stamina goes to zero or lower when they wear off, the character will pass out, and not naturally wake up until half the lost Stamina is recovered.

Body Points - Body Points represent the amount of structure that you have available for being damaged. The average character has 30BP. Damage taken is a fraction of this amount. Small amounts of damage, while annoying, may have no game effect, or could do you in eventually from blood loss or infection. Larger people have more body mass, so the same input of energy is less likely to affect them. Certain areas of the body, such as head and torso, are more involved with vital processes, and take more damage from a hit than arms or legs. Damage to the head and torso areas is multiplied after the first 2 points of damage. These 2 points represent the force needed to get past the non-vital parts in those areas, like abdominal muscles or the skull.

Bruise Points - Like Body Points, these measure your ability to take damage, but of a non-lethal kind. Damage of this type can be just as impairing, but heals much quicker, and Bruise Point damage cannot break bones or eventually cause the character to die. Damage taken to Bruise Points is also counted as a fraction of the total, and permanent effects of the damage are ignored.

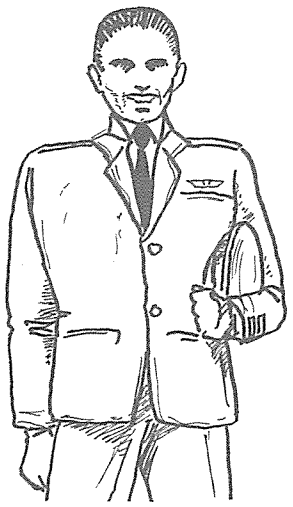
Quick Characters

Quick Characters - If you don't want to spend a lot of time on character generation, you can use the following samples to generate characters or NPC's quickly, based on the normal point totals of 300AP and 600SP. The attributes can be exchanged as long as this does not change a characters' Aptitude for listed skills, while keeping the same point total. Skills listed are suggested, and may be changed to similar skills to reflect different variations within a profession. Costs take into account skills characters get for free (first language), related skills and Aptitude.

Pilot

Attributes	Level	Cost
STR	8	16
DEX	14	49
CON	11	30
INT	13	42
WIL	10	25
BRV	12	36
PER	13	42
APP	10	25
STA	9	20
POW	7	12
Total AP		297

Skills	Level	Cost
Shuttle pilot	12	171
Lg.aircraft	8	36
Automobile	7	33
Zero-G	8	48
Comp.sci.	9	72
Electronics	9	72
Anglic	14	0
Space	10	38
Brawling	11	105
Pistol	7	33
Total SP		594

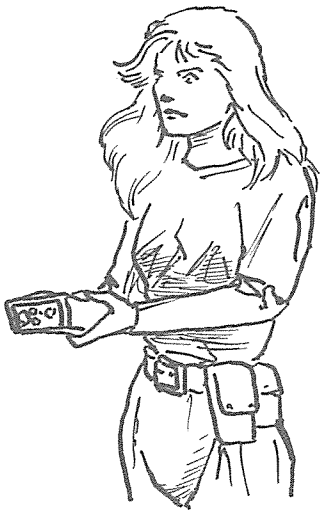


Disadvantages - None
Leftover AP = 3
Leftover SP = 6
Options: CON,INT,WIL,BRV PER and APP may be exchanged without affecting skill costs, as may STR and STA.

Tech

Attributes	Level	Cost
STR	9	20
DEX	13	42
CON	10	25
INT	15	56
WIL	10	25
BRV	11	30
PER	12	36
APP	11	30
STA	9	20
POW	7	12
Total AP		296

Skills	Level	Cost
Nucl. eng.	14	180
Mech. eng.	7	24
Electr. eng.	8	39
Comp.sci.	8	48
Anglic	14	0
Space	10	38
Uman	8	39
Mech.repair	8	48
Martial arts	10	121
Pistol	8	55
Total SP		592



Disadvantages - None
Leftover AP = 4
Leftover SP = 8
Options: DEX,CON,WIL,BRV PER and APP may be exchanged without affecting skill costs.

Merc

Attributes	Level	Cost
STR	12	36
DEX	11	30
CON	11	30
INT	11	30
WIL	13	42
BRV	12	36
PER	12	36
APP	10	25
STA	11	30
POW	7	12
Total AP		307

Skills	Level	Cost
Rifle	14	187
Auto wpn.	8	55
Pistol	9	65
Grav/Hover	7	40
Military sci.	7	40
Martial arts	11	148
Anglic	14	0
Street	7	0
Space	7	0
Stealth	8	55
Total SP		590

Disadvantages - Enemies, 10AP
Leftover AP = 3
Leftover SP = 10
Options: All attributes except POW may be exchanged without changing skill costs

Punk

Attributes	Level	Cost
STR	12	36
DEX	12	36
CON	11	30
INT	11	30
WIL	12	36
BRV	14	49
PER	12	36
APP	8	16
STA	10	25
POW	8	16
Total AP		310

Skills	Level	Cost
Comp.sci.	11	112
Stealth	8	55
Running	10	91
Shotgun	8	55
Knife	10	91
Street	14	0
Anglic	8	15
Con man	8	48
Pickpocket	8	68
Urban surv.	8	55
Total SP		590

Disadvantages - Enemies, 10AP
Leftover AP = 0
Leftover SP = 10
Options: All attributes except BRV,APP and POW may be exchanged without changing skill costs

Skills - All characters have skills in something, or areas of expertise that they are well informed about. Skills in one area usually apply to similar skills, and somewhat to less related skills. For example, knowing how to fly a light plane means you can probably fly any light plane. A Boeing 747, though far from a light plane, is still an aircraft, so you would stand a better chance to fly it than someone who couldn't fly at all. All characters have a base skill, or Aptitude with a particular skill. This is equal to 1/4(n) of any Attribute that applies to that skill. Aptitude may not be used multiple times on the same skill, but the character may use the highest Aptitude if more than one Attribute applies. Any skill falls into one of three areas as regards other skills. These are Closely Related, Related, and Unrelated. If you use a skill that is not rated, but is Closely Related to another, your chance of using it is half(u) the chance of using the main skill, but is at least your Aptitude+1.

Example - If you had an Automobile Driving of 12 and tried to drive a large delivery truck, the GM would probably say it is a Closely Related skill, and say your skill in that area is a 6, or half your Automobile Driving Skill.

Related Skills are still connected to the original skill, but not as close. Using a Related Skill adds 1 to your Aptitude for that skill, if your skill is at least twice your Aptitude. Using our driver of before, we put him behind the controls of a bulldozer. The GM would probably say this is a Related Skill. If the character had a Dexterity of 12, they would have an equivalent Aptitude of 4, for a skill of 5 in operating the bulldozer. Unrelated Skills are just that, and the character only gets their base Aptitude for that skill.

A skill chart for **SpaceTime** skills is on page 32. Skills that are Closely Related are enclosed in rectangles, and skills that are Related are enclosed in rounded rectangles.

Initial Skill Ratings - Skills are rated on a non-linear 1 to 20 scale, where 1 is no familiarity whatsoever with the skill, and 20 is incredibly good. Skills of higher than 20 are possible. This may be through a specific skill, or knowledge of a skill that is almost specific by itself. Extremely specialized professions are good examples of the latter. An example of this would be tightrope walking. A Skill rating of 5 is poor, 10 about average, and 14 and up a professional level of skill, meaning that the person could probably make a living off of it.

Example - In academic Skills, a 13-14 represents a Bachelors Degree, an 16-17 a Masters, and 18, a Doctorate. In the realm of athletics, anything above an 17 is Olympics material. Baron von Richtofen had a Light Plane Skill of 19 or better.

Rather than having to roll every time any skill is used, allow for some basic talent, especially in non-combat situations. A character can reliably perform tasks in the listed area without having to roll on their skill in most cases.

Skill level	Good for:
1-2	Virtually nothing
3-4	Only most basic of tasks
5-6	Simple use
7-8	All routine tasks
9-12	Basics, some advanced techniques
13+	Beyond this level, the character can perform all the basics of this skill reliably, and has mastered varying amounts of advanced knowledge. Any challenging use of the skill at this level or above will usually require a roll to be successful.

Specific Skills - A skill may be bought specific to a certain application of a skill. Skill with a rifle may be specific to a certain type or brand of weapon, or driving skill may be specific to the type of car you own. A good example is being able to play a certain musical instrument as a specific part of Music Skill. Specific skills should be described under the main skill applicable. Specific skill levels may not exceed the normal skill in that area, so you could not be fantastic with driving one vehicle, and a total klutz with all others. A specific skill is bought as a separate skill, and added to the base skill when used.

Example - Buzz Uldrin has a Computer Science skill of 12, and a Specific Skill of 8 in Intrusion Countermeasures Electronics (ICE). So, if he is trying to crack computer security, he has an effective skill of 12+8=20. But for any use of the skill outside this area, he only has a skill of 12.

Specific skills start at a level of 0, and do not have aptitude. If a character uses a skill in only one or two areas, a specific skill or skills can be cheaper than buying a high overall level.

Specific skill may be bought to nullify off-hand minuses. Each point of this skill *negates* 1 point of penalty for off-hand use, and applies to all weapons. Specific Skill plus normal skill may exceed 20, but may not exceed 40.

Difficulty Ratings - Some skills are easier or more difficult to learn than others. If so, a multiplier will be listed with the skill. This amount is a modifier to the cost of the skill. This modifier is used on the base cost to get the actual cost in points to buy the skill. *This is entirely optional. This amount may also apply to improving the skill, if you wish to add the complexity, or left out altogether to make things simpler.*

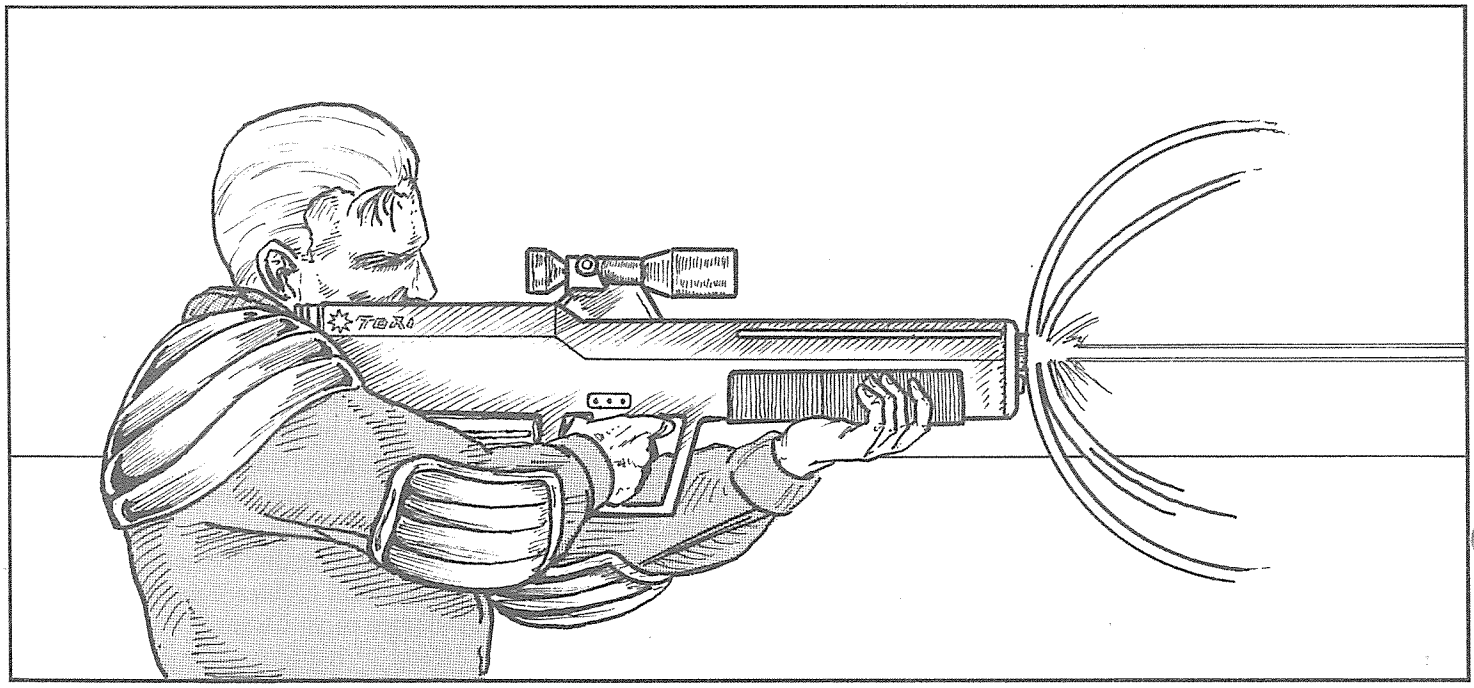
Governing Attributes - A skill may be easier or harder to learn if a character has a high or low Attribute that is especially pertinent in proficiency with that skill. Not only will a character with high Attributes have a better Aptitude, but they will find it easier to master advanced techniques in a particular skill, and learn much quicker. If a character has an Attribute with the levels below, they must use the modifier shown on the cost of the skill. If more than one attribute is listed, all the listed attributes are used. *This may also be left out in the interest of simplicity.*

Attribute Level	Modifier
1	+6
2	+5
3	+4
4	+3
5	+2
6	+1
7-13	+0
14	-1
15	-2
16	-3
17	-4
18	-5
19	-6
20	-7
21+	-8

Use of Skills - The **TimeLords** skill system is based on a 1d20 roll. In general, if the modified skill or less is rolled on 1d20, the attempt to use the skill is successful. This could mean anything from hitting a target to picking a lock to landing a ship. If the roll is failed, the attempt to use the skill does not have the desired results. It may not be outright failure, but it is not optimum either. Since every skill is different, all the possible modifiers to a skill cannot be listed. These will be up to the GM to decide. An example of this might be trying to perform sleight-of-hand in an area where you are constantly being jostled, or trying to think in a very noisy environment. As mentioned before, the modifiers to skills are *not* additions or subtractions, but percentage modifiers. A percentage modifier chart (The UMC) will be explained shortly (p.31), and may be copied for your convenience. This makes things simpler. A calculator is just as quick, and allows a bit more accuracy, especially if you use this as a percentile system rather than 1d20. Most combat skills are rated for combat conditions. For things like target practice, or skill use in a low pressure, non-combat environment, the skill can generally be doubled.

Skill Listing - The skill listing begins on page 33. Skills are listed with all information needed to use the skill. This includes: The skill name, an abbreviated form of the name, the governing attribute, the difficulty rating, and a short description of the skill.

No skill listing can cover everything. This particular listing leans towards high-tech skills. Many low-tech skills are included in **TimeLords**, so check there if you have access to a copy. Regardless, skills a player might want might not be here. It is up to the GM to determine if these are specific applications of a given skill, or a new skill, and then figure out the exact details of how the skill works. This adds to the individuality of your campaign, and once done, serves as a permanent reference for the other players.



The Universal Modifier Chart - This chart is used when ever any number needs to be modified by any other number in **SpaceTime**. In **SpaceTime**, almost all modifiers are percentage modifiers, rather than additions or subtractions. This makes things a lot more equal for characters.

Example - In an addition and subtraction system, a character with a skill of 50 getting a -50 to his skill because of conditions has no chance of succeeding, while a character with a 100 still has a 50% chance. This means that the first character has been dropped 100%, and the second character only 50%. Similar effects would occur with subtractions in a normal 2d6, 3d6 or 1d20 system. In a percentage modifier system, this would not happen. If a character with a skill of 50 got a -50% modifier, their skill would be reduced by 50%, or 25. The character with a skill of 100 would have their skill reduced by 50%, or 50. Both characters are affected equally. Anything that can be done with this chart (abbreviated UMC) will be noted in the rules, and I am sure you will be able to find other uses. Each + or -1 modifier in the game is actually a 5% modifier to the number applied to, so those using a percentile (d%) system can easily convert to this. The way the UMC works is as follows. Use the top row to find the number you wish to modify, such as a skill. Then use the leftmost column to find the modifier on that number, such as a skill modifier. When the two are cross-referenced, the result is the amount of the modifier.

Example - A skill of 17 (top row) modified by 6 (left column) would be a 5, so if the modifier was positive, the end result would be 17+5=22, and if negative, the result would be 17-5=12. For skills beyond the reach of the chart, divide the skill by some digit that places the result on the UMC, use the modifier, and then multiply it by the amount divided by.

For damage, find the character's Body Points on the top row and then go down that column until the amount of damage taken is reached. Then go across to the left until you find the modifier. This is the Damage Level taken.

Example - If a character with 28 Body Points took 7 as the result of a wound, effects for that wound would be at Damage Level 5. Taking 14 points would be a Damage Level of 10. If the amount of Body Points is off the chart, you should divide the Body Points enough to get it on the chart (in half will usually suffice), find the modifier, and then divide the modifier by the amount the Body Points were divided by. The UMC is below and also on the **SpaceTime** Aid Sheet.

Universal Modifier Chart

Number to be modified

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3
3	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4
4	0	0	0	0	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	6
5	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
6	0	0	0	1	1	1	2	2	2	3	3	3	3	4	4	4	5	5	5	6	6	6	6	7	7	7	8	8	8	9
7	0	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7	7	8	8	8	9	9	9	10	10
8	0	0	1	1	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7	8	8	8	9	9	10	10	10	11	11	12
9	0	0	1	1	2	2	3	3	4	4	4	5	5	6	6	7	7	8	8	9	9	9	10	10	11	11	12	12	13	13
10	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	15
11	1	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10	11	11	12	12	13	13	14	14	15	15	16
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13	1	1	1	2	3	3	4	5	5	6	7	7	8	9	9	10	11	11	12	13	13	14	15	15	16	17	17	18	19	19
14	1	1	2	2	3	4	4	5	6	7	7	8	9	9	10	11	11	12	13	14	14	15	16	16	17	18	18	19	20	21
15	1	1	2	3	3	4	5	6	6	7	8	9	9	10	11	12	12	13	14	15	15	16	17	18	18	19	20	21	21	22
16	1	1	2	3	4	4	5	6	7	8	8	9	10	11	12	12	13	14	15	16	16	17	18	19	20	20	21	22	23	24
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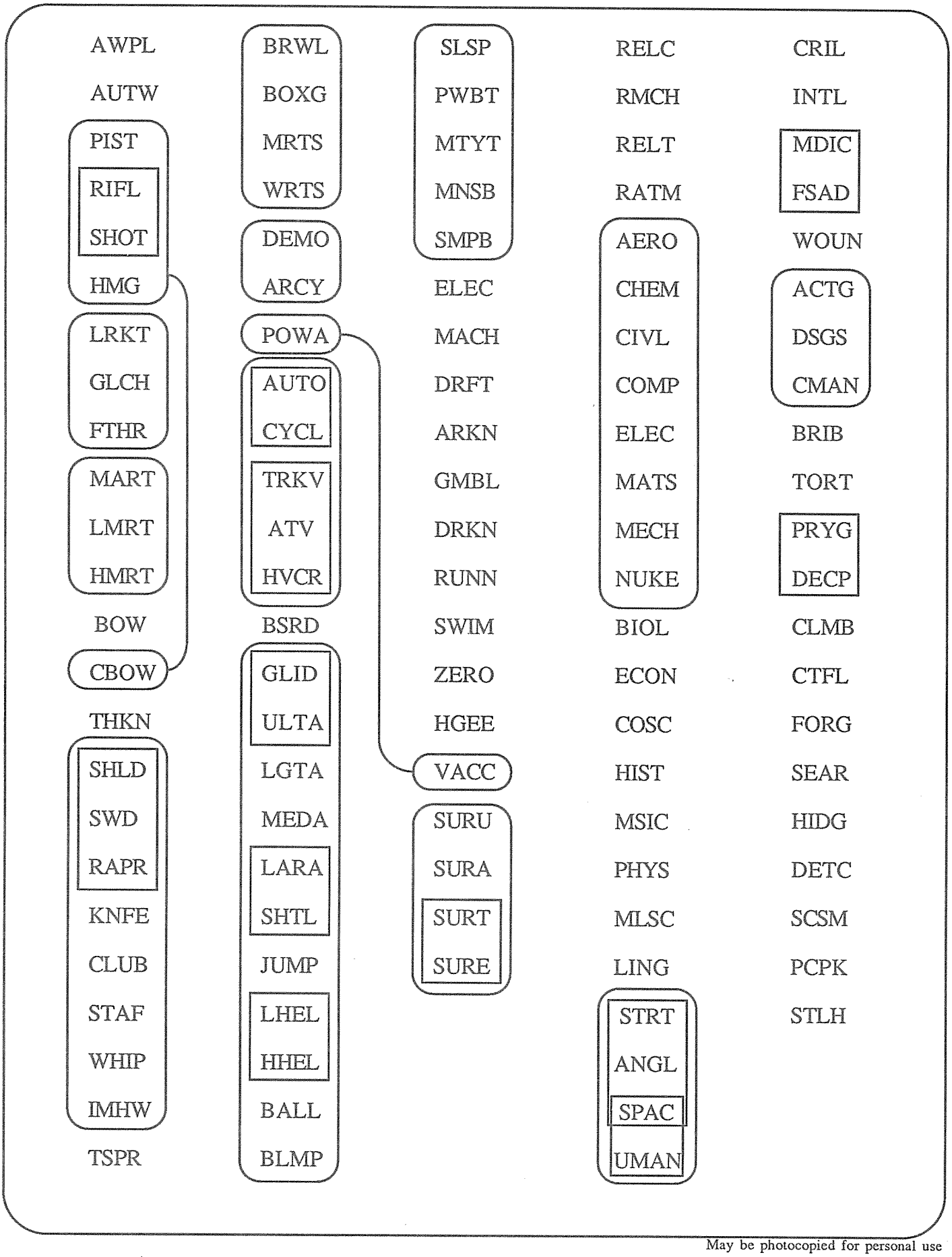
18	1	1	2	3	4	5	6	7	8	9	9	10	11	12	13	14	15	16	17	18	18	19	20	21	22	23	24	25	26	27
19	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24	25	26	27	28
20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30



Combat Skills, Modern Projectile Weapons

Archaic Weapon Loading(AWPL)(DEX)(+0) - This skill is the ability to load archaic hand weapons such as flintlocks, matchlocks, and percussion weapons. The skill must be rolled at the start of the reloading process. If the roll is failed, the amount failed by is used as a modifier to the time required to load the weapon. If failed by 10 or more, roll again and keep adding the amount failed by until it is failed by less than 10. Characters may fire archaic weapons using the modern version of the weapon skill, like using Pistol for flintlock pistols, etc.

Automatic Weapon(AUTW)(DEX)(+0) - This skill allows the controlled and accurate use of hand fired auto weapons such as machine pistols or auto rifles. This skill is averaged(d) with the character's skill with the non-automatic version of the weapon. Remember that the character will have an aptitude with this skill.

Pistol(PIST)(DEX)(+0) - This skill covers the operation of all pistols, including archaic, cartridge and energy weapons.

Rifle(RIFL)(DEX)(+0) - This skill covers the operation of all rifles, including archaic, cartridge and energy weapons.

Shotgun(SHOT)(DEX)(+0) - This skill covers the operation of modern shotguns and weapons designed to fire multiple projectile rounds, including cannister rounds from grenade launchers.

Heavy Machine Gun(HMG)(DEX)(+0) - This skill covers the operation of automatic weapons designed to be vehicle, bipod, or tripod mounted. These weapons are generally too large to be carried into combat by one person.

Light Rocket(LRKT)(DEX)(+0) - This skill covers the operation of man-portable rocket launchers and recoilless rifles.

Grenade Launcher(GLCH)(DEX)(+0) - This skill covers the operation of grenade launchers used for explosive rounds and includes rifle grenades.

Flamethrower(FTHR)(DEX)(-4) - This skill covers the operation of all types of flamethrowers, but not incendiary rockets, which is Light Rocket skill.

Heavy Rocket(HRKT)(INT)(+4) - This skill covers the use of tactical battlefield rockets, such as the modern Lance or Pluton, and rockets in this size range, generally up to 1000kg. Larger rockets are not covered.

Modern Artillery(MART)(INT)(+6) - This skill covers the operation of modern artillery, including advanced indirect fire systems.

Light Mortar(LMRT)(INT)(+0) - This skill covers operation of man-portable mortars.

Heavy Mortar(HMRT)(INT)(+2) - This skill covers the operation of non-man-portable mortars and fire control systems.

Combat Skills, Archaic Projectile Weapons

Bow(BOW)(DEX)(+4) - This skill covers the use of any type of bow.

Crossbow(CBOW)(DEX)(+0) - This skill covers the use of any type of crossbow.

Throwing Knife(THKN)(DEX)(+6) - This skill covers the use of single bladed throwing weapons that are evenly balanced.

Thrown Spear(TSPR)(DEX)(+0) - This skill covers the use of thrown spears and similar weapons.

Combat Skills, HTH Weapons

Knife(KNFE)(DEX)(+0) - This skill covers the use of one-handed bladed weapons less than 30cm long.

Sword(SWRD)(DEX)(+0) - This skill covers the use of any bladed weapon 30cm or more in length.

Shield(SHLD)(DEX)(+0) - This is the skill used when using a shield to actively block melee attacks, as opposed to just hiding behind it.

Rapier(RAPR)(DEX)(+0) - This skill covers the use of one-handed thrusting weapons.

Club(CLUB)(DEX)(+0) - This skill covers the use of one or two-handed blunt weapons that have no specific striking surface, such as clubs or maces.

Staff(STAF)(DEX)(+0) - This skill covers the use of two-handed blunt instruments like a quarterstaff or spear used in this manner.

Whip(WHIP)(DEX)(+2) - This skill covers the use of any totally flexible weapon.

Improvised Hand Weapons(IMHW)(DEX)(+0) - This skill covers the use of anything that would not normally be considered a weapon. Such items are generally unbalanced, and not as durable as a normal weapon. Dinner plates, beer bottles, rocks and pool cues are examples of such weapons. Such weapons may also be thrown with this skill. A regular weapon used with this skill (using it as a Related skill) gets only 3/4 its normal damage.

Combat Skills, Unarmed HTH

Brawling(BRWL)(DEX)(+0) - This skill covers general free-for-all infighting. Hands, feet, teeth, knees and elbows may be used. It may not be used to block or parry.

Note - Brawling and other unarmed hand-to-hand skills only get half the off-hand minus to hit.

Boxing(BOXG)(DEX)(+2) - This skill covers the use of fists as weapons in a more controlled setting than is usually found in a brawl. This skill may be used to block with.

Martial Arts(MRTS)(DEX)(+6) - This skill covers the use of any martial arts form the character wishes to learn. Specialized forms will have different specific skills associated with them. Characters with martial arts may block or parry most attacks. A character with martial arts skill also gets a +2 modifier to their Strength for purposes of damage from their hands or feet per level of skill. A black belt is roughly a skill level of 14. A 10th dan black belt is around a 17.

Wrestling(WRTS)(DEX)(+0) - This skill is like boxing, in that it is more sport than combat, but it can be used to pin an opponent without hurting them too much.

Combat Related Skills

Demolitions(DEMO)(INT)(+0) - This skill is used in the placement of explosives in constructing or removing obstacles. The GM should make a roll for the character to

determine how much explosive is needed. If the roll is failed, the amount missed by is taken as a modifier to the amount used. Whether too much or too little is randomly determined. A roll should also be made when planting the charge. If failed, the effect vs. the target gets a negative modifier equal to the amount missed by, so it is possible to use too much explosive and accidentally get the right result.

Anarchy(ARCY)(INT)(+10) - This skill covers the construction of dangerous items from household materials or easily available legal substances. These range from explosives to poisons to zipguns and anything else that can be thought of. It does not cover the use of such items. If a character wishes to make something, it is up to the GM to figure out what the character can do with what is available. If the roll is failed, the project does not work as intended, and if a 20 is rolled, may quite literally blow up in the character's face.

Power Armor(POWA)(DEX)(+0) - This skill allows a person to get the full benefits of a powered exoskeleton. These are used for cargo manipulation, travel on high-g worlds, and sometimes as shock troops in military operations. Power armor has a set Strength, which any wearer may use as though it were their own, with a Dexterity equal to this skill. No Dexterity-based skill may be used at a level of more than twice this skill. This skill applies only to power armor of a given TL, but all TL's are closely related. Early ones (TL12-13) are manually operated, while advanced models (TL14+) may be controlled partially or completely through a brain tap.

Vehicle Operation Skills, Land

Auto Driving(AUTO)(DEX)(+0) - This skill covers the operation of vehicles that have 3 or more wheels, are self-propelled, and weigh less than 3000kg.

Motorcycle Driving(CYCL)(DEX)(+2) - This skill covers the operation of any type of conveyance with 2 in-line wheels, such as bicycles, mopeds, and motorcycles, although the GM may wish to split these skills if it is felt necessary.

Large Truck(LGTR)(DEX)(+0) - This skill covers the operation of any non-articulated vehicle weighing more than 3000kg.

All Terrain Vehicle(ATV)(DEX)(+0) - This skill covers the operation of any wheeled vehicle designed for use in areas impassable to other vehicles, such as swamp or mud.

Tracked Vehicle(TRKV)(DEX)(+0) - This skill covers the operation of any tracked vehicle, such as tanks.

Hovercraft(HVCR)(DEX)(+0) - This skill covers the operation of any type of air-cushion or surface effect vehicle like grav vehicles. Ones with actual flight capability require an aircraft skill once airborne.

Vehicle Operation Skills, Animal

Beast Riding(BSRD)(DEX)(+0) - This skill covers the riding and controlling of horses and other creatures used for transportation. A skill of 1 is sufficient to stay on a walking horse, 3 for a trot, 5 for a canter, 7 for a gallop, and 8 for a full run.

Note - The ability to ride one beast may only count as a related skill for other beasts. An example of this would be horses and camels.

Vehicle Operation Skills, Air

Ultralight(ULTA)(DEX)(+0) - This skill covers the operation of any aircraft which can be foot launched and/or weighs less than 100kg.

Light Aircraft(LGTA)(DEX)(+2) - This skill covers the operation of aircraft weighing between 100 and 1000kg.

Medium Aircraft(MEDA)(DEX)(+4) - This skill covers operation of aircraft weighing from 1000 to 10000kg.

Large Aircraft(LARA)(DEX)(+6) - This skill covers the operation of aircraft that weigh over 10000kg.

Shuttle(SHTL)(DEX)(+6) - This skill covers most aspects of operating a ground to orbit shuttle, but is mainly for orbital maneuvering, and being able to pilot the aerodynamic equivalent of a pointed potato after re-entry into the atmosphere. Shuttle skill is also used for all docking maneuvers between spacecraft.

Glider(GLID)(DEX)(+2) - This skill covers the operation of unpowered aircraft and is closely related to Ultralight Aircraft skill.

Jump Pack(JUMP)(DEX)(+2) - This skill covers the operation of any personal jet, rocket or antigrav lift device.

Light Helicopter(LHEL)(DEX)(+4) - This skill covers the operation of rotary wing craft that weigh less than 3000kg, or operation of any similar hovering vehicle.

Heavy Helicopter(HHEL)(DEX)(+8) - This skill covers the operation of rotary wing craft that weigh more than 3000kg, or operation of any similar hovering vehicle.

Balloon(BALL)(INT)(+0) - This skill covers the operation of unpowered lighter-than-air vehicles.

Dirigible/Blimp(BLMP)(INT)(+4) - This skill covers the operation of powered lighter-than-air vehicles.

Vehicle Operation Skills, Water

Sail Ship(SLSP)(DEX/INT)(+8) - This skill covers the operation of any sailing craft longer than 25m. This includes all aspects of its operation.

Powerboat(PWBT)(DEX)(+0) - This skill covers the operation of powered water vehicles up to 20m in length.

Motor Yacht(MTYT)(DEX/INT)(+2) - This skill covers the operation of powered water vehicles between 20m and 70m in length, including all aspects of its operation.

Mini Sub(MNSB)(DEX)(+0) - This skill covers the operation of submersibles less than 25m in length.

Small Man Powered Boat(SMPB)(DEX)(+0) - This skill covers the operation of canoes, rowboats, kayaks, and the like. The base speed of the vehicle is modified by 1 per point of skill and per point of Strength above or below 10.

Trades

Electrician(ELEC)(DEX/INT)(+0) - This skill is the ability to lay out and install electric wiring for power or switching, and to connect such wiring to other such layouts.

Machinist(MCHS)(DEX/INT)(+0) - This skill is the ability to use heavy wood or metalworking equipment such as lathes, presses, etc.

Drafting(DRFT)(DEX)(+0) - This skill is the ability to make plans from an idea or finished item so that the proper craftsman could build the item shown in the plans.

Outdoors and Social Skills

Area Knowledge(ARKN)(INT)(?) - This is a specific skill, allowing detailed knowledge of a particular area with regard to a certain subject.

Examples - Which corporation in New Dallas has the most connections with organized crime, who is the best person to buy black market weapons from, which guards at the spaceport are easiest to bribe, etc.

The multiplier for the skill depends on the size or population of the area (whichever is more pertinent). Aptitude *does* apply, as common sense will get you some knowledge on almost everything.

Area	Population	Multiplier
1/100sq.km(30m*30m)	10	.1
1/50sq.km(150m*150m)	100	.2
1/20sq.km(200m*200m)	500	.3
1/10sq.km(300m*300m)	2,500	.5
1/3sq.km(600m*600m)	10,000	.7
1 sq.km(1km*1km)	25,000	1.0
5 sq.km(2.2km*2.2km)	100,000	1.2
20 sq.km(4.5km*4.5km)	200,000	1.4
100 sq.km(10km*10km)	500,000	1.6
1000 sq.km(30km*30km)	1,000,000	1.8
10000 sq.km(100km*100km)		2.0
100000sq.km(300km*300km)		2.5

The detail a level of skill will give the character is generally as follows. Specific information requires a roll.

Skill	Detail
1-3	Rumors, vague ideas
4-6	Educated guesses, who to see for more information
7-10	Firm knowledge of a few items, ideas for others
11-15	Personal knowledge of desired information, knowledge of where to get more information.
16-18	Character is main source of information on subject, knows 90%+ of information to be had.
19-20	Character is probably the best source of information on that subject to be found for some distance.

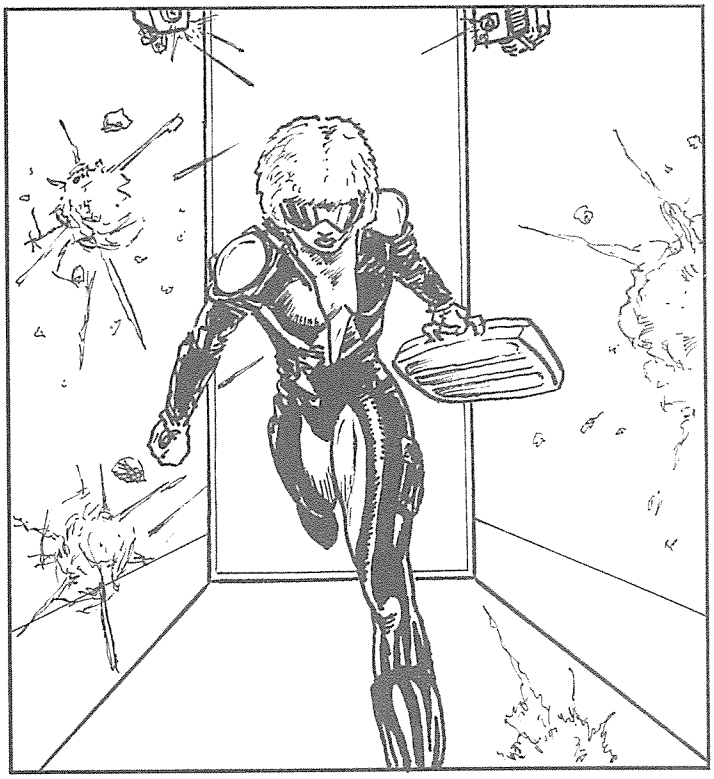
Gambling(GAMB)(INT/PER)(+0) - This skill is the art of knowing when and how much to bet in a game of chance plus skill. The base chance of winning a game is 16+Gambling Skill. This is divided by the odds of winning(n). If a win is made, the payoff is applied to the amount bet.

Example - A character with a skill of 12 lays money on a game with 10 to 1 odds that pays off 8 to 1. The base chance of winning is (16+12)/10, or a 3. If the character wins, they receive 8 times the amount bet.

Any character with a skill of 10 or greater has a chance of detecting cheating in any game being observed. This chance is the skill with a -15 modifier. Of course if the cheating was blatant or exceptionally well hidden it would be easier or more difficult. If a character cheats, they get a +4 modifier to their skill for as long as they cheat, but if the skill roll is failed by 3 or more while cheating, it is probably noticed. Any character who wins constantly and/or lucratively is likely to become a target for everyone who would like to "share the wealth". In extreme cases, the gambling establishment may take direct action, such as stripping the gambler of their winnings and tossing them out (discreetly, of course).

Drinking(DRKN)(CON)(+0) - This skill is the ability to hold your liquor, or may be applied specifically to other substances as well. Trying to drink someone under the table is a Constitution roll, and this skill is a modifier to Constitution. The time spent between rolls is left to the GM and depends on quality and quantity of what is consumed.

Running(RUNN)(STA)(+0) - This skill is the ability to run faster than normal people. Normal humans have a top speed of 9m/sec. If this skill is rolled on a phase of running, 1m/sec may be added to this amount. If the roll is made by half(d), 2m/sec may be added, and if made by 3/4(d), 3m/sec may be added.

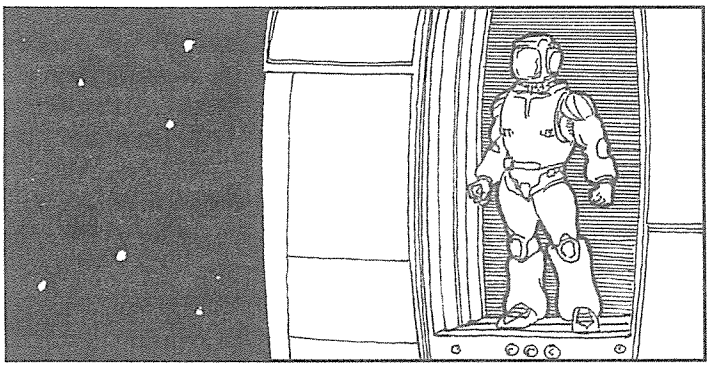


Swimming(SWIM)(STA)(+0) - This skill is the ability to swim. A skill of 6 or better allows the character to reliably keep their head above water. Base swimming speed is 1m/sec. The amount the roll is made by is a positive modifier to swimming speed. If the roll is failed by 15 or more, the character goes under, and may not resurface until a roll on this skill is made. A drowning character is counted as fully exerting themselves unless they make a Willpower roll with a -10 modifier. If a character is encumbered, remember that the minus to skills applies to swimming as well.

Zero-G(ZERO)(DEX)(+0) - This skill is the ability to not make a fool of yourself in low or zero-gravity situations. Whenever trying to perform an action in null or very low gravity, a roll on this skill must be made. If failed, the action gets a negative modifier of the amount missed by, with a maximum of -2 per .1g below normal. This covers things like moving around, using weapons with recoil, etc.

High-G(HGEE)(DEX)(+0) - This skill is the high-gravity counterpart of Zero-G, but high-gravity situations are not as forgiving of errors, since everything used weighs proportionately more.

Vacc Suit(VACC)(INT/DEX)(+0) - This skill is the ability to use a spacesuit or environment suit without penalty, and familiarity with its capabilities and the equipment normally present with one. Each time a character tries to access a specific function of the suit (like maneuvering jets), they must make a roll on this skill to do it successfully, otherwise the attempt is unsuccessful and they can try again on the next phase.



Survival(SURn)(INT/PER)(+0) - This skill is the ability to find food and/or shelter in arctic (SURA), temperate (SURT), equatorial (SURE) or urban (SURU) environments. These are all separate skills. The appropriate survival skill is the chance on 1d20 of being able to find food and water for 1 person for 1 day. If the roll is made by half(d), food and water is found for 2 days, and if the roll is made by 1/4(d), food and water is found for 2d3 days. Modifiers should be given for different terrain within an area, such as desert or swamp. The modifiers below are suggested, and average over terrain containing more than one feature. The weather is also an important factor, especially for water.

Terrain	Modifier, food	Modifier, water
Plains	-4	-4
Forest	0	0
Ice pack	-15	automatic
Swamp	0	0
Desert	0	-15
Hills	0	+6
Mountains	-4	+5

If a character rolls a 20, there is a chance of finding contaminated food and/or water. If the character rolls greater than their skill on a second d20, the food is contaminated and the character will probably be ill. Survival skill does not confer immunity to temperature extremes, but the effective temperature may be modified by 1d3x5 degrees on a successful roll. The represents the ability to find shelter from adverse temperatures. This skill may only be used 3 times per day, and each roll must be separated by at least 4 hours, which is approximately the time it takes to determine the success or failure at your efforts.

Repair Skills

Electrical Repair(RELC)(INT)(+4) - This skill covers the repair of simple electrical or electromechanical devices. The skill is averaged with the character's skill with the object being repaired to find the base chance of a successful repair.

Mechanical Repair(RMCH)(INT)(+4) - This skill covers the repair of any type of mechanical device. The skill is averaged with the character's skill with the object being repaired to find the base chance of a successful repair.

Electronic Repair(RELT)(INT)(+4) - This skill covers the repair of electronic devices such as radios, computers, etc. In most cases in **SpaceTime**, proper use of this skill simply will allow the character to know what needs to be replaced. Very few items can actually be repaired without total replacement of the defective part.

Atomic Repair(RATM)(INT)(+4) - This skill covers the repair of any sort of nuclear-powered device, and is the hands-on difference between how it works in principle (NUKE skill) and knowing how to fix it. This would be the typical skill used by an engineer on most spacecraft.

Academic Skills, Engineering

Aerospace(AERO)(INT)(+0) - This skill is technical knowledge pertaining to the theory of flight of any type. Characters with a professional level of an engineering skill (14+) are assumed to be able to design or appraise items relating to that skill.

Chemical(CHEM)(INT)(+0) - This skill is knowledge pertaining to any type of chemical reactions and how to implement them on a large scale, such as for manufacturing.

Civil(CIVL)(INT)(+0) - This skill is knowledge pertaining to the construction of any type of large structure, and deals with the stability and design quality of the structure.

Computer(COMP)(INT)(+0) - This skill is knowledge pertaining to computer design or design of computer-controlled equipment.

Electrical(ELEC)(INT)(+0) - This skill is knowledge pertaining to the design and theory of electrical, electronic or optical/electronic devices.

Material Science(MATS)(INT)(+0) - This skill is knowledge pertaining to the properties of any type of material.

Mechanical(MECH)(INT)(+0) - This skill is knowledge pertaining to any type of machinery or supporting structures.

Nuclear(NUKE)(INT)(+0) - This skill is knowledge pertaining to any type of nuclear reactor, and includes nuclear weapons.

Academic Skills, Arts and Sciences Group

Biology(BIOL)(INT)(+0) - This skill is knowledge pertaining to any natural processes which sustain the life of a creature.

Economics(ECON)(INT)(+0) - This skill is knowledge pertaining to the economic systems the character is acquainted with, and economics in general. The character knows exchange rates and local supply and demand. It is useful to know where certain items are scarce or plentiful, and helps to keep you from being ripped off in unfamiliar areas.

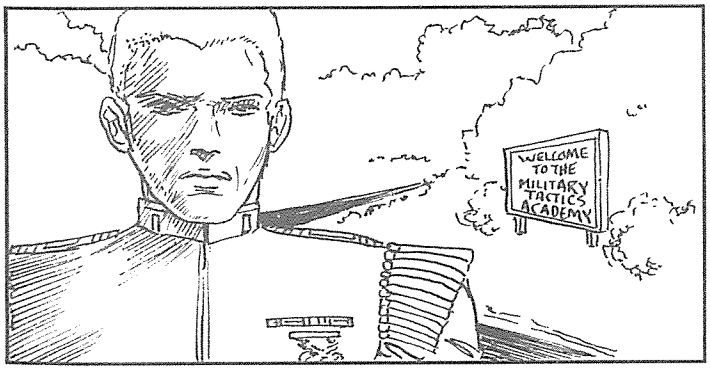
Computer Science(COSC)(INT)(+0) - This skill is knowledge pertaining to any type of computer programming or "hacking". Most characters should have at least a 4, allowing them to be able to use public access terminals, etc.

History(HIST)(INT)(+0) - This skill is knowledge pertaining to the history of the people of the earth, although the skill also applies to the history of any particular planet.

Music(MSIC)(INT/PER/DEX)(+0) - This skill is knowledge pertaining to the history, theory, and practice of music. It is also usually the skill the character possesses with a specific musical instrument.

Physics(PHYS)(INT)(+0) - This skill is knowledge pertaining to matter, energy of any type, and the interactions between the two. It can be used to calculate the energy needed or used in completing a task of this nature, such as burning a hole in a steel plate or the calculating the trajectory of a cannon shell.

Military Science(MLSC)(INT)(+4) - This skill is knowledge pertaining to any type of military equipment or tactics. The character is familiar with weapon types and their proper use on the field of battle. If a character attempts to use unfamiliar equipment or untried tactics a roll should be made on this skill. If the roll is failed, the character is treated as using a closely related skill for that battle if tactics, or a for a turn if a weapon.



Linguistics(LING)(INT)(+4) - This skill is the ability to pick up new languages through familiarity with all languages. When learning a new language, the character may be counted as teaching themselves. Note that you need a skill of at least 6 in the language to do this, and your skill cannot exceed the level of your source for the language. For skill buying, assume all languages are Closely Related to Linguistics (one-way), i.e. a Linguistics of 10 gives you an base skill of 5 in any language, although this has its limits on totally unfamiliar languages.

Anglic(ANGL)(INT)(+0) - This is the spoken knowledge of the Anglic language, the predominately English mish-mash of tongues currently spoken by most Earth inhabitants. Between two speakers, a combined skill of at least 20 is required for understandable conversation, with each person having at least a 5. The chance of succeeding with a verbal skill shouldn't exceed the average language ability of those involved. Characters start with 1 spoken and written language (not necessarily Anglic). In that language, the character automatically has a skill of 14. If for some reason a character is illiterate, they get back half the "cost" for their base language in AP or SP, and will not be able to buy any skill which requires reading.

Languages are Related Skills at best, and are usually Unrelated. Few languages are actually Closely Related enough that a speaker of one can understand the other without much difficulty.

Uman(UMAN)(INT)(+0) - This is the official language of the Uman, or at least the main power bloc. Most inhabitants of the planet can speak, read and write it, even if only as a second language.

Space(SPAC)(INT)(-5) - This polyglot tongue is a combination of that of all the known planets, but predominately that of Earth and Uman. It is widely used as a common tongue by those that have to deal with several different planets, like space pilots, traders, etc.

Street(STRT)(INT)(-5) - This language is restricted solely to Earth, and mainly used as a recognition symbol or sign of protest against society. Street gangs, sidewalk vendors, smugglers, etc. are usually fluent in this language.

Other Languages(?)(INT)(?) - You may wish to add languages of your own, like trade languages(-5), technical jargon(-10), sign language(+0), lip reading(+10), or others. Note: A language bought as spoken knowledge only is half cost, as is any language that has no writtten component.

Criminal Law(CRIL)(INT)(+0) - This skill is knowledge pertaining to criminal law, both local and regional, and includes tricks, loopholes, delaying tactics and any other unscrupulous use that can be exploited.

International Law(INTL)(INT)(+0) - This skill is knowledge pertaining to law between planets or nations, such as treaties, with the same uses and abuses as criminal law.

Medical Skills

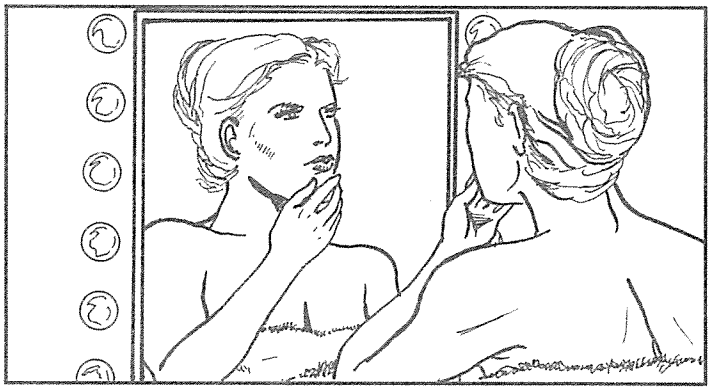
Medicine(MDIC)(INT)(+10) - This skill is knowledge of the human anatomy and physiological processes, especially as pertains to the long term recovery of a patient, and also to surgery. This skill is appropriate for doctors, surgeons, etc., and is best applied when there is ample time and facilities for treatment. This skill is also mentioned under Use of Medical Skills (p.66).

First Aid(FSAD)(INT)(+0) - This skill is knowledge of the human anatomy and physiological processes, especially as pertains to the immediate care of injuries. This skill is appropriate for paramedics, and works best in situations where immediate care must be given. This skill is also mentioned under Use of Medical Skills (p.66).

"Criminal" Skills

Wounding(WOUN)(INT)(+10) - This skill is the ability to do maximum damage with a weapon due to knowledge of weak points in the body. This skill does *not* have Aptitude and is always bought from a level of 0. It is bought to affect a specific weapon skill. If a called shot to a specific location is made successfully, the character may add 1/2(d) of this skill to the Damage Level done to the opponent. The damage addition may never be more than double the base table (DL1 to DL2, DL3 to DL6, etc.). This skill is important to those who wish to kill with a single blow from a small weapon. A normal use of this would be a stab to the heart with a dagger, slashing a throat with a razor, etc., a small weapon being used to its greatest effectiveness. Larger weapons generally do enough damage that this skill is not needed. If a character rolls a 1 on a to hit roll and needed a 10 or less, whether they have this skill or not, they may shift the Damage Level column by 1d10 (up to double) to represent a lucky hit.

Acting(ACTG)(INT/PER/APP)(+0) - This skill is knowledge pertaining to verbal communication, and specifically to communicating with large numbers of people. As disguise can cover the physical form of an object, acting can be used to cover the personality.



Disguise(DSGS)(INT)(+0) - This skill is the ability to alter the appearance of an item, usually people. It counts as a negative modifier to the Perception of others. If the Perception roll is made by 5 or more, they realize the person is in disguise. If made by less than 5, they can try to make an Intelligence roll to deduce the same thing. If the roll is failed, they accept the appearance as the actual form. Modifiers to this skill are as follows.

Modifier	Amount
Character is well known by observer	-4
Character is known by observer	-2
Character has had time to prepare ample disguise	+5
Disguise is makeshift	-5
Disguise blends in with background	+5
Disguise contrasts or conflicts with background	-5

The total of all modifiers to Perception apply, plus the modifier for use of this skill.

Con Man(CMAN)(INT/BRV/APP)(+0) - This skill is the ability to con, dazzle, bamboozle, and otherwise get people to part with something they possess for something you have no intention of parting with or giving them. Call it a unidirectional flow of services or goods in your direction. The amount the roll is made by is the amount the suckers must make an Intelligence roll by in order to not fall for the scam. There are modifiers to the con artist's chance of success. These are below.

Modifier	Amount
Target wants to believe the scam	+5
Target already trusts character	+5
Target is desperate	+5
Target needs what is offered	+3
Target is suspicious	-2
Target does not need what is offered	-3
Target has heard of scam before	-3
Target actively distrusts the character	-3
Scam is "too good to be true"	-1
Scam is "a limited time offer"	-1
Accomplices are involved	+1/2 of best skill

If the roll is failed, the target is not interested in the offer. A miss by 5 or more means they are suspicious, and a miss by 10 or more means the target probably knows there is a scam going. Other modifiers to the roll should be given for how well the scam is set up, the type of offer vs. the personality of the target, etc. On the average, a quick scam may take a while to plan, but once the plan is perfected the actual scam may take less than an hour per victim. More involved scams may take days or weeks.

Bribery(BRIB)(INT/BRV)(+0) - This skill is knowledge pertaining to greasing palms. While area knowledge might give an idea of who to bribe, this skill does that and gives an idea of how much to bribe, and how to offer it. The roll is modified by the monetary consideration and the illegality of the deed to be performed, as follows.

Modifier	Amount
Bribe is less than 1% of salary	-2
Bribe is 1% of salary	+0
Bribe is 2% of salary	+1
Bribe is 5% of salary	+2
Bribe is 10% of salary	+4
Bribe is 25% of salary	+6
Bribe is 50% of salary	+8
Bribe is 75% of salary	+10
Bribe is 100% of salary	+12
Bribe is 150%+ of salary	+15
Deed is slightly illegal(small fine)	-1
Deed is illegal(reprimand, substantial fine)	-3
Deed is very illegal(loss of position, jail)	-6
Deed is incredibly illegal(treason)	-10

If it is standard practice to accept bribes for certain services in an area, any bribe of a set amount or more will

automatically succeed. Exceptions to this are offering huge amounts of money. The person may then forego money for prestige and turn you in. Slipping a customs official a bill to get your luggage through faster is an example of this. If bribes are held in very poor regard in an area, the illegality of the deed is shifted down 1 or more rows. A failed roll means the bribe is not accepted. Another attempt may be made if more money is offered. If the roll is failed by 5 or more, the money is kept by the person it is offered to, and the desired service not performed. If the roll is failed by 10 or more, the money will be kept, and the character reported to authorities. In some countries, this means getting sent to someone who is more expensive to bribe, but more likely to get the job done.

Torture(TORT)(INT/PER)(+0) - This skill is the ability to extract information from unwilling victims. An unsavory skill, it includes knowledge of various drugs and "tools" of the trade. If the roll is made, the amount made by is a negative modifier to the tortured character's Willpower. If the roll is failed, the information desired is gotten. If the Willpower roll is made, the torturer may inflict any Damage Level desired on any part of the character, and roll again. This process continues until the character talks, is released, or dies. If the roll is failed, the Damage Level inflicted is increased by the amount missed by, divided by 2(u). Only 1 roll on this skill may be made per hour for physical torture. Drug or brain-tap methods may take less time.

Prying(PRYG)(INT/PER/APP)(+0) - This skill is the ability to talk information out of unwitting victims. If the character fails the roll, the target realizes they are being pumped for information, although the character trying to pry may not realize they have failed. If the character makes the roll, the amount made by is a negative modifier to the Perception of the target. If the Perception roll is failed, the target will reveal information that they ordinarily wouldn't have. If the Perception roll is made exactly, the information is revealed, but the target realizes that they shouldn't have said anything.

Deception(DECP)(INT/PER)(+0) - This skill is the ability to realize you are being pumped (Prying/Torture, although the latter is obvious), and the ability to say a lot without saying anything. If the character is having Prying used on them, this skill is a positive modifier to their Perception. If the character makes the roll, no further Prying attempts will have any effect unless the character wishes to "slip" information. This information may be false.

Climbing(CLMB)(DEX/STR)(+0) - This skill is the ability to scale vertical or near-vertical obstacles. The base climbing speed is 1 meter per phase. The following modifiers apply to this skill.

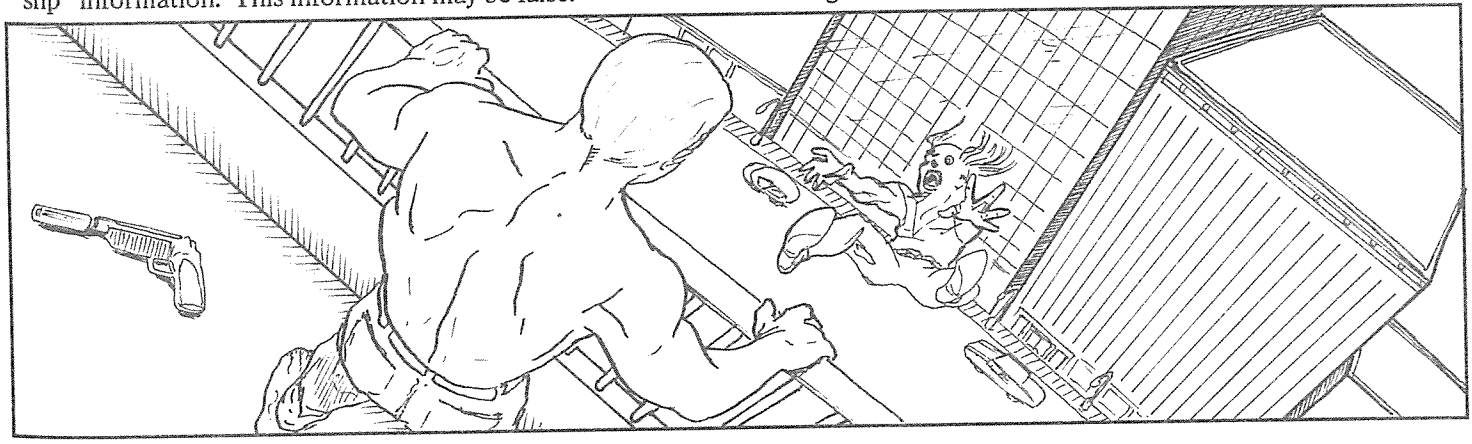
Modifier	Amount
Many handholds, not slippery	+0
Small handholds	-6
No handholds	-15
Smooth surface	-5
Slightly slick (wet)	-5
Slick (slimy)	-10
Very slick (greased)	-15
Each +10 degrees of tilt (to 50 degrees)	+2
Each -10 degrees of tilt (to -50 degrees)	-4
Assisted by external devices (rope, etc.)	+1 to +15
Each phase of preparation (up to +10)	+1

If the roll is failed, no progress is made that phase. If the roll is failed by 5 or more, 1 meter of ground is lost. If the roll is failed by 10 or more, the character must make a Dexterity roll to avoid falling. If a falling character is secured by a climbing harness, the fall will be treated as though from a height 1/10(d) the actual distance fallen.

Catfall(CTFL)(STR/DEX)(+0) - This skill is the ability to lessen the damage a character takes from a fall. The roll gets a -3 modifier per meter over a safe distance fallen, but if the roll is made, the character can subtract the amount the roll was made by from the height in meters. Any negative modifiers due to encumbrance also apply to this skill. A controlled fall from an actual height of 2 meters or less does no damage. If the skill is over 10, this is raised to 3 meters, and if over 15, to 4 meters.

Forgery(FORG)(DEX/INT)(+0) - This skill is the ability to create artificial documents or other items, depending on the skill it is combined with. An example would be combining Art and Forgery to create a forged work of art. Not only the ability to recreate existing items, it is the ability to create new ones that look like they were made by someone else. Modifiers to this skill depend on the equipment available for the forgery, the item being produced, and the time spent on the project.

Searching(SEAR)(INT/PER)(+0) - This skill is the ability to find hidden or lost objects through perception and intelligence. This skill acts as a positive modifier to



Perception when looking for objects whose location is unknown. In general, there are three types of searches: A casual search, a normal search, and a detailed search. The area searched per phase and the modifier to Perception depends on whether the search is indoors or outdoors.

Search	Area per phase indoor/outdoor	Modifier
Casual	$10m^2/100m^2$	-5
Normal	$1m^2/10m^2$	+0
Detailed	$.1m^2/1m^2$	+5

Modifier	Amount
Poor conditions for search	-1 to -10
Good conditions for search	+1 to +10
Searcher knows exactly what is being looked for	+5
Searcher has an idea of what is being looked for	+2
Searcher doesn't know the object of search	-5

All rolls on Perception when using this skill should be made by the GM. If the roll is made, anything to be found is usually discovered by the searching character. If the sum of all modifiers on Perception is positive, the roll is counted as being made. Anyone under the direct supervision of a character with this skill can use 1/2(d) that person's skill.

Hiding(HIDG)(INT/PER)(+0) - This skill is used to hide things so they will not be found by searchers. This is a matter of ingenuity, and applies to objects of any size, from hiding a dagger in your boot or gun in your jacket, to smuggling aliens over the border. This skill is used as a negative modifier to the Perception of the searchers as the positive modifiers apply to their Searching skill, as follows.

Modifier	Amount
Area has many areas to hide an object this size	+5
Area has few areas to hide an object this size	+0
Area has no areas to hide an object this size	-5
Very small object concealed on person	+5
Small object concealed on person	+0
Medium object concealed on person	-5
Object concealed *in* person	+20
Multiple objects of a given size	-1 per
Secret compartment	Varies
Object is clevery disguised	+5
Purloined Letter trick	1d10-6

After all modifiers are totaled up for hiding, this skill is added to the amount, and the result applied vs. any searches.

Detective Work(DETC)(INT)(+0) - This skill is the ability to follow the shortest path of questioning to arrive at a conclusion. If presented with evidence, the character can make suppositions and educated guesses as to what is going on, based on what has already happened. If the information received is false, the conclusions will probably be in error. This skill also gives the character an idea of where to proceed if more information is needed. The character should only be allowed to roll on this skill when a significant piece of information is found, or enough information is available to reach valid conclusions. Finding this information may be in the province of other skills.

Security Systems(SCSM)(INT/PER/DEX)(+4) - This skill is the ability to find, evaluate, and disarm alarms and traps. The character is familiar with various types of systems and arrangements, and the ways to negate them. The GM should make all rolls on this skill. If the roll is made, the system is nullified. If failed, the security device or system performs its function. Common modifiers are below.

Modifier	Amount
System and disarming technique are known	+10
System is accessible from outside area	+10
System is totally enclosed in area	-5
System is totally inaccessible in area	-20
Character has specific tools for system	+5
Character is in uncomfortable position	-3
Character has unlimited time	+5
Character has restricted time	-3
Character has severely restricted time	-10

In some cases, this skill should be combined with a skill appropriate to the type of alarm or security system. This is preferable to just giving a minus for an unfamiliar system. A modern example would be to average this skill with electronics for defusing a bomb with electronic security devices. Computer security, or ICE, is a specialized aspect of computer science skill, although this skill may be needed to gain access to a place that the other could be used from.

Pickpocketing(PCPK)(DEX)(+4) - This skill is the ability to lift wallets, jewelry, etc., without the target realizing it. This skill is treated as a negative modifier to the Perception of the target. If the roll is made, the item is acquired. If failed by 5 or less, the target is aware of the theft, but the item is still acquired. If failed by more than 5, the item is not acquired, and the target is aware of the attempt. Modifiers are as follows.

Modifier	Amount
Item is easily accessible	+3
Item is moderately accessible	+0
Item is relatively inaccessible	-3
Item is very inaccessible	-8
Target is wary of pickpockets	-(PER/2)
Target is distracted	+1 to +10
Target is asleep	+6

Stealth(STLH)(INT/DEX)(+0) - This skill is the ability to move by living creatures without being noticed. This skill is treated as a negative modifier to the Perception of those being bypassed. All other modifiers that affect the Perception roll also apply. If the creatures being bypassed also have Stealth, their skill is treated as a positive modifier to their Perception when they are trying to respot a character who has been seen, or if they have reason (not just a hunch) to suspect intruders, used as a positive modifier on Perception to spot the intruder, *if* they know where to look.

Finishing Touches

Finishing Touches - The last thing you need to do for your character is go shopping. You don't have a lot of money, so what you get should be useful for the first few adventures. By then, you should be able to equip yourself in better fashion. As you proceed through the rules, you will reach sections that detail the specific attributes of equipment. For now, you just need to own the items, and gradually learn the rules and format as you need to during play. The following list covers some items that a starting character might carry or find useful. Some may be more or less expensive (black market or second-hand?), depending on the background of your character and the world you live in.

Item	Cost	Mass
Pocket communicator/phone	500Cr	.3kg
Use charges per month (in advance)	50Cr	-
Pocket computer, keyboard access only	200Cr	.5kg
Pocket computer, voice/keyboard access	500Cr	.6kg
Credit card	-	.1kg
Light amplification sunglasses (mirrored)	500Cr	.2kg
Complete change of clothes, AV1/0	100Cr	2.0kg
Torso body armor, AV15/4 (stops a .357)	200Cr	.9kg
Riot helmet, AV20/10	100Cr	1.0kg
Cheap pistol,DV20I(semi-auto,20 shots)	190Cr	1.0kg
Extra clip	20Cr	.3kg
Ammo, per box of 50 rounds	7Cr	.6kg
Pre-War rifle,DV41I(auto-burst,30 shots)	650Cr	3.9kg
Extra clip	30Cr	.5kg
Ammo, per box of 50 rounds	15Cr	.6kg
Combat knife, DV6I	40Cr	.4kg
Vibroknife, DV6I, armor-piercing	150Cr	.5kg

Of course, characters are not restricted to this list, and can peruse the detailed equipment and weapon lists for unusual items. Even then, lack of funds will limit initial purchases. Given the simple starting equipment of the characters, and the basic notes on society earlier in the rules, you shouldn't be bogged down with rules or unfamiliar information. You can quickly get a feel for the world the GM has created, and introduce yourself to the system gradually.

Now, your character is physically complete. But, you aren't quite done yet. Stand back and take a look at the "person" you have created. Sketch in the character outline. What does the character look like? Will the general appearance of the character "mark" them as being from a certain place, income level or subculture? What effects will this have in their everyday life?

Think about any character disadvantages you may have bought. What else is in the character's background? How did they reach this point in their life? What do they plan to do, both in the next few days, and for the rest of their life? What are the driving forces that push this character onward? How does this reflect in the stats and equipment you have chosen for the character? Do they match?

A good character is more than numbers on a page. You, the player, must convert this list of attributes, skills and equipment into the abstract personality of another person, your character. Look at the sample character below, and pay attention to the little notes that may justify or explain the stats. While not very important in and of themselves, they can provide a wealth of background material for later use in play.

Name: Reg Natarmis —— Don't call him Reggie
Background: Punk from Texmex border area
Robbed wrong person, now on the run.

Age: 18 Height: 170cm Mass: 58kg BP: 26 BR: 26
Disadvantages: Skinny, 5SP, Enemies, 10SP, Fear of heights (-10 to Willpower), 10SP

Strength : 8 —— Studiously avoids anything resembling work,
Dexterity : 13 —— and as a result has to live by his reflexes.
Constitution : 13 —— Grew up in a ruined area
Intelligence : 15 —— Has a lot of native intelligence
Willpower : 10 —— About average, no real pain tolerance or mental fortitude
Bravado : 12 —— Bluffs a bit, has a slightly inflated opinion of his abilities
Perception : 12 —— Always looking over his shoulder
Appearance : 8 —— Surly attitude, a bit unkempt, maybe needs dental work
Stamina : 8 —— A sprinter, can't tolerate long-term labor very well
Power : 7 —— Not at all psychic, nor does it run in his family

Skills	Level	
Knife	10	—— Knows how to use a knife,
Wounding	5	—— and where to stick it for best effect
Shotgun	7	—— Used to own one, but it attracted too much attention
Street talk	12	—— Very fluent, but his dialect marks his place of origin
Anglic	14	—— Ditto
Running	10	—— Prefers to run instead of fight,
Stealth	10	—— so he can sneak back for an ambush later
Sec. sys.	10	—— Pretty good as a cat burglar
Electr. repair	8	—— or car thief
Deception	8	—— Will try to weasel out of anything that can't be bluffed

Skinny and short due to childhood malnutrition

Equipment
Suitcase
Clothes —— Left town in a hurry
Knife, credit card with 960Cr

Combat - Combat *will* occur in the course of play. The following rules will show how it is done.

First, you need to get the basics that apply to all combat. Then the different forms of combat will be explored, and finally, damage and armor will be covered.

Speed - Each character in **SpaceTime** has a Speed, listed on the character sheet. This reflects how fast you are, how quickly you can move or react to a situation. Speed determines how many full actions a character gets in a turn, and what disadvantage they are at between these actions.

Combat is done in turns. Each Combat Turn is split into 10 seconds, or phases. Play moves phase by phase, each phase completed before the next begins. A character will get a full action in every phase marked with an "X".

	Speed									
	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20
1				X	X	X	X	X	X	X
2			X				X	X	X	X
3		X			X	X	X	X	X	X
4				X					X	X
5	X		X		X	X	X	X	X	X
6										X
7		X		X	X	X	X	X	X	X
8			X					X	X	X
9				X		X	X	X	X	X
10				X	X	X	X	X	X	X

A character may act on a phase other than the ones marked with an "X", but if they do, they will take a minus to all of their actions. The modifier a character gets on phases without an "X" is determined by their Speed. This modifier applies to all skill and Attribute rolls. *Alternately, you may either throw out this minus altogether, allowing characters to act equally on all phases, or say that a character may act only on their phase, and not on any others.*

Speed	Modifier	Speed	Modifier
1-2	-9	11-12	-4
3-4	-8	13-14	-3
5-6	-7	15-16	-2
7-8	-6	17-18	-1
9-10	-5	19-20	-0

Example - A character with a Speed of 10 gets 5 full actions in a Combat Turn, and 5 actions that get a -5 to rolls.

Initiative - In order to see who moves when in a phase, initiative must be determined. Take the average(n) of your Skill used and your Physical or Mental Speed, *or* use the following table to compute it. This result is your *base* initiative. If what skill you plan to use is not determined, or you are moving, the skill is counted as Dexterity. Firearms have a minimum initiative of 12, regardless of how low the Skill and Speed of the user are (anyone can pull a trigger fairly fast). The minimum is 12, and if Skill and Speed indicate so, it may be higher.

	Skill								
Speed	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18
1-2	2	3	4	5	6	7	8	9	10
3-4	3	4	5	6	7	8	9	10	11
5-6	4	5	6	7	8	9	10	11	12
7-8	5	6	7	8	9	10	11	12	13
9-10	6	7	8	9	10	11	12	13	14
11-12	7	8	9	10	11	12	13	14	15
13-14	8	9	10	11	12	13	14	15	16
15-16	9	10	11	12	13	14	15	16	17
17-18	10	11	12	13	14	15	16	17	18
19-20	11	12	13	14	15	16	17	18	19
20+	12	13	14	15	16	17	18	19	20

Then add or subtract the following, depending on the action done.

Action	Modifier
Initiative of weapon used	varies
Using a psionic power	+0
Holding an action	+5
Performing non-combat action (running, shouting, etc.)	-3
Attacking into Sector II, VI	-1
Attacking into Sector III, V	-3
Attacking into Sector IV	-5
Hipfiring	-3

Roll 1d6 and add it to this amount. The characters act in order from highest total to lowest total.

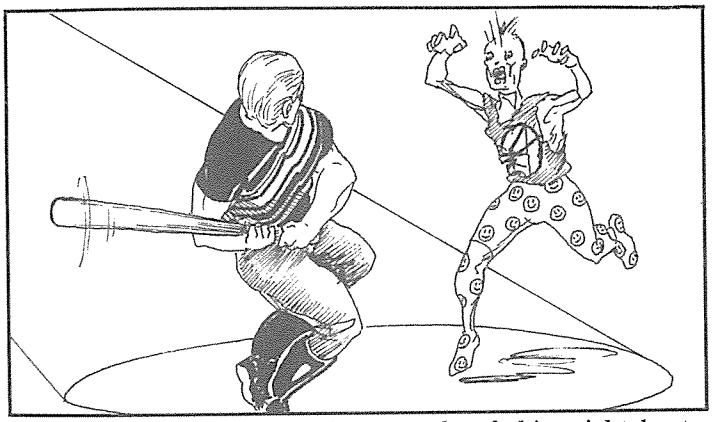
Example - A character has a skill of 14 with a weapon having an initiative of +2 (large pistol). Their Dexterity is 12, and Strength is 12, for a Physical Speed of 12. Their base initiative is the average of Speed and Skill, plus 2 for the weapon, for a total of 15. They roll 1d6 and gets a 1, so the final result is a 16. This character acts after all characters with Initiatives of 17 or better, at the same time as those with 16, and before all those with a 15 or less.

If they had decided to move first, and then shoot, their Initiative would be 12 (Dexterity of 12, Speed of 12), minus 3 for a non-combat action, for a result of 9. If the roll of 1d6 is again a 2, the Initiative would be a 11, significantly slower because of the time spent moving.

Characters who have a course of action planned will generally act faster than those who are waiting to see what happens. Characters who are moving will probably act after those who are using a weapon, melee weapons are slower than guns, and characters with low skills will probably act after those with high ones.

Length Advantage - In melee combat, if one character has a weapon at least 30cm longer than opponent, the attack by the character with the longer weapon gets a +5 to Initiative because of weapon length. This is negated when the character with the shorter weapon closes to a range of less than the length of the weapon. For weapons less than 1m long, this means in the same hex. This does not apply to thrown weapons.

Combat Sequencing - Within a ten second Combat Turn, play proceeds by each one second phase. Within each phase, actions are classified as Combat or Movement, and proceed in the order of initiative. If a character wishes to move before attacking, they are counted as moving for initiative. If they attack and then move, they are counted as attacking for initiative, but cannot attack after moving. Movement is semi-simultaneous, things being done in logical order. All characters within sight of each other can respond to each other's actions. If necessary, movement should be 1 hex at a time, in order of initiative, and sequenced by using the Combat Sequencing Chart. There are certain actions that are exceptions to the normal initiative flow. These include combat maneuvers, such as dodging, and opportunity fire, which is used in situations where combat *must* occur during movement, as in shooting through a window as you run past. Although a movement, dodging is counted as a combat action, with a Skill equal to Dexterity, and opportunity fire is counted as being during movement, although it may be a held action if the character had a specific target in mind, rather than a spur of the moment attack. Characters may also hold actions on combat or movement, which is waiting for certain conditions before



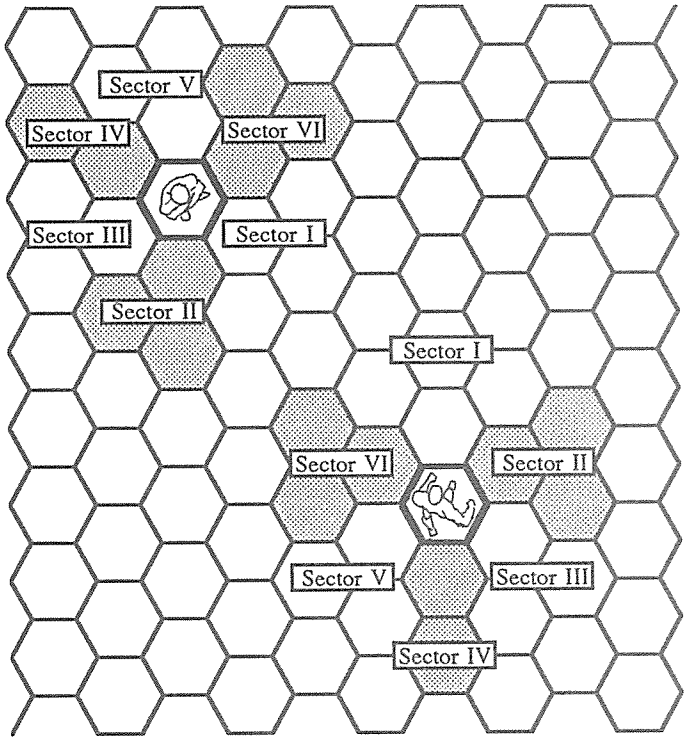
executing the maneuver. An example of this might be to prepare to dodge an attack you expect will be coming, or being ready to shoot while moving. Phases are a necessary concept so that the passing of time in combat can be defined, but the sequence of actions can make it hazy. A person who wants to attack and then move does so in the normal sequence, but a person who wishes to move, then attack might use the Movement part of one phase, and the Combat part of the next. On the timescale used, this is sometimes necessary. A character is always counted as doing the move they did at the end of their last Movement for purposes of attacking or being a target. If they have not yet moved on the current phase, the movement of the previous phase applies.

Example - If a character moves and attacks, they may take a movement modifier on their chance to hit. On the next phase, if they attack immediately, they will have a better initiative, but still be counted as moving for their chance to hit. After attacking, they can stop, and be counted as stationary for the next phase. If they instead decide to stop and prepare before attacking, giving a better chance to hit, they are counted as moving for initiative purposes, so whomever they attack will probably get in the first blow.

The sequencing system is very flexible, but it also requires thought on the part of the players, thinking ahead a second or two to see what they want to do, and planning their actions so they can be done with best effect.

To simplify sequencing, all actions can be classified as Combat or Movement, and proceed in this order. All combat occurs, then all movement occurs, each in the order of initiative. Dodging is still counted as combat, and opportunity fire as movement.

The Combat Display - Hexagonal grid paper is usually used for map and display purposes, although you may use staggered squares equally well. Each character has 6 facings, called sectors. Sector I is always the facing to the character's front, regardless of which way they turn. The other Sectors are always in the same position relative to Sector I. A character should always be facing a hex side, so that there is no doubt as to how the character is facing. The Sectors are illustrated below.



A map is usually drawn of the area in which the combat occurs. The scale is: 1 hex on the map equals 1 meter. 5mm hex paper is good for open areas or outdoor combats, while 12mm paper is good for combat inside buildings or small areas. Characters may be kept track of by marking their initials in hex they are in with pencil. An arrow serves to show the way the character is facing. Alternately, characters may be represented by miniatures. This is visually more appealing, but substantially more expensive.

For larger scale actions, it is recommended that you use a scale of either 5 or 10 meters per hex. This allows you to display a much larger area, while still allowing characters to move rationally, usually moving one or two hexes per phase.

Projectile Weapon Combat

Projectile Weapons - Projectile weapons are those that fire, sling, shoot, or otherwise propel a projectile to inflict damage. The modifiers for projectile weapon combat also apply to energy weapons, and to psionic powers, if used.

Projectile Weapon Format - Each projectile weapon in **SpaceTime** will have a large quantity of information presented in the following format. This allows you to have a complete weapon list in a relatively small space, or to easily find a weapon by its reference number. *If you wish to keep the amount of information at a lower level, just write down the combat related information, and leave the rest until needed.*

#	Name	Cal	RC	DV	IA	Init	Skill	Nat.	Mass	SZ	TL	Cost	NS	ACT	MS	H	R	CLM	AV	BP	Notes
1M	FN FAL	7.6mm	4/4	+0	+2	-1	RIFL	Belg.	4.25	S/6	10	890	20	AT/C	11	1	O	.60	11	18	

#n - This is the number of the weapon for reference purposes. The n after it is to show what period the weapon is from. These periods are:

- A - Ancient. The weapon is from a period before gunpowder weapons.
- E - Early. The weapon is from a period during which gunpowder weapons were used, but before metallic cartridges saw use.
- M - Modern. The weapon is from a period in which metallic cartridges were widely used.
- F - Future. The weapon uses or relies on advanced technology.

Name - The familiar name of the weapon.

Cal - The caliber of the weapon. In most cases, other weapons in the caliber fire the same ammunition.

RC - The Range Class of the weapon for aiming (first number) and damage (second number). When using the weapon, the first RC is used to find the effects of range on the chance to hit. Most energy weapons use a combination of RC's, usually one for the type of weapon, plus RC7, which is added to any other modifiers to reflect the advantages of this weapon type. If optional range effects on damage are used (p.50), the second RC is used to determine them.

DV - Any plus or minus to the standard DV of the caliber used. This number is added or subtracted to the DV of the weapon before rolls are made. If average damage is used, add 1/2(u) this amount to the average damage. Energy weapons do not have bonuses, so for them, the number here is the actual DV of the weapon.

IA - The Inherent Accuracy of the weapon, a measure of how easy the weapon is to use. Some weapons may be inherently easier to shoot because they have better sights, longer barrel, or just a better "feel". The IA is added directly to user skill before any modifiers come into play.

Init - The Initiative of the weapon, how quickly it can be brought into play. Weapons like pistols are quicker to bring into position than a large shotgun would be. The initiative modifier makes it more likely that faster weapons will act first. The higher this number, the faster the weapon can be brought into play.

SK - The skill needed to use the weapon, using the same abbreviation as the bracketed one in the Skill description, and as the player should list it on the character sheet.

Nat - Nationality. Where the weapon was manufactured. Will be less common outside that area.

Mass - The mass of the unloaded weapon in kg. *Round to nearest .1 for simplicity if the situation warrants.*

SZ - The size of the weapon for carrying or concealment purposes. If a /n follows the size, it means that the weapon covers n locations when worn. A rifle slung diagonally over the shoulder would provide cover to a shoulder, the center of the back, and a hip.

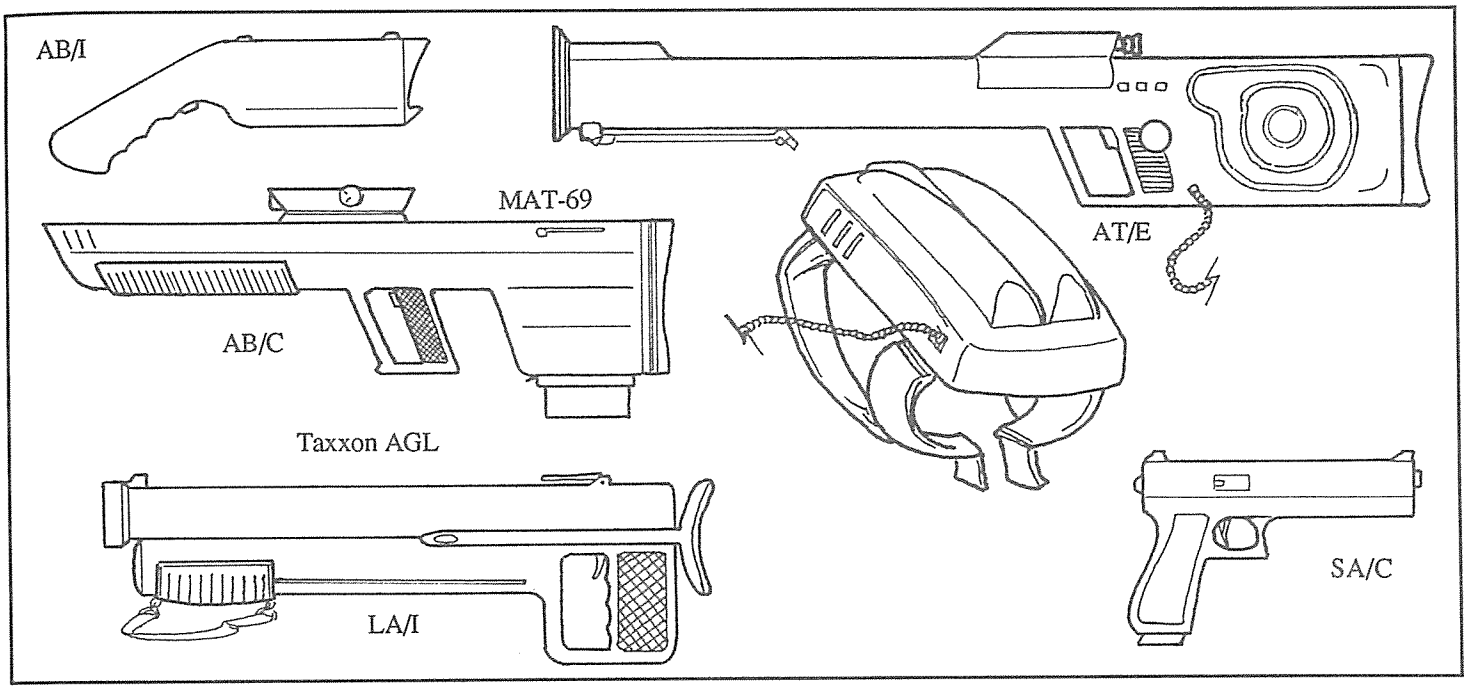
TL - Tech Level. A more specific idea of how advanced the weapon is. The game usually starts off at TL14 or TL15. Out of date weapons abound in less advanced areas, mainly as black-market or surplus sales. This TL scale is compatible with **TimeLords**.

Cost - The cost of the weapon in credits, *when new*. Weapons will usually lose 25% of their value per Tech Level they are out of date, or more if in poor condition, with a maximum price reduction of 75%. How "out of date" a weapon is depends on where it is being sold.

NS - This is the number of shots the weapon can fire from a full load of ammunition or energy. Most cartridge weapons except single shot and revolvers can have an extra round in the chamber, adding 1 to this number.

ACT - This is the type of action (ammunition feeding and loading) the weapon has. The / separates the ammunition loading mechanism from the ammunition feed mechanism type. The types of actions are:

- **SS/n** Single shot/number of barrels the weapon has. The weapon may only fire one shot for each barrel it has.
- **RV** Revolver. Multiple shots are obtained by using a rotating cylinder which passes new shells in front of the barrel for each shot.
- **SA** Semi-automatic. Either recoil or gas pressure from the powder charge cycles the action and feeds in new ammunition.
- **AT** Full automatic. Functions as a semi-automatic, except that the new round is fired without the trigger being pulled again. The weapon will fire until pressure on the trigger is released. These may also fire as SA actions.
- **AB** Automatic Burst. As full automatic, but each pull of the trigger only fires 3 rounds. Some can adjust the burst from 2 to 5. An AB weapon may also act as SA.
- **BA** Bolt Action. New ammunition is fed in by manually cycling the action by means of a projection on the top or side of the weapon.



LA Lever Action. New ammunition is fed in by manually cycling the action by means of the handguard or other area beneath the weapon. This term may also be used for pump actions.

-M Matchlock. This suffix means the weapon is a matchlock. The charge is fired by touching a lighted wick to a touchhole on the weapon.

-F Flintlock. This suffix means the weapon is a flintlock. The charge is fired by the sparks created when a moving flint strikes steel.

-P Percussion. This suffix means the weapon uses percussion caps. These are struck by the hammer of the weapon and ignite the charge.

The types of ammunition feed are:

/C Clip. Ammunition is held in a box-like affair that can be ejected from the weapon when empty and replaced by a new one.

/I Internal magazine. The ammunition is kept in a non-removable part of the weapon, and when all ammunition is expended, new rounds must be placed into the magazine.

/E External magazine. The ammunition is fed to the weapon from outside, usually kept in a box on or near the weapon. A belt for a weapon will only fit weapons of that specific type unless the belt is expressly designed to fit more than one type of weapon.

Example - A SA/C is a clip-fed semi-automatic action. An AT/E is a automatic weapon with an external magazine. An RV-P is a percussion action revolver.

Note - The archaic weapons are provided only because you may have need of some on more primitive worlds. Almost all modern weapons will be semi-automatic, full-automatic or auto burst, with clips or external magazines.

MS - Maximum Shots per Phase. This is the maximum rate of fire, or shots per second, that the weapon is capable of in combat. Less than the maximum may be used.

H - Hands. The number of hands needed to accurately sight and fire the weapon.

R - Restrictions. These are things which may restrict the availability of the weapon to the characters. Two standard restrictions are below. If the GM wishes to invent their own restrictions, they should abbreviate them and use this space in the weapon format to record it.

Letter	Meaning
M	Military weapon. Not available to civilians without expensive permits, or must be purchased illegally (double cost).
O	Out of manufacture. Weapon availability is restricted to surplus and used weapons.

CLM - Clip Mass. Mass of ammo and clip (if used) when weapon is loaded. A "-" subsumes this under Mass.

AV - Armor Value of weapon. Its ability to resist damage due to its materials and type of construction.

BP - Body Points of weapon. Amount of damage weapon can take before being totally destroyed. Less than this amount will usually keep the weapon from working.

Notes - On many weapons a number will be here. Refer to the bottom of the weapon sheet for special information regarding this particular weapon. Some notes are general, like an automatic weapon available in semi-auto form to civilians, or be specific to a particular weapon.

Projectile Weapon Combat

Projectile Weapon Combat - Projectile weapon combat is resolved in the following manner. First, the appropriate Skill score is added to the Inherent Accuracy of the weapon to get the Adjusted Skill. Second, all modifiers applying to the shots are added together, and the total modifier applied to the Adjusted Skill on the Universal Modifier Chart. The result is added to or subtracted from the Adjusted Skill. This is the chance to hit on 1d20. If the number rolled on 1d20 is equal to or less than this number, then the target has been hit. Also see Use of Skills (p.30).

"To Hit" Modifiers - The following is an expanded version of the "To Hit" Modifiers listed on the **SpaceTime** Aid Sheet. Once you know the basic modifiers, you should seldom have to refer to the full listing.

Range Modifiers - Different classes of weapons have different firing characteristics. The following table gives the bonuses and penalties to hit at different ranges for different types of weapons. A "-" means weapons with that range class cannot be used at this range.

	Range in meters																				
Range Class	0	1	2	3	4	5	6	7-8	9-10	11-13	14-20	21-30	31-40	41-50	51-70	71-100	101-150	151-250	251-400	401-700	701-1000
RC1	+120	+30	+14	+7	+4	+2	+1	+0	-1	-2	-5	-12	-24	-40	-70	-	-	-	-	-	-
RC2	+100	+40	+20	+12	+9	+7	+5	+3	+2	+1	+0	-1	-3	-6	-9	-16	-30	-60	-	-	-
RC3	+80	+35	+20	+14	+10	+8	+7	+5	+4	+2	+1	+0	-1	-2	-3	-6	-10	-20	-35	-	-
RC4	+60	+30	+20	+14	+11	+9	+8	+6	+5	+4	+2	+1	+0	-1	-1	-3	-5	-9	-13	-28	-40
RC5	+80	+40	+20	+15	+12	+10	+9	+6	+6	+6	+4	+0	-4	-8	-12	-17	-25	-35	-50	-	-
RC6	+80	+40	+20	+16	+13	+12	+11	+8	+5	+2	+0	-2	-8	-15	-25	-40	-	-	-	-	-
RC7	+0	+0	+1	+1	+2	+2	+3	+3	+4	+4	+5	+5	+6	+6	+5	+5	+4	+4	+3	+3	+2

A -20 or worse means the weapon cannot be fired with any degree of accuracy without preparation, and hits are a matter of chance rather than skill.

Visual Cover - Visual cover is any cover that partially obscures a target, but offers little or no resistance to weapons. Things like bushes, fog, smoke, etc. are Visual Cover. Visual Cover is a negative modifier of -1d3, -2d3, or -3d3, depending on how obscuring the cover is.

Firer Movement - If the firer is moving, the chance of hitting the target decreases greatly.

-6	Firer is walking (Type I movement)
-12	Firer is running (Type II/III movement)
-6	Firer is dodging

Target Movement - If the target is moving, the chance of hitting is decreased, but not as much as for firer movement.

-2	Target is walking (Type I movement)
-8	Target is running (Type II/III movement)
-6	Target is dodging

Hip Firing - It normally takes 3 phases to draw and fire a holstered or slung weapon, one to ready the weapon, one to complete the draw, and one to sight and fire. Opened or fast draw holsters only take 2 phases. Hip firing requires only one phase. Hip firing is also used if a character has a weapon ready but is attacked from an unexpected direction. After the first phase of hip firing, the weapon may be brought to normal firing position. There is a -15 for the first phase of hip firing, and a -10 for all subsequent phases until the weapon is brought to normal firing position, like if a character is attacked from several areas successively. For hip-fired weapons, if the location of previous hits can be seen, the subsequent phases modifier may be reduced by 3 for each shot fired for weapons with an MS of 1 or better, up to a maximum of -1. This is due to the tracer-like effect.

Example - A character hip fires a pistol with a MS of 2. The first shot gets a -15 for hip firing, but if the character can see where it hits (like against the wall behind the target), the second shot only gets a -12. The next phase the base modifier is -10, and 6 is subtracted from this giving a -4, and the second shot only gets a -1. Therefore, for this weapon, the minuses for hip firing for the first 4 shots would be -15, -12, -4, -1. *Note that most modern (TL12+) weapons will be equipped with laser sights, which negate hipfiring penalties. However, if there is fog or dust in the air, a laser sight will also pinpoint the location of the firer, especially at night.*

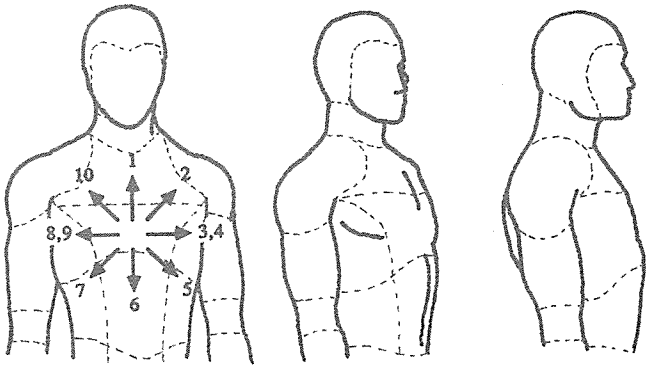
-15	First phase of hip firing
-10	Subsequent phases of hip firing

Target Location - The normal firing arc for a projectile weapon is in Sector I. If firing into Sectors II or VI, there is a -2, in Sectors II and V there is a -4, and in Sector IV there is a -8. A right-handed person cannot fire a shoulder fired weapon into Sectors II or III without taking the modifier for firing a two-handed weapon with one hand, *and* this modifier. This is reversed for left-handers.

-2	Sectors II, VI
-4	Sectors III, V
-8	Sector IV

Called Shots - Anyone may aim at a specific Hit Location or locations. It is standard practice. When shooting at a target, you do not shoot at a target sized area,

you shoot at the center of the target. If shooting to kill, you do not shoot at a man-sized area, you shoot at the chest or head. However, in certain situations you may not have time to aim at a specific area, and any hit is usually better than no hit. The modifier for making a called shot is -10. If the roll is made with this modifier, the specific location aimed at it hit. If the roll is failed, the target may still be hit. The hit will be up to one location off for each point the roll was missed by. The actual amount is a die roll equal to the amount missed by (u), such a a d2 for a miss by 2, a d6 for a miss by 5, etc.. Blank areas between locations, such as between legs, count as locations for this purpose. The direction of the miss is determined by a roll of 1d10, as follows.



Example - Vil Stein takes a shot at a pursuer. He goes for a center chest shot. Assuming there are no other modifiers in this case, he has an Adjusted Skill of 10. The -10 modifier makes the chance a 5 or less on 1d20. If he rolls a 5 or less, he gets a hit to the center chest location. If he rolled an 8, he would miss by 1d3 locations. This stands a good chance of being a hit to another location. If he rolled a 17, the shot would have missed by 1d12 locations, which is much less likely to be an actual hit.

Size Modifiers - The "To Hit" numbers are based on a man-sized target. Below are some modifiers for different size targets. For sizes, see Equipment Bulk (p.73).

Modifier	Size	Example
-20	Very Small(VS)	Microchip, watch
-16	Small(S)	Pocketcom
-12	Medium(M)	Small computer
-6	Large(L)	Tire, large dog
-0	Very Large	Person
+12	Extremely Large(EL)	Small car
+20	Huge 1(HG1)	Limousine
+40	Huge 2(HG2)	Large truck
+60	Huge 3(HG3)	Locomotive

Cover - The probability to hit is normal, but when location is rolled, if the cover was hit, it must be totally penetrated before the character is hit, and then the character is only hit by the remaining points of damage.

Steadying - A character may receive this modifier if they take a phase to steady their weapon. Steadying is an action, and may only be done if the character is not moving relative to the surface they are on. Steadying requires a two-handed grip. A weapon must be steadied after each shot to get this bonus, but only if the weapon has recoil. Steadying for more than one phase allows this bonus to be added multiple times, but the amount is reduced by 3 each time, for a maximum of 8+5+2=+15.

+8 Weapon Steadied

Bracing - A weapon may be braced on any solid object, using the conditions as steadying; however, a braced weapon remains so as long as the character keeps both hands in place and shoots only at targets in Sector I. A weapon may not be braced and steadied, as braced weapons count as steadied plus a modifier for a solid rest. Continued bracing acts as continuing steadying, but the amount is reduced by 4 each time, for a maximum of 12+8+4=+24.

+12 Weapon Braced

Laser Sights - Weapons equipped with laser sights are not affected by hip firing modifiers, and get a +6 to normal, sighted fire. Almost all modern weapons will be equipped with laser sights. In conditions where the beam scatters (fog, dust, especially at night), a laser sight will give away the firer's position. Anyone hit in the face with a laser sight must make a Dexterity roll with a -10 (-15 at night). Any amount the roll is failed by is a minus to Perception for an equal number of seconds, like a -3 for 3 seconds, etc.

Gyrostabilized Weapons - If a high-tech hand weapon has built-in gyrostabilization, all movement modifiers for the firer will be halved. Use of such weapons is a separate skill, or a specific skill for a weapon type. Gyrostabilized weapons are usually only used by heavy infantry or power armor units. While a steadying influence, gyrostabilization decreases the initiative of the weapon. Stats for a stabilized weapon are based on active stabilization. If turned off, increase the initiative by 1.

Scoped Weapons - Almost any weapon may mount a telescopic sight. A non-enhanced optical scope may be used in Daylight or Twilight conditions and requires steadying or bracing to use. Electronic scopes are more common, and can be used in any light condition. Unless special mounts or a laser sight is used, a weapon with a scope *must* use it for sighted fire or take a -10 modifier to hit.

The effect of a scope is to divide the range to the target by their power, but to get the effect, several phases must be spent sighting in.

Power of scope	Phases to set properly
1-1.5x	1
2-4x	2
5-9x	3
10-16x	4
17-25x	5
25x+	6

If the full amount of time is not spent sighting in, the character does not get the division of the range, and also gets a negative modifier to hit, as below. Cross-reference the time spent vs. the time needed to get the negative modifier.

	Phases needed to set					
Phases spent	1	2	3	4	5	6
0	-2	-4	-6	-8	-10	-12
1	0	-2	-4	-6	-8	-10
2	0	0	-2	-4	-6	-8
3	0	0	0	-2	-4	-6
4	0	0	0	0	-2	-4
5	0	0	0	0	0	-2
6	0	0	0	0	0	0

The adjusted range may never be less than 3 meters when using a scope. A properly set scope also gives a +1 modifier to hit because of the crosshairs. A scope does not increase the maximum range of a weapon.

Folding Stock - Some weapons, notably submachine guns and machine pistols, have a folding stock. A folding stock will take 1 action to fold or unfold, and any weapon using RC2 will automatically get a +4 modifier if both hands are used on the weapon when the stock is unfolded. The initiative of the weapon is also decreased by 1.

Camouflage - Camouflage appropriate to a situation will give a -6 to Perception rolls made to spot the character, and a -4 to shots fired at the character. Totally inappropriate camouflage will reverse these modifiers. Modern electronic camouflage automatically matches the background.

Firing 2 Weapons - If a character is using two weapons at the same time, a -6 modifier applies to each.

-6 Firing 2 Weapons

Firing one-handed - If a character fires a weapon requiring 2 hands with 1 hand(if possible), all Inherent Accuracy of the weapon is lost, and there is an additional -6 modifier to hit.

-6 Firing one-handed

Consecutive Shots - Each shot more than 1 in a phase will get a negative modifier equal to (Damage Value of weapon/Strength of user)(n), but only if the weapon has recoil. This minus is halved(d) for bipod and tripod mounted weapons. If a character uses two hands on a weapon, they may modify their Strength by +10, so normal fire from a rifle always gets this. If using one hand on a two-handed weapon however, the Strength gets a -6 modifier.

Example - A character fires two shots in one phase from a slug-thrower pistol with a DV of 20I. If their Strength were 11, if they fire another shot this phase it will take a (20/11) = -2 modifier. If using both hands, effective Strength would be 16, so they would only take a (20/16) = -1 modifier.

Multiple Shots - With any weapon that can fire more than once per phase, different targets may be fired at. The firer must designate the targets before firing. A -2 is taken per half hexside(u) turned (measured at the firer's hex), and weapons with recoil lose steadying/bracing bonuses after the first shot. The firer determines how many shots are to be fired, and how many hexes to fill. The number of shots per hex is determined by the firer, but the amounts must be equal, in increasing sequence (such as 2,2,4), or decreasing sequence (such as 5,4,2). Any shots may be called shots, but consecutive shot minuses may cause misses on later shots, as several -1 or -2 modifiers add up to a very poor chance to hit.

To avoid numerous "to hit" rolls for automatic weapons, do the following. Assume the weapon does an average(d) number of hits for the number of times you fired. Then, divide 20 by the number of shots fired (up to 20, (u)). Then roll to hit. If the roll is failed, each amount equal to (20/shots fired)(u) subtracts 1 from the average number of hits. Likewise, if the roll is made, 1 is added to the average number of hits for each increment. Continuous beam lasers count as firing 100 shots per second for multiple hit purposes.

The following table gives samples. Cross-reference number of shots and chance to hit to get the average number of hits, and the amount the roll must be made or failed by to increase or decrease this number.

	Chance to hit				
Number of shots	6	8	10	12	14
5	1/4	2/4	2/4	3/4	3/4
10	3/2	4/2	5/2	6/2	7/2
20	6/1	8/1	10/1	12/1	14/1

Example - Firing 10 shots with a base chance of 8 or less means you will get 4 hits, plus 1 hit per 2 points the roll is made by, or minus 1 per 2 points the roll is failed by.

Recoil penalties increase the chance of misses, and decrease the chance of extra hits by an amount equal to the recoil modifier on one shot.

Example - Assume the previous example was a gun having a -3 recoil per shot. A -3 modifier on a chance of 8 is a 1, so each 1 point the roll is failed by is an extra miss, and each 3 points the roll is made by is an extra hit. The "failed by" amount is never less than 1 point.

Spray Fire - This is inaccurate fire, designed to make people keep their heads down or cut down dense formations of targets. The only modifiers applying to spray fire are range, wounds, and firer movement. Spray fire is a -12 modifier. When doing spray fire, the firer allots a certain number of bullets to an area, as for Multiple Shots. After the appropriate modifiers are applied, the chance to hit is rolled against *every target in the line of fire*, closest to furthest. The fire is assumed to travel from the firer's hex to the target hex in a straight line. A target is in the line of fire if this line *crosses* one or more hexsides of the hex the target is in. Spray fire may also increase the rate of fire of non-automatic weapons. The modifier is used, and the MS is doubled. This represents the weapon's theoretical ROF, rather than the aimed ROF. Called shots are not permitted with spray fire.

Extra Shots - Anytime less than the MS of an automatic weapon is used, a roll on the appropriate skill should be made. If failed, half(d) the amount missed by (with a total of up to the rate of fire of the weapon) is added to the number of shots fired. These extra shots count as using the same aiming as rest of the fire and the firer divides them evenly among the targets. This is important when dealing with a high rate of fire and a small clip.

Example - If a character with a Skill of 10 fires a machine pistol with a MS of 20, but only wants a 10 round burst, they should roll 1d20. If they roll 10 or less, they succeed. If they rolled a 14, they would miss by 4, and so would fire 12 rounds instead of 10.

Impossible Shots - If a character has a negative or zero chance to hit, a roll of 1 may be a hit. If a 1 is rolled, a +20 modifier is added to the previous modifiers and the chance to hit recalculated. If a hit is made with this roll, the shot found its target. Called shots may not be done if they take the modifier total to -20 or greater.

Duds and Jams - If a 20 is rolled on the "To Hit" roll for percussion, cartridge or energy weapon, the weapon *may* have malfunctioned. Roll again. On a 20, the round has jammed. On normal guns, the round has fired, but the shell has become stuck inside the weapon, preventing further use. An attempt to clear the jam will take 1 action. The attempt is successful if a Dexterity roll is made. On energy weapons, this usually is a glitch in the circuitry, and will reset itself auto-matically. Normal fire may resume on the next phase. On other weapons, a jam means a malfunction in the propulsive system or a loss of the power used for that shot.

If a 19 is rolled on the second roll, the round is a dud. On semi-automatic and automatic weapons, no further fire is possible that phase, and all sighting bonuses are lost. It will take 1 action to clear the dud. On revolvers, that round misfires, but the weapon may be fired the next phase with no penalty. On energy weapons it means a partial failure of some type. The weapon will fire enough that it can be located, but not enough to do any damage. Muzzle loading weapons must be recocked, and 5 is added to the next try to see if there is a dud or jam. Some archaic weapons cannot have duds, but can have faulty ammunition, like defective arrows. These will only do half damage if they manage to hit.

Sustained Fire - If you hold the trigger down on any automatic weapon, eventually it will overheat. Every round fired at full auto decreases the jam and dud number by 1. This decrease is removed at the rate of 5 per phase the weapon is allowed to rest. For long bursts, do not roll for each shot. On normal weapons, burst of 10 *will* have some sort of malfunction on a burst "to hit" roll of 20, followed by a 9+. A burst of 20 rounds will malfunction on a "to hit" roll of 20. Roll a die to see where in the burst this happens.

Example - For a 10 round burst, a 20 is rolled. Normally, a jam or dud occurs on a 19 or 20 on the *second* roll, but since 10 rounds were fired, a 9 is a dud and 10+ is a jam. A result of 7 on 1d10 means the 7th round failed.

Reloading - Reloading a weapon takes several actions. This can be critical, usually because it occurs in a combat situation. Different types of weapons take varying amounts of time. Reload times are below, complete with the various actions that occur for modern weapons. If a character makes a Dexterity or weapon skill roll (Whichever is better), they reload in the minimum time given. Otherwise, add an appropriate modifier for the amount the roll was missed by. A roll of 20 means a fumble of some kind, and reloading will take at least twice as long.

Clip fed
- 1 action to eject old clip
- Variable to get new clip, at least 1 action
- 1 action to insert new clip and close slide
- Minimum Total - 3 actions

Revolver
- 1 action to open cylinder and eject shells
- Variable to get new ammunition, at least 1 action
- 1 action per shell to insert in cylinder, or 1 action to insert shells with speed loader
- 1 action to close cylinder
- Minimum Total - 4 actions

Single Shot
- 1 action to break open weapon, eject shells
- Variable to get new shell, at least 1 action
- 1 action to insert new shell, close weapon
- Minimum Total - 3 actions

Internal Magazine
- Variable to get new ammunition, at least 1 action
- 1 action to hook up new power pack, or one action per shell to insert, or 1 action to load stripper clip.
- 1 action to ready weapon or chamber first round
- Minimum Total - 3 actions

Muzzle Loader
- Minimum Total - 24 actions for rifle, 21 for carbine, 18 for single shot pistol, 60 for revolver

Bow(DV=$STR^2/10$)
- Minimum Total - 3 actions

Light Crossbow(DV10I)
- Minimum Total - 5 actions

Medium Crossbow(DV29I)
- Minimum Total - 15 actions

Heavy Crossbow(DV53I)
- Minimum Total - 22 actions

Shotguns - Shotguns and other such weapons offer the possibility of multiple hits. The number of hits from a shotgun is dependent on the shot size, the range and the bore size. Weapons besides shotguns should have a shotgun equivalent for this calculation. The base number of hits is 1. An amount is added equal to the amount the roll is made by times a range multiple. The type of shot used, bore size, etc., will affect the range used.

Range(m)

0-5	6-10	11-15	16-35	36-45	46-70	71-100
6x	5x	3x	2x	1.5x	1x	.5x

Additions to Range for shot type

#4 Shot	+0m
#1 Shot or 5mm	+10m
#00 Buck or 8mm	+20m

Centerline torso hit	+3 to x
3mm flechettes	-(range/2)
Deverter	+25m
Sawed off	+10m

Hit locations are rolled separately at distances of 12 meters or greater. All hits occur on 1 location and adjacent locations at ranges of 7-12 meters, and at less than 7 meters all hits are on the same location, and the effect is that of a slug with a -5 modifier to DV (don't include range modifiers). Called shots may only be done at a range of 12 meters or less. At a range greater than this, a called shot allows you to add or subtract 30 from the hit location roll, allowing you to shoot high or low. Those hits which exceed 100 or go below 0 on the location roll are considered misses. If a hit is made at a range of 20 meters or greater, adjacent targets may be hit also. If the original shot was a miss, see where it would have hit to determine scatter.

Sawed-off Shotguns - These are 1/2 the mass and length of a shotgun of the same type, and usually have a pistol grip. If a hit is made at a range of 10 meters or greater, adjacent targets may be hit. The spread of shot is 1 hex to either side per 10 meters of range. If a deverter is used, the shot spread is 1 hex to either side per 6 meters of range, and multiple pellet hits are automatically to adjacent locations.

Shotguns and Inherent Accuracy - The listed IA of a shotgun is that for slugs. If using pellets, add 1 to the IA per 5 meters of range, up to an IA of double the original IA. This reflects the spread of shot at longer ranges. Shotguns using slugs may be fired using Rifle skill.

Knockback - Whenever a character takes their Body Points in BP from a *projectile* (this is damage which strikes the character, not what gets through armor), the character will be knocked back 1 meter in the direction opposite the attack. This is not a quick movement, but more of a stagger because of an unexpected blow. If the character is moving towards the attack, 2m/sec will be subtracted from their velocity. Every multiple of this amount done will add a meter to the knockback, or subtract 2m/sec from velocity. The character must make a Dexterity Roll with a -5 modifier per meter knocked back. If the roll is made, the character has a minus on all their actions for the next 2 phases of -5 per hex thrown. If the roll is made by half, the minus only applies to the next phase. If the roll is failed, the character takes a minus equal to -5 per hex thrown, plus the amount the roll was missed by. This minus applies to all rolls for this period. On a 1, the character is still on their feet and takes no minus, and on a 20, they are prone and totally defenseless.

Damage Modifiers - Several factors may modify the amount of damage a weapon does.

	Range in meters																				
Range Class	0	1	2	3	4	5	6	7-8	9-10	11-13	14-20	21-30	31-40	41-50	51-70	71-100	101-150	151-250	251-400	401-700	701-1000
RC1	+1	+1	+1	+1	+1	+0	+0	+0	-2	-4	-6	-8	-10	-13	-17	-	-	-	-	-	-
RC2	+2	+2	+2	+1	+1	+1	+1	+0	+0	+0	-2	-4	-6	-8	-10	-11	-12	-13	-	-	-
RC3	+2	+2	+2	+2	+2	+2	+2	+1	+1	+1	+1	+0	+0	-2	-4	-6	-8	-10	-11	-	-
RC4	+3	+3	+3	+3	+3	+3	+3	+2	+2	+2	+2	+1	+1	+1	+0	+0	-1	-3	-5	-8	-11
RC5	+2	+2	+2	+1	+1	+1	+1	+0	+0	+0	-2	-4	-6	-9	-12	-14	-16	-18	-19	-	-
RC6	+2	+2	+1	+1	+1	+0	+0	+0	-1	-2	-3	-6	-9	-12	-15	-18	-	-	-	-	-
RC7	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	-1	-2	-2	-3	-3	-4	-4	-5	-6	-8	-10

Range - At different ranges, a projectile weapon will have different Damage Values. The Damage Value of a weapon is the one used where the range modifier is 0. At other ranges, the Damage Value is modified up or down by the modifier listed below. Damage modifiers for energy weapons use the same range class combination as for range modifiers. In areas with no dispersal of the energy, like a vacuum, most weapons will have no negative range modifiers on damage. *Range effects on damage are optional, and need only be brought in if you desire them.*

Special Ammunition - The Damage Values given for projectiles are for standard ammunition. Other types are available, subject to the campaign and GM. Special ammo types generally multiply the DV for purposes of penetrating armor, with another multiple that applies to any of this adjusted damage that strikes the character. For example, if a nomral bullet does 10 points of damage, an exploding one does .5x, or 5. Against an armor of 2, 3 points would penetrate, and get a 3.0x multiple, for an effect of 9 points of damage. The reverse effect is true for AP ammo. See below.

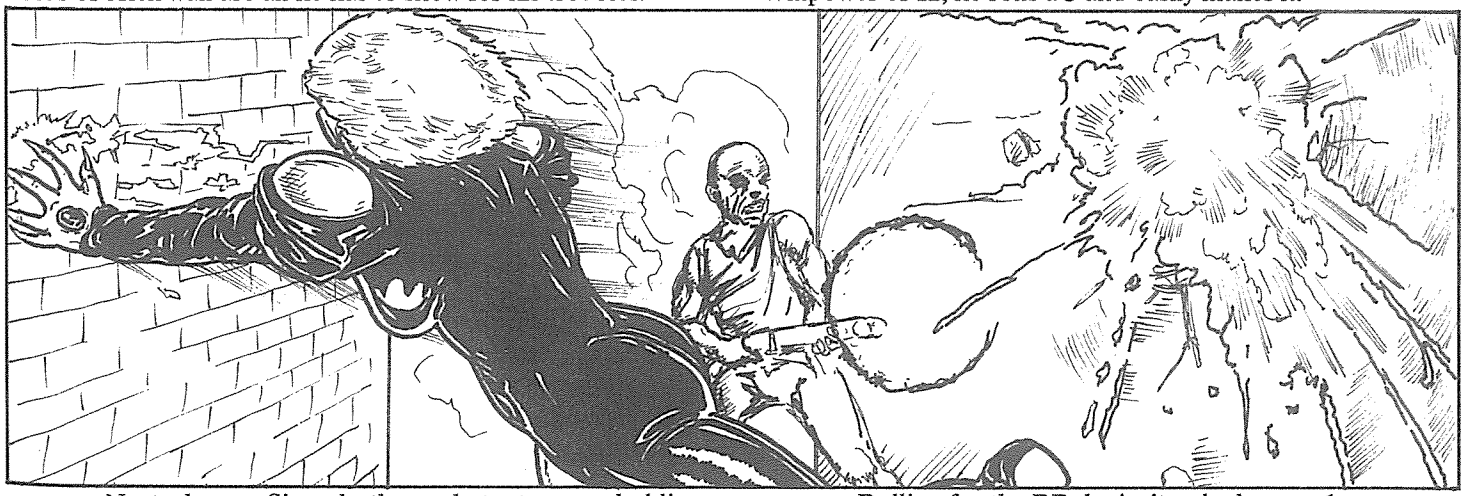
Ammunition type	DV vs. armor	After penetration
Armor piercing	1.5x	.5x
Hollow point	.7x	1.8x
Exploding or Glaser type	.5x	3.0x

Projectile Combat Example

Projectile Combat Example - Taj, who is unwisely trying to rip off the local crime syndicate, is trying to bushwhack Slash, a razorgirl of many talents. Taj is marginally familiar with shotguns, having a skill of 6. He has a Speed of 10, so this gives him an Initiative of 8. Since this is a firearm, the minimum initiative of 12 is used instead (p.42). He is hipfiring (p.42), for a -3, and was holding action, for +5 (p.42), so his total is 14, plus 1d6 (a 3), for a total of 17. Slash, on the other hand, is highly skilled, and was expecting some sort of sneak attack, so she was also holding action. She wishes to dodge (p.43). She has a Speed of 16, and a Dexterity of 18, which gives an Initiative of 17, plus 1d6 (a 2), for a total of 19. Slash wins the initiative, which means her dodge takes effect before Taj's shots.

Taj fires. The Inherent Accuracy of the shotgun is 2 at this range (p.50), and this adds to Taj's skill of 6, for an Adjusted Skill of 8. Now the modifiers to his chance to hit.

Taj hipfired. This is a -15 modifier. He is at a range of 6 meters with an RC6 weapon (sawed-off shotgun), which is a +11 (p.44). Slash is dodging. She has a Speed of 16, so this is a -8 on the chance to hit (p.54). The total of the modifiers is -15+11-8=-12. A skill of 8 with a -12 modifier is a 4 or less on 1d20. Rolling, a 7 comes up, so he misses. Firing the other barrel, he takes an additional minus due to the recoil of the weapon (p.48). Taj has a Strength of 10. If the weapon had a DV of 30I, Taj would normally take a 30/10, or -3 on this shot. However, since he is using both hands, his effective Strength is 15, so he only takes a 30/15, or -2. Since he can see where the first shot hit the wall behind Slash, he can try and correct this on the second shot (p.46), giving him a +3, so his total modifier for the second shot is slightly better than the first, at -11. This is not large enough to make a difference, and he still needs a 4 or less on 1d20. Rolling again, he gets a 13, and misses cleanly. Two freshly blasted areas of brick wall are all he has to show for his troubles.



Next phase. Since both combatants were holding action, neither had to worry about any minuses for acting out of phase. On this phase however, we assume it is now Phase 2, and use the sequencing chart. Slash, with a Speed of 16, takes no minus, while Taj, with a 10, takes a -5 on all his actions.

Slash moves to pick up a chunk of brick, which we will count as a medium rock. Taj turns to run. Since neither is interacting with the other, no Initiative rolls are needed. At the end of Phase 2, Taj has turned completely around, and has started down the alley, and Slash has acquired a jagged chunk of masonry.

Phase 3. Taj accelerates down the alley. Slash throws the chunk of brick at his head. Because of the difference in skills, and Taj performing a non-combat action, the initiative result is a foregone conclusion. This is bad for Taj, since he will not accelerate until after the throw, and a faster speed would have made him harder to hit.

Slash takes a -2 because Taj is still at a walking pace. She takes no modifier for the range of 8 meters with a RC1 weapon (p.44,56). She does take a -10 for doing a called shot to his neck (p.47), for a total modifier of -12. She has a IMHW skill of 18 (p.34), so her chance to hit with a -12 is an 8 or less. Rolling 1d20, a 9 comes up. Ordinarily this is a miss, but since she tried a called shot, a roll for scatter must be made (p.47). Rolling 1d10, a 1 comes up, which means scatter is one location up, or in the skull. The Damage Value (p.60) of a medium rock is 8III, but Slash's Strength makes it an 11III (p.56). Rolling 2d10 for the damage, a 8 and 4 come up, for a total of 8 points of damage. Type III damage is half lethal and half bruising, so Taj takes 4BP and 4BR to the back of his head (p.60). Since all damage after the first 2 points is quadrupled on a skull hit (p.60), Taj instead takes 10BP and 10BR. If Taj had 30BP, we would go down the "30" column on the UMC (p.31) until 10 was reached, and then going across to the left, showing that Taj would be on the "7" column of the Head/Neck Damage Table (p.63). Not good.

Rolling for the BP first, a 10 comes up (p.60). The result is 1,S4. Taj takes a -1 to all actions requiring Intelligence, Dexterity, or skill use, and must make a Willpower roll with a -4 or be Stunned (p.61). With a Willpower of 12, he rolls a 3 and easily makes it.

Rolling for the BR, he isn't as lucky, as a 1 comes up. The result is 3,O10,E7. This means he takes another -3 to his actions, and must roll his Willpower with a -10 modifier, or be Out of It (p.62). The E7 result means an eventually fatal wound; but since this roll was for bruising damage (BR), it does not apply. Rolling 1d20, Taj gets a 9 on the Willpower roll, so he kisses asphalt. At this point we close the curtain on what will doubtless be an unhappy scene.

Hand to Hand Weapons - These are weapons that are used directly on an opponent without any part leaving the hand. This ranges from improvised clubs, to hand stunners, to vibroblades and everything in between.

Hand to Hand Weapon Format - As with projectile weapons, hand to hand weapons have a format explaining all the necessary details for that weapon. An explanation of the format is below.

#	Name	DV	IA	Init	Skill	Mass	SZ	Length	TL	Cost	H	AV	BP	Notes
2	Vibroblade	6I	+1	+0	KNFE	.50	VS/2	.25	13	150	1	7	2	C,P, acts as armor piercing

- The weapon number, for easy reference.

Name - The familiar name of the weapon.

DV - The Damage Value of the weapon.

IA - The Inherent Accuracy of the weapon, how easy it is to use, and depends on the quality and type of weapon.

Init - The initiative modifier of the weapon. It is based on the mass, length, and usage of the weapon.

Skill - The skill needed to use the weapon and is the abbreviation given on the skill listing.

Mass - The mass of the weapon in kilograms.

SZ - The size of the weapon for carrying purposes. A /n means that the weapon takes up n locations with the listed bulk.

Cost - The cost of the weapon in Cr.

Length - The length of the weapon in meters.

TL - The period that the weapon first came into use. Unlike guns, many melee weapons have a useful life that extends over several Tech Levels, so the price will not appreciably change.

H - The number of hands needed to properly use the weapon.

AV - The Armor Value of the weapon, how difficult it is to damage.

BP - The number of Body Points the weapon has, the amount of damage is can sustain before breaking.

Notes - Special information that pertains to this weapon. See the bottom of the listing for more information.

Hand to Hand Combat - Hand to Hand Combat is resolved in the same manner as it is for a projectile or energy weapon attack. The IA of the weapon is added to the appropriate Skill of the user, and modifiers applied to the total. If the roll is equal or less than the modified total, a hit is made. One addition is that the side the attack is made to should be stated before the "to hit" roll is made. Example: "I am attacking to his left side." Thrusting weapons always attack to the center and use puncturing wounds as a wound modifier. If the side is not declared, the attack is assumed to go against the left side if the character is right-handed, and to the right if the character is left-handed.

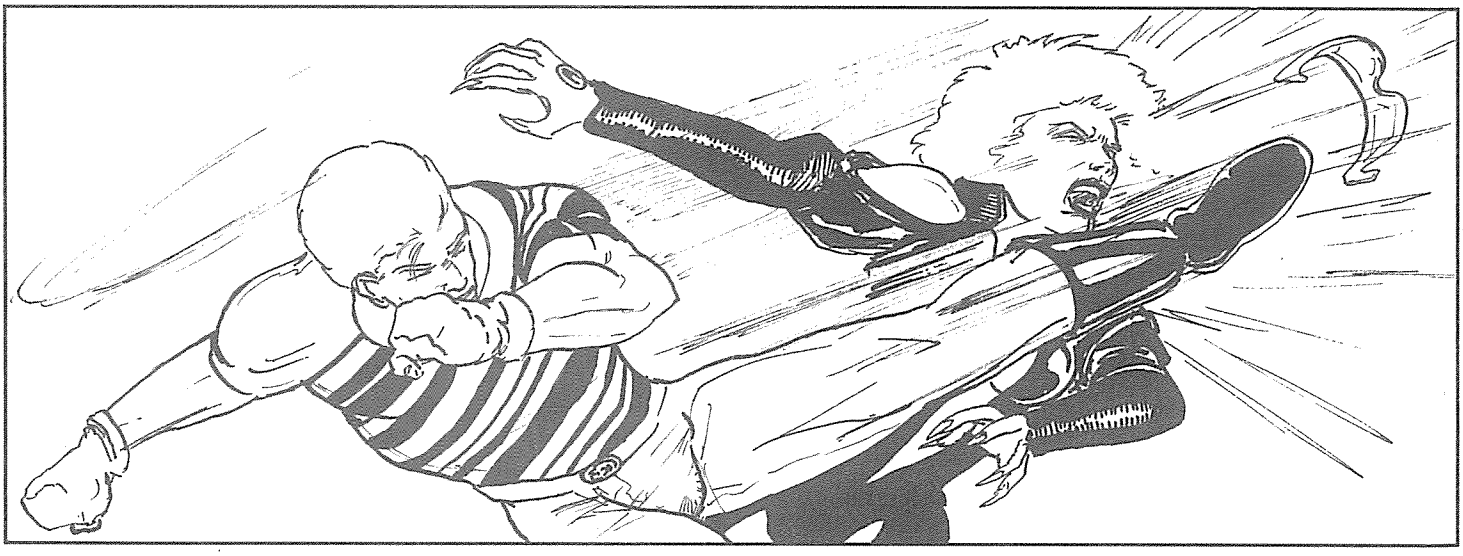
"To Hit" Modifiers - The following is an expanded version of the "To Hit" modifiers listed on the **SpaceTime** Aid Sheet. *As for projectile weapons modifiers, use only the modifiers you feel apply to the seriousness of your campaign, as many of the modifiers can be left out without seriously affecting play.*

Target Facing - It is easier to hit someone directly in front of you rather than over your shoulder or to your sides.

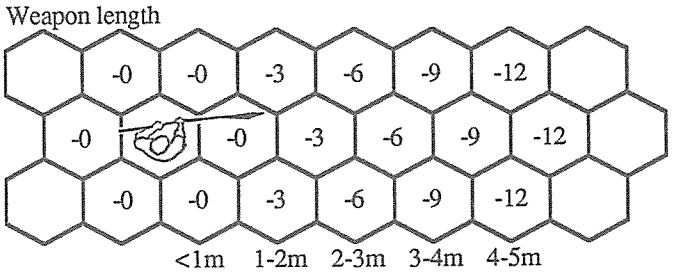
-0	Target in your Sector I
-6	Target in your Sector II or VI
-12	Target in your Sector III or V
-18	Target in your Sector IV

Attacker Facing - It is easier to hit someone who is in an inferior position, and cannot dodge or block your attack as well.

+0	You are attacking into opponent's Sector I
+4	You are attacking opponent's Sectors II,VI
+8	You are attacking opponent's Sectors III,V
+14	You are attacking opponent's Sector IV



Distance - Only weapons longer than .99m can attack into a hex outside the ones the character is adjacent to. Even so, it is more difficult. A hex will be classified as far if it is not adjacent. There is a -3 modifier per hex distance. Adjacent hexes are never considered far hexes.



If a character with a weapon is engaged in combat with someone in the same hex, they get a modifier of -4 for each .5(d) meters of weapon length, up to a maximum of -16. This reflects their inability to bring the weapon to bear on a very close opponent.

This minus does not apply if the weapon is being used in a way that negates its length. An example of this would be to use a spear as a staff, holding it across your front rather than using it to make thrusts with.

-3 Per far hex
-4 Per .5m of length for same hex attacks

Off-hand Attacks - If a character uses a weapon in their off-hand, there is a -8 modifier. This does not apply if the character is using the off-hand in addition to a regular grip for better effect, but any off-hand wounds would apply.

-8 Off-hand attack

Height Advantage - If a height advantage of 50cm or better is to be had, like a table or a few stairsteps, the attacker gets a +6 modifier. This also will have an effect on the hit location of any hits (p.56).

+6 Height Advantage

Position - If the attacker is prone, there is a -14 modifier. If the defender is prone, there is a +20 modifier.

-14 Attacker prone
+20 Defender prone

Target Defenseless - If a target is at reduced defensive effectiveness due to a stun or daze result, the attacker gets double the defender's minus as a bonus to hit.

Example - A character is stunned and has a -4 to all actions for the next phase. Anyone attacking the character in this period gets a +8 to hit. A totally defenseless character would be at +40 (x3) to hit. Unconscious or totally helpless opponents will take maximum damage from a weapon hit if the attacker spends one phase preparing.

+40 Target Defenseless

Retreating - A character may opt to retreat. This gives a -5 modifier to attacks by that character, and a +6 modifier to blocking or parrying attempts by that character. These modifiers apply only against attackers being retreated from. The character must back up 1 or 2 hexes during movement, and the character may be moved by the attacker. This does not count as movement for initiative purposes.

Advancing - A retreating character may be advanced upon. This gives a -4 modifier to blocking attempts by the advancing character, and a +3 modifier to attacks. The advancing character moves 1 or 2 hexes during their movement, after the retreating character moves. This does not count as movement for initiative purposes.

Blocking - If a hit is scored, the target may defend with any applicable skill, even if the results are not optimum. You can block a sword blow with your arm...once. The chance of blocking any blow is equal to the skill being used to defend with, subject to any modifiers that would apply if the skill was being used offensively, such as wounds, position, etc.

Character who elects to do no attacks in a phase get a +4 modifier to block. Characters can block multiple times in a phase, but consecutive blocks get a cumulative -6 modifier.

A character may elect to make two attacks in a phase, counting their first block as an attack. Both attacks will get a modifier equal to the initiative of the weapon used. *Note: This means that if a character does two attacks, their first block gets a -6.*

Whatever is used to block with takes damage as though a normal hit were scored, except unarmed HTH attacks, which do no damage to weapons on a block.

The blocking character must make a Strength roll if the block was done before their attack. This roll is modified by the Strength difference between the combatants. If the roll is failed, the character may not attack that phase, and the amount failed by is used as a modifier on further blocks.

Optional - The chance to block is modified by the Strength difference between attacker and defender. Strength gets a +10 modifier if the weapon is two handed.

Example - Kelly Dent is trying to block a blow from Narg, mutant barbarian of the Blacksburg Wastes. Kelly has a Strength of 8, and Narg has an 18. Narg attacked first, and hit, so Kelly decides to block. We'll assume he makes the block. The Strength difference is 10, so Kelly must roll his Strength with a -10 modifier to be able to block *and* attack. This is a 4. Rolling 1d20, he gets a 10, so he cannot attack this phase, and any further blocks this phase will get an *extra* -6 modifier. *You may just use the basic blocking rules if you don't wish to spend a lot of time on the maneuver.*

Parrying - Parrying an opponent's blow is harder than just blocking it. Normally, only weapons may be used to parry with, but weapons less than .3m long may be parried barehanded. This assumes the weapon arm is being parried rather than the weapon itself. In certain circumstances, longer weapons may be parried barehanded, but there is a chance of damage to the character, even if successful. An

example of this would be having the skin and muscles shaved off your arm while parrying a sword. Individual cases are left to the discretion of the GM. If the blocking roll is made by a third(u), the character may say the weapon has been parried. This will give the character a +3 modifier to their next attack, if it is before their opponent's next attack. If the character uses 2 weapons, the one not used to parry with will get a +6 modifier rather than a +3. Purely or partly flexible weapons like whips or flails may not be parried, and are a -10 to block.

Dodging - If a character wishes to stand and dodge an attack, they may. A dodge will give a negative modifier of 1/2(d) the character's Speed (after being adjusted for encumbrance) to an attack from one person, and half(u) this amount from all others. This applies to projectile weapons also. If the attacking character has initiative, they can move the dodging character 1 hex straight back, to the right rear, or left rear. If the dodging character refuses to move, the dodge modifier is halved(d).

Feints - A character may feint an attack to throw an opponent off guard (two if two attacks are made). This takes up a character's combat action and no real attack is made (unless the character opts for two attacks). If the attacking character makes a skill roll (like a normal attack), the defender must make one also (using best applicable HTH skill). If the defender fails, the attacker gets a bonus on the next attack equal to half(u) the amount missed by, *or* a negative modifier on their opponent's block chance, provided the attack is before the defender attacks again (gets a chance to recover). If the defender makes it, there is no effect. If the defender has a ranged weapon, a successful feint may be used to reduce the defender's *attack* chance.

Example - A character with a Martial Arts skill of 14 is attacking one with a 10. If he successfully feints, the defender must roll a 10 or less on 1d20 to not overreact. If he rolled a 14, the attacker would get a +2 modifier to their next attack, or make the defender take a -2 to their next block, *if* it was before the defender's initiative came up again. The attacker could not attack again immediately, unless he had declared it before his first attack.

Long Combats - Occasionally, a combat will occur between excellent opponents. In real life, this could take up to several minutes of combat. In game time, it could take forever. *In purely hand-to-hand combats, you can speed things up by halving the skill of the combatants for blocking purposes. All things will remain equal relative to the combatants, and the combat will be shortened. The time actually spent in combat varies, depending on skill, but for high skills, play time may be multiplied by a factor of 10 or more to get the actual time.*

Knockback from Hand to Hand Weapons - If a hand to hand weapon does 1/2 or more of a character's Body Points in points of damage (This is BP+BR, before armor is applied), the character will be knocked back 1m or have 2m/sec subtracted from their velocity. In all other respects it is identical to knockback from projectile weapon attacks.

Bashing - Diving into someone in a flying tackle falls under Brawling Skill. The Damage Value of such an attack is (1/3 Body Points x Velocity Modifier)/3(d) of Type IV damage. Velocity modifiers are below.

Velocity	Modifier
1m/sec	1
2-4m/sec	2
5-7m/sec	3
9-12m/sec	4
13-16m/sec	5
17-20m/sec	6
21-25m/sec	7

Both parties will be prone afterwards and will be treated as not defending until the end of their next action. The person tackled will also take an additional 1d6 Bruise Points and 1d2 Body Points, added to the bash damage before effects are computed. The attacker will take 1/2(d) this amount. Damage locations will be as though a fall had occurred (p.70).

Moving Attacks - Any hand to hand attack made while on a vehicle, animal, or while running will do more damage. The adjusted DV is the DV times 1/2 the Velocity Modifier from Bashing, with a minimum of 1 x DV. Moving attacks also get a negative modifier to hit equal to twice the Velocity Modifier for Bashing.

Entanglement - Certain weapons or combat forms can entangle or pin an opponent. Examples could be such future weapons as a tangle gun, or as simple as a whip. If an extremity is hit, roll 1d20. If the result would be another hit, that extremity is bound to the closest body part. With arms, this is normally to the body, and with legs, the other leg. If the second roll would not have hit, the attacker may say the weapon has entangled that location, giving a -10 modifier to all use of that body part until freed, or that the weapon strikes, doing normal damage. If a location is entangled, it will normally take 1d3 actions to free. This may be modified by circumstance.

Wrestling - To pin a person using Wrestling skill, the scores of the characters are compared. Each character has a chance of their skill over the sum of the skills. On the UMC, go down from the total to find the skill of each person, then go left to find the number needed on 1d20. Whoever makes this roll first pins the other character. If the pins are simultaneous, the person who made the roll by more gets the pin. Once a pin is made, both sides continue rolling, but the character with the pin can add 1 to their chance per 5(n) points of Strength. Each phase the pin is maintained, the modifier for Strength may be added, until the pinned character cannot escape. If the pinned character makes his roll and the attacker doesn't, then the pin is broken. A character who has a pin may use the damage they could do with a punch on the pinned character. This automatically hits, but the location is random. Once determined. The

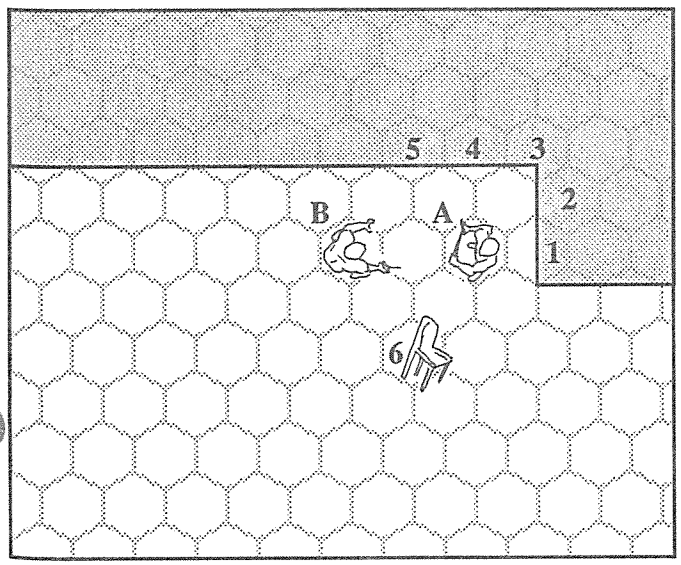
location of damage is used for all other "punches" on that pin. Wrestlers may do called shots. This applies to the skill before the skills are compared.

Example - If two wrestling characters had Skills of 12 and 8, the first would have a 12/20 chance of pinning the second, and the second would have a 8/20 chance of pinning the first.

Grabbing - To grab something from a character, the grabber must make 2 Dexterity rolls, modified by the chance to hit and the size of the object grabbed for. The first is to grab the object, and the second is to get it loose. If a tug of war develops, the first character to fail a Strength Roll loses the grab. Note that this is a use of Strength. A character may dodge a grab.

Jerking - Anyone in an entangled situation may attempt to pull their opponent off balance. The chance of doing this on 1d20 is a Strength Roll, with a modifier of the difference in BP, positive for the heavier character, and negative for the lighter character. If the roll is made, the amount made by is the negative modifier applied to the opponent's actions on the next phase. Less than 1/3(d) this amount will pull the weapon or entangled item from the opponent's grasp, or pull them to the ground if the item can't be released.

Restrictions - If a character doesn't have room to swing a weapon, there will be a lesser chance to hit. A clear hex to each side is needed for each 1m(n) of weapon length, but Sectors I, II, and VI must be clear directly in front of the character no matter how short the weapon. For each blocked hex adjacent to the character, there is a -2 modifier to all attacks. For each other hex that is blocked (but not those blocked by other hexes closer in) there is a -1 modifier. Thrusting attacks can only be restricted by obstacles directly opposite the direction of the thrust. A hex is considered blocked if an obstacle (at least Large) occupies the hex or crosses 2 hexsides.



Example - Character A has a weapon 1.6m long. This rounds to 2m, therefore character A needs 2 hexes in all directions to have no modifiers. However, adjacent hex 1 is blocked for -2 by the wall, non-adjacent hexes 2, 3, 4, and 5 are blocked for -1 each, and non-adjacent hex 6 contains an overturned chair for another -1. The total minus due to obstructions is a -7. This is cumulative with the other modifiers. Character B has a knife, and his Sectors I, II, and VI are clear, so he has no modifiers for obstructions, but since character A is 2 hexes away, nor can he do anything. This room has a ceiling higher than 4m (2m over the character's head) or there would be an additional modifier for this area restricting the swing of the character.

Weapon Breakage - When a weapon hits a solid object like a wall or other weapon, as opposed to soft flesh or a yielding surface like soft armor, it may take damage. A roll is made by the attacking weapon for damage, -1 to the roll per point of AV over the target. If this exceeds the AV of the weapon, take any extra damage off its BP. If this total goes to 0 or below, the weapon will break. Roll 1d6, divide by 10, and multiply this by the old DV of the weapon to get the new DV of the weapon. The fraction left is also proportional to the new length of the weapon. This may be done multiple times, using the *current* stats of the weapon for subsequent damage. As weapons don't heal, a record should be kept of any permanent damage done. For purposes of breaking things across them, heads have an AV of 3.

Example - Someone tries to crash a pool cue over someone else's head and misses, hitting the bar. It has a DV of 8III. If the person rolls well and gets an 8, it will do 4 BP to the target and itself. The pool cue has an AV of 3, so in this case it will take 1BP from its total of 3. Later on in the combat it breaks. The character using it rolls 1d6 and gets a 2. 2 divided by 10 is .2, times the DV of 8 gives a new DV of 2. Left with a useless piece of splintered wood, the character can drop it and reach for something more durable, or perhaps use the splintered end as a jabbing weapon.

Damage Modifiers - Hand to hand weapons may do extra damage or lesser damage, depending on strength and how the weapon is wielded. Every point of Strength above or below 10 is a modifier of 2 to the DV of the weapon. Whether this is positive or negative depends on the Strength of the character. This amount should be figured ahead of time to save time during combat. If a weapon that can be used with 1 or 2 hands is used with both hands, the DV gets a +10 modifier. If a 2 handed weapon is used with 1 hand, the DV gets a -6 modifier. Weapons that can be dulled may have their DV modified after heavy use. A modifier to DV of up to -5 is reasonable, as is lowering the Damage Type by 1.

Stamina in Hand to Hand Combat - A Stamina roll will have to be made once per turn in hand to hand combat if the character has spent more than half the turn using a hand to hand weapon. This generally corresponds to using 1/2 to 3/4 of your Strength. While you may use your full Strength on attacks, time is also spent shifting position, parrying, or

doing other actions not requiring a full effort. You may modify this time period up or down depending on the character's weight load or weapon type used. Daggers might only require a roll once a minute.

Thrown Weapons - These are any form of HTH or improvised weapon that can be thrown for effect.

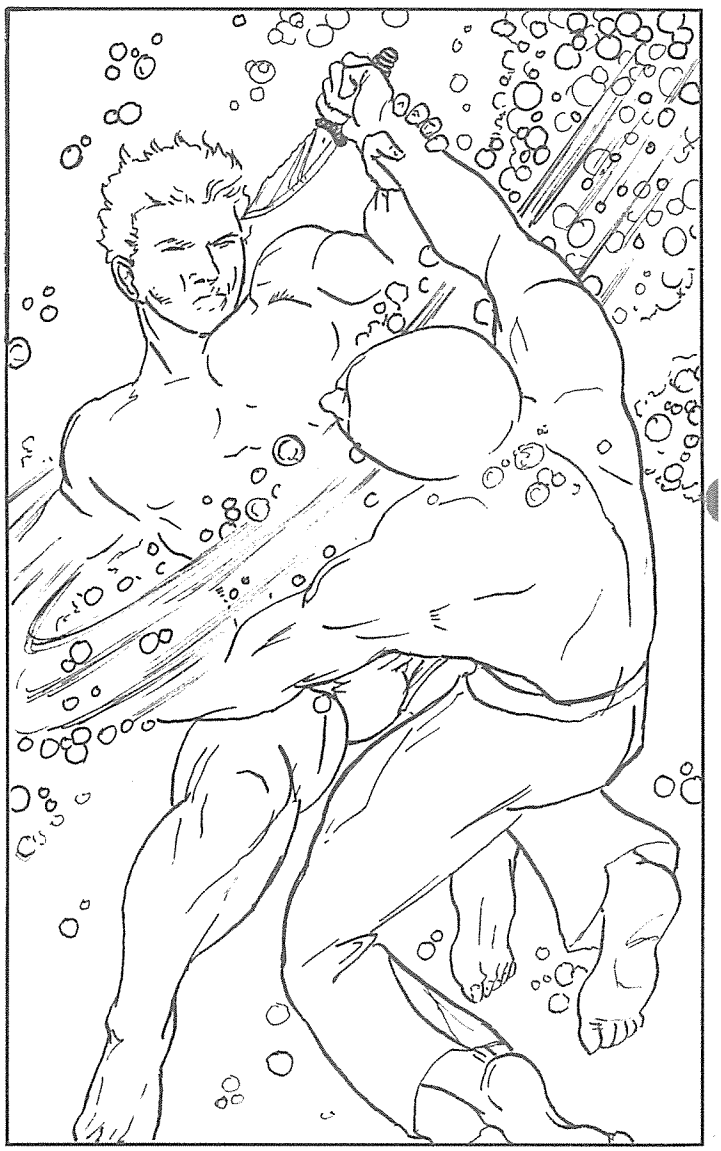
"To Hit" Modifiers - Thrown weapons use modifiers applicable to projectile weapons.

Range - The maximum distance an object can be thrown is 110 meters. A non-aerodynamic object can be thrown 1/2 this distance. An object can be thrown a distance in meters equal to $((\text{Strength})^2/(4 \times \text{mass of object in kilograms}))$. Small objects or objects with very low density will travel lesser distances. This is left to the discretion of the GM. Throwing while stationary (chart assumes running throw) only gets 1/2 the range listed, and throwing while prone gets 1/4 the range. Thrown objects can travel up to 30 meters per phase. The chart below gives the distances objects can be thrown with varying amounts of Strength. Thrown weapons use the Range Class 1 range table, but do not get positive modifiers for range. All positive modifiers for range, for chance to hit or damage, are counted as +0.

	Mass of thrown object										
STR	.1	.25	.5	.75	1.0	1.5	2.0	3.0	5.0	7.0	10.0
1	02	01	00	00	00	00	00	00	00	00	00
2	10	04	02	01	01	00	00	00	00	00	00
3	22	09	04	03	02	01	01	01	00	00	00
4	40	16	08	05	04	03	02	01	00	00	00
5	62	25	12	08	06	04	03	02	01	00	00
6	90	36	18	12	09	06	04	03	01	01	00
7	110	49	24	16	12	08	06	04	02	01	01
8	110	64	32	21	16	11	08	05	03	02	01
9	110	81	40	27	20	13	10	07	04	03	02
10	110	100	50	33	25	17	12	08	05	03	02
11	110	110	60	40	30	20	15	10	06	04	03
12	110	110	72	48	36	24	18	12	07	05	03
13	110	110	84	56	42	28	21	14	08	06	04
14	110	110	98	65	49	33	24	16	10	07	05
15	110	110	110	75	56	37	28	19	11	08	06
16	110	110	110	85	64	43	32	21	13	09	06
17	110	110	110	96	72	48	36	24	14	10	07
18	110	110	110	108	81	54	40	27	16	12	08
19	110	110	110	110	90	60	45	30	18	13	09
20	110	110	110	110	100	67	50	33	20	14	10

Underwater Combat - Underwater combat is run the same as normal combat, with the following modifiers. All damage done underwater is halved(n) for hand to hand weapons, so if characters were involved in a waist-deep knife fight, damage done to a location below the waist would be halved. Normal guns fired underwater will malfunction on a hit roll of 17 or better, the result being a dud on 17, and a jam on 18-20. Energy weapons will usually short out, with possible weapon damage. They are meant to be weather resistant, but not being totally submerged for long periods. Waterproofed models should work, but with the same range restrictions on damage as for projectiles. Railguns will not work underwater.

Weapons such as bows and crossbows will work underwater, but have a maximum range of 1/10(n) their normal range, or 40 meters, whichever is lowest. The range is multiplied by 10 for damage purposes on all projectiles. Thrown weapons such as spears have a maximum range of 4 meters and the range for damage purposes is multiplied by 15. Thrown weapons such as knives will not work underwater.



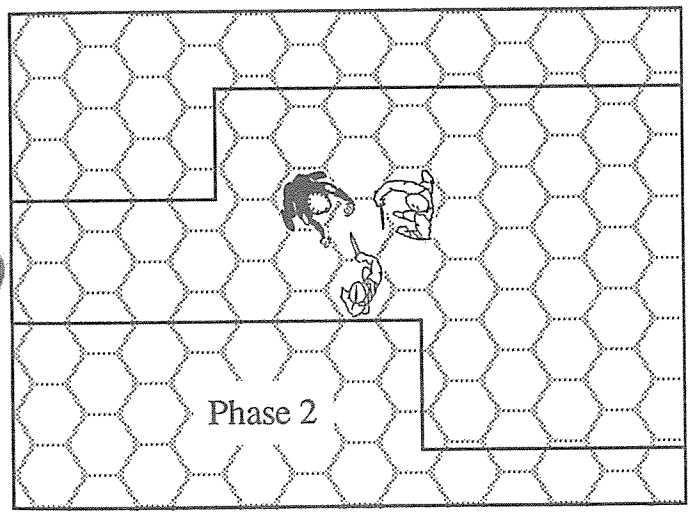
Combat Simplified - *For those of you out there who prefer an addition and subtraction system over the modifier system used in the* **TimeLords** *system, a way of converting the modifiers is presented. Divide all modifiers by 2(d), and use the resulting amount as an* **addition or subtraction** *to the character's skill. If you prefer percentile dice, multiply all 1d20 numbers by 5. This works best for skills in the 6-14 range, but becomes too unequal at other levels. The UMC is not needed now, and play may proceed slightly faster.*

HTH Combat Example

HTH Weapon Example - Giving Taj another chance, we will replay the projectile combat example. After unsuccessfully trying to blow Slash away with an old double-barreled shotgun, Taj realizes he is in a lot of trouble. But, anticipating this, he had a friend conceal himself at the meeting site beforehand. Now Taj draws a knife, as does his companion, Dogmet, and the two of them confront a wary Slash. Necessary stats for each are below. Weapon damages are already adjusted for Strength bonuses, and skills are adjusted for any Inherent Accuracy of the weapon used.

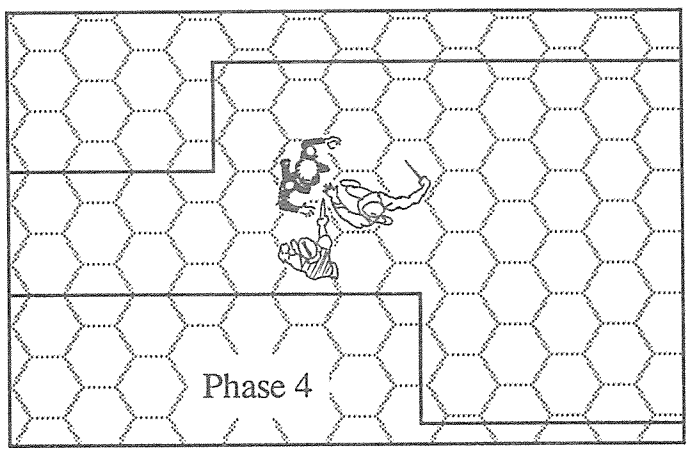
Name	STR	DEX	WIL	Spd	Skill	BP	Weapon
Slash	14	18	16	16	16	30	4I
Taj	10	10	12	10	8	30	6I
Dogmet	13	10	10	11	8	30	8I

The layout is that shown on the Phase 2 diagram. Taj will take a -5 to his actions because of the off-phase minus, Dogmet takes a -4, and Slash is unaffected (p.42).



The combat starts. Slash decides to move forward one hex, to give herself some elbow room (p.55). Taj and Dogmet know that Slash is too good to take on in single combat, so they move forward together. Slash has a Speed of 16, and takes a -3 for a movement action, making it a 13. Her 1d6 roll is a 2, making her final Initiative a 15. Taj has a Speed of 10, which goes to 7 because of his movement, and up to 13 because he rolled a 6 on his 1d6 roll. Still not good enough. Dogmet also moves after Slash. Now to Phase 3.

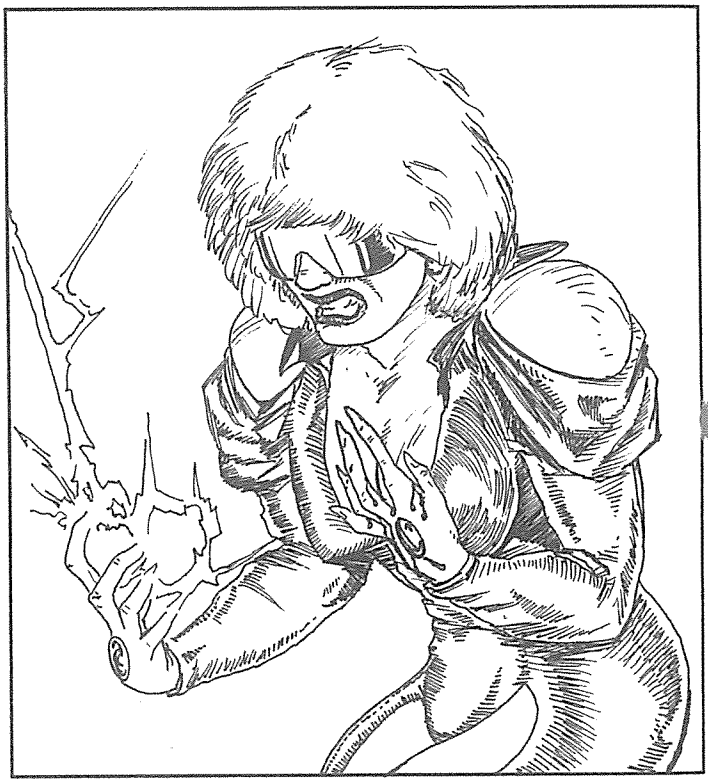
Slash decides to wait for someone to close, while Taj and Dogmet try to get her from both sides. Since Slash is better, is waiting, and is not moving, Taj and Dogmet don't stand a chance of getting in a first hit, but hey, with the kind of money that she has, they can afford to get some cuts patched up afterwards. Dogmet and Taj move in simultaneously, to keep Slash off guard. She surprises them by not taking advantage of her speed, letting them attack first. Taj goes for a sweeping cut in her general direction. He moved one hex, so he takes a -2 to his chance (p.54), which is no effect. Rolling 1d20, he gets a 9, for a close miss. Whoosh! Dogmet attacks from the other side, but tries a thrust. Having the same chance to hit, he gets a 6, which may connect. Slash attempts to block by rolling her skill, and gets a 4. This is less than 1/3 her skill, so it counts as a parry (p.54). This gives her a +6 if she attacks with her other hand (p.54), and she does, going for a called shot to the throat. She has a +6 for the parry, a -10 for the called shot, for a total of -4. On a skill of 16, this means she needs a 13 or less. Rolling, a 12 comes up, so she cuts him across the throat with one of her razor-sharp "fingernails". Since she has five of these per hand, she rolls four more times, getting a 15,12,6, and 8, for a total of four hits. Since all the attacks are on the same "weapon" (her hand), Dogmet's attempt to block will either get all of them, or none. Rolling a 14, he gets none. With her Strength, the damage from the attack is 4I, or 1d4 for each of the hits (p.60). The rolls are 1,3,4,1. Using the optional neck hits rule, the damage after 1 point to the neck is quadrupled (p.59), so the damages end up as 1,9,13 and 1. Checking the UMC (p.31) on the "30" column and going down and across, this means Dogmet takes effects only on the 6 and 9 columns of the Head/Neck Damage Table (p.63). Rolling 1d10 to see the results on the 6 column, a 5 comes up. This is a result of 2,S4. However, both the neck and sharp weapons have special damage possibilities. The neck has a +1B, which means you check one column to the right to see if there are B results. In this case, no. There is also a +3E for the neck, and a +1E for sharp weapons, so you check 4 columns to the right for E results. Again, none. last, there is a -3S for the neck, and another -1S for sharp weapons, so you check 4 columns to the left for S results. In this case, the S4 result disappears, so Dogmet only takes a -2 impairment to Intelligence, Dexterity and Skills. On the second hit (the 9 column), a 4 comes up. This is a base result of 3,S7. The modifiers to this are identical to the previous hit, so the end result of the wound is 3,S3,E7. Dogmet takes another -3 to his actions, and must make a Willpower roll with a -3 to avoid being Stunned. This is an 11, and he rolls a 10, barely making it. However, he has taken an eventually fatal result on the 7 column (p.65). Adding 1d6 (a 2), this moves to the 9 column, and cross-referenced with a 1d10 roll (a 3), the result is 12 minutes. So, Dogmet has been badly slashed, and is losing blood rapidly. Rolling another 1d10, the result is a 2. Compared on the same column, this means Dogmet will pass out from blood loss in 8 minutes (p.65). Now to phase 4.



HTH Combat Example

Everyone will take a minus this phase. Taj takes a -5 for acting out of phase. Dogmet takes a -4 for acting out of phase, and another -5 for injuries, and Slash takes a -2 for acting out of phase. Everyone is attacking, but Slash is thinking about making two attacks on Taj, which will hurt her block chance. Slash has a base Initiative of 16, plus 1d6 (a 2) for a total of 18. Dogmet has an 11, plus 1d6 (a 6) for a 17, and Taj has a 10, plus 1d6 (a 2) for a 12. Slash waits for Dogmet to attack before committing herself to two attacks on Taj. Dogmet thrusts at Slash. His chance is a skill of 8, with a -9 modifier for off-phase and wounds, and another -2 because he attacked before he stopped moving for the phase. An 8 with a -11 is a 4 or less. He rolls a 9, missing. Slash does two attacks to Taj, both of them called shots. She takes a -2 for off-phase, and a -10 for the called shots, to the throat and right wrist. a 16 with a -12 is a 7 or less. The shot to the throat rolls a 12, missing, and the one to the wrist gets a 4, for a hit. The shot to the throat may scatter, so a 1d10 scatter roll is made for direction (p.47). A 1 means scatter is up. The number of locations of scatter is 1d6, for a result of 3. This moves from the face, to skull, to empty air. We can assume logically that Taj ducked. The other shots to the wrist would need to be made whether the first hit or not. The results are 9,12,3, and 6, for two more hits. The others may scatter, but Taj makes his block roll on a 4, so none of them hit. Now Taj lunges forward. He takes a -2 for his movement, and a -5 for off-phase action. An 8 with a -7 is a 6 or less. He rolls a 5, for a hit. Slash tries to block. She has her skill of 16, with a -6 for doing two attacks, and another -2 for off-phase action. A 16 with a -8 is a 10 or less. Rolling a 12, she fails the block, and Taj strikes home. Rolling 1d% for location, Taj gets a 40. This is a melee weapon less than .4 meters long, so the roll gets a -5 modifier, making it a 30. The result: A center chest hit. Rolling 1d6 for damage (p.60), he gets a 6. All chest hits after the first two points are doubled, so this becomes 10 points, which with her 30BP means a result on the 7 column of the Torso Damage Table (p.63). Rolling 1d10, a 4 comes up. The base result is 5,S4. Both the chest location and puncturing weapons (this was a thrust) have special effects. The total column shifts are +1B,+4E,-2S. The +1B does have an effect. The impairment stays the same, but will take four times as long to heal (p.62). The +4E means Slash must make an eventually fatal roll with a base column of 12, and the -2S means the S4 result goes to S2. She makes the Willpower roll, and is unaffected. She takes a -5 impairment to her Strength, Stamina, running speed and skills. Her effective Strength is now an 11, her Speed a 14, and her damage 3I instead of 4. Adding 1d6 (a 3) to the 12 column for eventually fatal results gives a result on the 15 column, which cross-referenced with 1d10 (a 8) means that untreated, this injury will kill her in 32 hours. Now, Phase 5.

Nobody takes any off-phase minuses. Order of initiative is Slash, Taj, and Dogmet. Slash does one attack on Dogmet, trying to reduce her problems to one opponent. She does a thrust to the neck. Her skill of 16 gets a total modifier of -15, giving her a chance of 4 or less. Rolling, she gets a 3,6,7,14, and 2, for two hits. Dogmet fails his block, so she gets two hits at 1d3 each. The results are 1,3. The 1 result is an annoyance, but ignorable. The 3 becomes a total of 9 points, or a result on the 6 column of the Head/Neck Damage Table. Just for the sake of a nasty result, we'll say a 1 is rolled on the 1d10. This gives a base damage result of 3,U8,E7. With modifiers for location and weapon type, the final result is 3,S2,E5. So, Dogmet takes another -3 impairment. Rolling his Willpower, he gets a 12, which fails by 3, giving him another -3 impairment for 1d6 phases. Most importantly, he rolls on the Eventually Fatal table with an initial column of 5. Being nasty again, we say he rolls a 1 on both the 1d6 and 1d10 rolls, placing the result on the first line of the 6 column. This result is 4t, or 4 turns (40 seconds) to live. He is bleeding very badly, and has an impairment of -11 until the Stun effect wears off, when it will only be an -8.



Taj goes next. He makes another thrust at Slash, and rolls a 16, missing badly. Dogmet decides that survival is the better part of valor, and turns to run down the alley, clutching at his throat and gurgling for a doctor. Now to Phase 6.

Slash goes first, and holds action, waving blood-flecked nails at Taj while a spreading red stain oozes down the side of her jumpsuit. Taj feints a slash at her face. He rolls for his skill with a -5 because of off-phase actions, and gets a 4, making the roll by 2. Slash must make a skill roll with a -5 for the impairment and -3 for off-phase actions or be led off by the feint. She rolls a 7, so she has no problems. Dogmet is accelerating down the alley, and is essentially out of the combat. Now to Phase 7.

Taj, having lost his moral support and superior numbers, decides to slowly back off. Slash lets him. They warily watch each other until they lose sight of each other. Combat is over.

Hit Location

Damage Location - When a hit is made, a hit location must be rolled. Projectile weapons, thrown weapons and energy use the sector numbers, and hand to hand attacks use the facing numbers.

Example - Projectile weapons firing into Sector I will hit Sector I, but a hand-to-hand attack could hit center, left front, or right front. Percentile dice(d%) are rolled and cross-referenced with the appropriate table to get the location hit.

Location Modifiers - Certain attacks have a better chance of hitting certain areas. The amounts shown here should be used as modifiers to the amount rolled on the percentage dice for location. *Straight additions and subtractions are in the rightmost column, and apply to an average roll for percentile dice, or d20 hit location chart.*

Modifier	Attack	Addition
-6	With fists	-15/-2
+7	With feet (count rolls less than 35 as 35)	+17/+2
-7	With fists using martial arts	-17/-2
-3	With feet using martial arts	-7/-1
-7	Using hand to hand weapon less than .2 meters long	-17/-2
-5	Using hand to hand weapon less than .4 meters long	-12/-1
-2	Using hand to hand weapon less than .6 meters long	-5/-1
-2	Attacker has height advantage (negates minimum for kicks)	-5/-1
+2	Attacker at height disadvantage	+5/+1
+7	Attacker prone, defender up (as for kicks)	+17/+2

Effects of Location - Hits to different body locations will get a multiple on the damage due to the fact that these locations are more responsible for keeping you alive. Hits to the torso or abdomen are *doubled* (x2) after the first two, and hits to the head are *quadrupled* (x4) after the first two. This takes into account the muscles or bone that must be penetrated before serious damage is done to the brain or internal organs. *Optionally, neck hits may be quadrupled after only one point.*

Example - A hit of 10BP to the torso will have 8BP of the damage doubled, for 16, plus the non-doubled 2, for a total of 18 points of damage.

Example - A hit of 10BP points to the head will have 8 points of the damage quadrupled, for 32, plus the non-doubled 2, for a total of 34 points of damage.

Example - A hit of 10BP to the arm or leg simply does 10 points of damage.

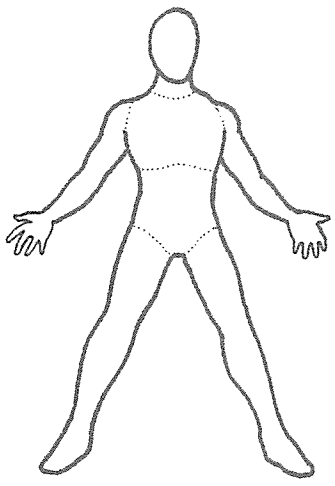
Multiplication of damage applies to animals as well, and can be applied in differing amounts to aliens or alien creatures. Very large creatures may require 3 or 4 points before multiplication, and small ones only 1, or none. Almost all creatures will have vital areas, although some are better protected than others.

Hit Location Chart - A copy of the Hit Location Chart is below. An identical copy is on the SpaceTime Aid Sheet.

	Roll(d%)				
Sector Location	I Front	II,III RF,RR	IV Rear	V,VI LR,LF	Name
1	01-02	01-03	01-05	01-03	Skull
2	03-05	04-06	06-06	04-06	Face
3	06-06	07-08	07-08	07-08	Neck
4	07-10	09-13	09-12	09-10	U.R.Arm
5	11-13	14-14	13-14	11-11	R.Shoulder
6	14-16	15-16	15-16	12-13	U.Chest
7	17-19	17-17	17-18	14-14	L.Shoulder
8	20-23	18-19	19-22	15-19	U.L.Arm
9	24-25	20-21	23-24	20-21	R.Elbow
10	26-28	22-26	25-27	22-22	R.Chest
11	29-31	27-29	28-30	23-25	Chest
12	32-34	30-30	31-33	26-30	L.Chest
13	35-36	31-32	34-35	31-32	L.Elbow
14	37-39	33-35	36-38	33-35	R.Arm
15	40-41	36-38	39-40	36-36	R.Abd.
16	42-44	39-41	41-43	37-39	Abdomen
17	45-46	42-42	44-45	40-42	L.Abd.
18	47-49	43-45	46-48	43-45	L.Arm
19	50-51	46-47	49-50	46-47	R.Hand
20	52-56	48-52	51-56	48-50	R.Hip
21	57-57	53-53		51-51	Groin
22	58-62	54-56	57-62	52-56	L.Hip
23	63-64	57-58	63-64	57-58	L.Hand
24	65-70	59-66	65-70	59-66	R.Thigh
25	71-76	67-74	71-76	67-74	L.Thigh
26	77-79	75-77	77-79	75-77	R.Knee
27	80-82	78-80	80-82	78-80	L.Knee
28	83-89	81-87	83-89	81-87	R.Shin
29	90-96	88-94	90-96	88-94	L.Shin
30	97-98	95-97	97-98	95-97	R.Foot
31	99-00	98-00	99-00	98-00	L.Foot

A simpler 1d20 table is below for those who wish to use it. It is not as anatomically correct.

Roll	Location
1	Head/Neck
2-4	Right Arm
5-7	Chest
8-10	Left Arm
11-12	Abdomen
13-16	Right Leg
17-20	Left Leg



Damage and Injury Effects

Damage - Weapons of any type are rated according to their Damage Value, or DV, and Damage Type. The DV of a weapon is the number of d10 of damage the weapon can do, plus the chance of doing extra points of damage. The number of d10 is the DV/10(d), and the remainder is the chance of doing extra damage.

Example - A DV of 34 means the weapon does 3d10 of damage, and can do up to 4 points more. If the remainder or less is rolled on a fourth d10, that amount is added to the other damage done. If the rolls for damage were 5,3,7 and 3, the total damage would be 18, but if the rolls were 5,3,7 and 5, the total damage would only be 15.

For weapons with a DV of less than 10, the DV is the type of die rolled for damage.

Example - A DV of 6 does 1d6 of damage, and a DV of 4 does 1d4. A DV of 5 would roll 1d6, and reroll any results of 6.

Guns and energy weapons are rather consistent, and more realistic results are obtained if the average damage is used. This is listed by the DV of the bullet and is roughly the DV/2(u). For those who wish to be more exact, it is the result on the UMC of the DV with a -9 modifier.

Damage Type - Weapons are divided into five types for damage purposes. This ranges from Type I, which is all lethal damage, like bullets, lasers, and bladed weapons, down to Type V, which is all non-lethal damage, like a stunner. Most weapons are in the Type I to Type III range.

Damage Type	Damage Done
I	All BP
II	1/4BR, 3/4BP
III	1/2BR, 1/2BP
IV	3/4BR, 1/4BP
V	All BR

Damage is taken according to type. 5 points of Type IV damage would be 3BR, 1BP, then 1 more BR, for a total of 4BR and 1BP. The damage type will be directly after the Damage Value, like 29II. This would be a Damage Value of 29 that does Type II damage.

Damage Effects - **SpaceTime** uses a different damage system than most other games. People do not have a fixed amount of Body Points that are lost as they take damage. If you think about it, people do not usually die from structural disassembly. This system avoids the "shot in foot" problem. This is that a severely injured person can usually be killed instantly in most systems by shooting them in the foot. The instantaneous trauma would have to be excessive in order to do this.

Damage in **SpaceTime** can roughly be classified as impairment, various levels of unconsciousness, and eventually fatal. We see this all the time. A crash victim is alive when the paramedics get there, but dies before the hospital is reached. You fall down the stairs and break your leg. Someone gets hit over the head with a lead sap. These are eventually fatal, impairment, and unconsciousness results. They can be separate or combined, and the length of the effect varies. Writer's cramp is a painful but relatively temporary impairment, but having a car run over your hand might be permanent.

When a character takes damage, the amount of damage taken is cross-referenced with their Body Points or Bruise Points on the UMC. Any ambiguous results round in the favor of the character. The result is the fraction of their damage taken in that blow. This may be increased by a successful use of Wounding skill (p.38)

Example - A character with 27BP is hit and takes a total of 7BP and 6BR. Looking at the UMC under the 27 heading and going down that column, this is either a 5 or 6, so it goes to 5 for the BP. The 6BR is a result of 5, as well.

This result is found on the top row of the damage chart for that location. 1d10 is rolled with any modifiers that apply, and the two are cross-referenced. The results are then applied to the character.

Example - The character who previously took two results of 5 would roll once for BP effects on the 5 column, and once for less permanent BR effects on column 5 as well.

Example - A character with 26BP gets shot in the abdomen with a bullet that does a total of 20 points (11 points, with doubling after the first 2). This gives a damage result of 16 on the torso damage table (p.63). Rolling 1d10, an 8 is the result. The result is B11, D9, E11. The fact that it is a bullet shifts the E result 1 column to the right, making it an E11 still, and the B result 2 columns to the right, making it still a B (p.61). The impairment is *not* changed, so it remains an 11. The net result is that the character receives a -11 to their Strength, Stamina, and Physical Skills, they must make a Willpower roll with a -9 to avoid being Dazed, and they must check for an eventually fatal result with an initial column of 11. On the average, the character will live for 10 hours without medical treatment before dying.

If a character ever receives an impairment modifier of -15 or greater, the possibility exists of permanent damage to the character. Using the same row as the 1d10 roll indicated, roll 1d20 and go across, up to the initial result. The result is the permanent negative modifier that the character will have without high-tech healing. Modern medical technology can subtract 5 from the modifier per TL over 10, so advanced technology (TL14 or better) can remove all of it, sometimes by installing a replacement body part. Since the modifier is permanent, use the UMC to find the new value for modified Attributes, and replace the old value with the new value. In the example given previously, if the character had rolled a 5 on the 1d10, there would be permanent impairment. 1d20 is rolled, getting a 10. The character will have a permanent -8 to Strength and Stamina if allowed to heal normally, provided he lives. For an average man, this means that his Strength and Stamina of 10 go to 6. This can be increased back up by training and exercise, but until then it stays at 6. A modifier of -20 can mean an amputation, especially if the modifier to the immediate left is also a -20. Advanced technology may be able to cover for this also, but it might take a while, and it will certainly take a lot of money.

Effects of Impairment - Impairment is a modifier to particular actions, the actions determined by the part of the body hit. A blow to the head might affect your ability to think clearly more than it affects your Strength, and a cut to the legs would hurt your movement, but not your thinking. In general, when the total impairment reaches 20 or more on a body part, that part of the body cannot be used. Usually, the location involved is most affected, and the adjacent areas are indirectly affected.

Example - A shoulder with an impairment of -20, would prevent you from doing any skill that involved movement of that arm, even though the rest of the arm may be undamaged.

The GM may wish to rule on special cases. For instance, the person in the above example could probably flip a switch or pull a trigger, but could not normally move the arm to do so.

A leg impaired to this extent cannot bear any weight, and the character must crawl. If the total impairment on both legs is -20 or greater, the same thing happens. Impairment to the chest of this amount weakens the character to the point where breathing or motion is so painful that they cannot do any sort of physical activity. An impairment of this level to the head means the character is too dazed to act, and while they may not actually be unconscious, the effects are the same for all practical purposes.

Example - If a weapon has an effect of -2B and +3E, it means that for purposes of broken bones the result goes 2 columns to the left, and for eventually fatal results it goes 3 columns to the right. A good example is burns. You could easily be fatally burned without breaking anything, and the whole body table modifiers reflect this.

Hydrostatic shock is for bullets, supersonic or explosive projectiles or weapons that can vaporize blood and tissue, like lasers or particle beams.

Blunt instruments are those which do not have cutting or puncturing ability, such as a baseball bat. Burns include damage from heat or cold, usually to an entire location, rather than just a point. Flame weapons or chemicals are common examples.

Sharp weapons include any weapon used in a cutting, hacking, or slashing mode, such as knives.

Puncturing weapons are those which usually leave small external wounds, and do most of the damage to internal organs, such as arrows, quarrels, and stab wounds.

Weapon types are not combined on a hit, so a knife attack would either be cutting or puncturing, but not both.

General Effects - Here is a list of the effects on the Damage Tables. These results are supposed to recreate the effects of damage of various types on different areas of the body, and you should feel free to add in any specific effects for the different locations.

Damage Tables - On the following pages are copies of the damage tables. There are 5, for the head/neck area, torso, arms, legs, and whole body damage. Additions and subtractions to the results are given for various weapons and locations. These modifiers are applied horizontally to the rolled result, and apply only to the areas specified. If the result goes off a side of the table, any remaining amount is applied vertically, down for the left side, and up for the right.

x **Impairment** - The listed attribute, attributes, skills or abilities receive a negative modifier of this amount to all actions involving their use.

Sx **Stun** - The character must make a Willpower roll with a negative x modifier or will be take a minus to all actions of the amount the roll was missed by for 1d6 phases. If the Willpower roll is made, there is no effect.

D **Daze** - As for Sx, but make the time modifier 4d6 phases. If the character makes the roll, they are counted as receiving an Sx result with the same x.

Ux **Unconscious** - As for Sx, but if the roll is failed, the character is unconscious for a number of phases equal to the amount missed by, times 2d6. Upon regaining consciousness, the character will act as though they took a Sx result. If the roll is failed, the character takes a Sx result with the same x.

Ox **Out of It** - As for Sx, but if the roll is failed the character is unconscious for a number of minutes equal to the amount missed by, times 2d6. If the roll is made, the character takes a Sx result with the same x.

Note that if the character makes enough rolls, a "Unconsciousness" or "Out of It" result can go to a "Stun" result, which can go to no effect. Temporary impairment affecting all rolls should be listed under skill impairment, with a note on the duration of the impairment. *Alternately, temporary impairment may be ignored or made to last only until the end of the next phase, using only the U and O results for determining knockouts.*

B **Broken bone or lasting injury.** The area of the body hit is "broken". It has no additional effect, but the area hit will take 4 times as long to heal for the first healing. The rest heals normally. This is usually broken bones, but may just be damage in a slow healing area, such as tendons and ligaments, or could represent damage to internal organs.

Ex **Eventually fatal wound.** Roll 1d6 and add it to x. This is the column on the Eventually Fatal Table that must be rolled on. Cross-reference a 1d10 roll on this table to see how long the character will live without medical treatment. The character may lose consciousness before death. Roll 1d10 on this table again to see when the character passes out. If the result is before the predicted death, the character will lose consciousness at the given time. If after, the character may be conscious until death, depending on other rolls. This unconsciousness is counted as an O20 result.

It is important to remember that an eventually fatal result does not mean that the character stands no chance of survival, just that left untended, complications of the injury will cause death.

F **Fatal.** The injury is instantly fatal and/or totally incapacitating. With the advanced technology available at TL14 or TL15, the only truly fatal results in the game are the F results to the skull or face, or an F result from being blown to bits on the Whole Body Damage Table. Any other cause of death can be corrected, *provided* that the character receives paramedic attention within 15 minutes of death, gets to a major hospital very quickly, *and* has the credits to pay for it.

You may notice that a large number of rolls may have be made for severe damage. This can be cumbersome in large battles, or you may not like or need this much detail in all circumstances.

To reduce dice rolling, treat all rolls against players as as average. Use a 5 for 1d10 rolls, 3 for 1d6 rolls, and 7 for 2d6 rolls. Against NPC's, treat all rolls as 1 less than average. The "average" areas on the tables are italicized. You may also choose to ignore the modifiers for location or weapon type, or add to damage rolls to make combat more survivable for the characters. The system is designed to be realistic, but the object is not to force it on you. Use as much of it as you wish.

Head/Neck and Torso Damage Tables

Head/Neck Damage Special Effects

Location 2 (Face) +2B +2E -2S -2D -2U -2O
Location 3 (Neck) +1B +3E -3S -3D -3U -3O
B results go to F

Damage Effects: Bruise Points cannot get E, F, or B results
Impairment Effects: Intelligence, Dexterity, Skills

Weapon Effects

Hydrostatic shock		+3E	+3S	+3D	+3U	+3O
Blunt instruments	-2B					
Burns	-5B	-3E				
Sharp weapons		+1E	-1S	-1D	-1U	-1O
Puncturing weapons		+2E	-2S	-2D	-2U	-2O

Damage Level

Roll	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20+
1	1 S1	1 S2	1 D3	2 D4 E8	2 U6 E8	3 U8 E7	3 O10 E7	B4 O12 E6	B4 O14 E6	B5 O16 E5	B5 O18 E5	B6 O20 E4	B6 O20 E4	B7 O20 E3	B7 O20 E2	B8 O20 E1	B8 O20 E0	F	F	F	F
2	1	1 S1	1 S2	2 S3	2 S4	3 D5	3 D6 E8	4 D7 E8	4 U8 E7	5 U10 E7	B5 O12 E6	B6 O14 E6	B6 O16 E5	B7 O18 E5	B7 O20 E4	B8 O20 E3	B8 O20 E2	B9 O20 E1	B9 O20 E0	F	F
3	N	1	1 S1	1 S2	2 S3	2 S4	2 S5	3 D6	3 D7 E8	4 U8 E8	4 U10 E7	5 O12 E7	B5 O14 E6	B6 O16 E6	B6 O18 E5	B7 O20 E4	B7 O20 E3	B8 O20 E2	B8 O20 E1	B9 O20 E0	F
4	N	1	1 S1	1 S2	2 S3	2 S4	2 S5	3 S6	3 S7	4 D8	4 D9 E8	5 U10 E8	5 U11 E7	6 O12 E7	6 O14 E6	6 O16 E6	B7 O18 E5	B7 O20 E4	B8 O20 E3	B9 O20 E2	B9 O20 E1
5	*N*	*1*	*1* *S1*	*1* *S2*	*2* *S3*	*2* *S4*	*2* *S5*	*3* *S6*	*3* *S7*	*4* *S8*	*4* *D9*	*5* *D10* *E8*	*5* *U11* *E8*	*6* *U12* *E7*	*6* *O13* *E7*	*7* *O14* *E6*	*B7* *O16* *E6*	*B8* *O18* *E5*	*B8* *O20* *E4*	*B9* *O20* *E3*	*B9* *O20* *E2*
6	N	N	1	1 S1	1 S2	2 S3	2 S4	2 S5	3 S6	3 S7	4 S8	4 D9	5 D10 E8	5 U11 E8	6 U12 E7	6 O13 E7	7 O14 E6	B7 O16 E6	B8 O18 E5	B8 O20 E4	B9 O20 E3
7	N	N	1	1 S1	1 S2	1 S3	2 S4	2 S5	2 S6	3 S7	3 S8	4 D9	4 D10 E8	5 U11 E8	5 U12 E8	6 U13 E7	6 O14 E7	B7 O16 E7	B7 O18 E6	B8 O20 E6	B8 O20 E5
8	N	N	1	1 S1	1 S2	1 S3	2 S4	2 S5	2 S6	2 S7	3 S8	3 S9	4 D10	4 D11 E8	5 U12 E8	5 U13 E8	6 U14 E7	6 O16 E7	B7 O18 E7	B7 O20 E6	B8 O20 E6
9	N	N	1	1 S1	1 S2	1 S3	2 S4	2 S5	2 S6	2 S7	3 S8	3 S9	3 D10	4 D11 E8	4 U12 E8	5 U13 E8	5 U14 E7	B6 O16 E7	B6 O18 E7	B7 O20 E6	B7 O20 E6
10	N	N	1	1 S1	1 S2	1 S3	1 S4	2 S5	2 S6	2 S7	2 S8	3 S9	3 D10	3 D11	4 U12 E8	4 U13 E8	5 U14 E8	6 O16 E7	B6 O18 E7	B7 O20 E7	B7 O20 E6

Torso Damage Special Effects

Locations 6,10,11,12 (Chest) +3B +2E
Locations 15,16,17 (Abdomen) +2S

Damage Effects: Bruise Points cannot get E, F, or B results
Impairment Effects: Strength, Stamina, Running Speed, Skills

Weapon Effects

Hydrostatic shock	+2B	+1E				
Blunt instruments			+2S			
Burns	-5B	-3E				
Sharp weapons		+1E	-1S	-1D	-1U	-1O
Puncturing weapons	-2B	+2E	-2S	-2D	-2U	-2O

Damage Level

Roll	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20+
1	1 S1	2 S2	B3 S3	B4 D4 E13	B5 D5 E13	B6 D6 E12	B7 D7 E12	B8 U8 E11	B9 U9 E11	B10 U10 E10	B11 U11 E10	B12 O12 E9	B13 O13 E8	B14 O14 E7	B15 O15 E6	B16 O16 E5	B17 O17 E4	B18 O18 E3	B19 O19 E2	B20 O20 E1	F
2	N	1 S1	2 S2	3 S3	B4 D4	B5 D5 E13	B6 D6 E13	B7 D7 E12	B8 U8 E12	B9 U9 E11	B10 U10 E11	B11 U11 E10	B12 O12 E9	B13 O13 E8	B14 O14 E7	B15 O15 E6	B16 O16 E5	B17 O17 E4	B18 O18 E3	B19 O19 E2	B20 O20 E0
3	N	1	2 S1	3 S2	4 S3	5 S4	B6 D5	B7 D6 E13	B8 D7 E13	B9 D8 E12	B10 D9 E12	B11 U10 E11	B12 U11 E10	B13 U12 E9	B14 U13 E8	B15 U14 E7	B16 O15 E6	B17 O16 E5	B18 O17 E4	B19 O18 E3	B20 O19 E1
4	N	N	1	2 S1	3 S2	4 S3	5 S4	B6 D5 E13	B7 D6 E13	B8 D7 E12	B9 D8 E12	B10 D9 E12	B11 U10 E11	B12 U11 E10	B13 U12 E9	B14 U13 E8	B15 U14 E7	B16 O15 E6	B17 O16 E5	B18 O17 E4	B19 O18 E2
5	*N*	*N*	*1*	*2*	*3* *S1*	*4* *S2*	*5* *S3*	*B6* *S4*	*B7* *S5*	*B8* *D6* *E13*	*B9* *D7* *E13*	*B10* *D8* *E12*	*B11* *D9* *E12*	*B12* *D10* *E11*	*B13* *U11* *E10*	*B14* *U12* *E9*	*B15* *U13* *E8*	*B16* *U14* *E7*	*B17* *U15* *E6*	*B18* *O16* *E5*	*B19* *O17* *E3*
6	N	N	1	1	2	3 S1	4 S2	5 S3	B6 S4	B7 S5 E13	B8 D6 E13	B9 D7 E13	B10 D8 E12	B11 D9 E12	B12 D10 E11	B13 U11 E10	B14 U12 E9	B15 U13 E8	B16 U14 E7	B17 U15 E6	B18 O16 E4
7	N	N	N	1	1	2	3 S1	4 S2	5 S3	B6 S4	B7 S5 E13	B8 D6 E13	B9 D7 E13	B10 D8 E12	B11 D9 E12	B12 D10 E11	B13 U11 E10	B14 U12 E9	B15 U13 E8	B16 U14 E7	B17 U15 E5
8	N	N	N	1	1	1	2	3 S1	4 S2	5 S3	B6 S4 E13	B7 S5 E13	B8 D6 E13	B9 D7 E12	B10 D8 E12	B11 D9 E11	B12 D10 E11	B13 U11 E10	B14 U12 E9	B15 U13 E8	B16 U14 E6
9	N	N	N	1	1	1	2	2	3 S1	4 S2	5 S3	B6 S4 E13	B7 S5 E13	B8 D6 E13	B9 D7 E12	B10 D8 E12	B11 D9 E11	B12 D10 E11	B13 U11 E10	B14 U12 E9	B15 U13 E7
10	N	N	N	1	1	1	2	2	3	3 S1	4 S2	B5 S3 E13	B6 S4 E13	B7 S5 E13	B8 D6 E12	B9 D7 E12	B10 D8 E11	B11 D9 E11	B12 D10 E10	B13 U11 E10	B14 U12 E8

Arm and Leg Damage Tables

Arm Damage Special Effects

Locations 5,7 (Shoulder) +1B -1E
Locations 14,18 (Lower Arm) -2B +1E
Locations 19,23 (Hands) +5B -3E
Damage Effects: Bruise Points cannot get E, F, or B results
Impairment Effects: Arm Strength, Skills and Dexterity rolls

Weapon Effects

Hydrostatic shock	+1B					
Blunt instruments		-2E				
Burns		-4E				
Sharp weapons	-1B	+1E				
Puncturing weapons	-3B	-2E	-2S	-2D	-2U	-2O

Damage Level

Roll	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20+
1	2	4	6 S1	8 S2 E8	B10 S3 E8	B12 S4 E8	B14 D5 E7	B17 D6 E7	B20 D7 E7	B20 D8 E6	B20 U9 E6	B20 U10 E6	B20 U11 E5	B20 O12 E5	B20 O13 E5	B20 O14 E4	B20 O15 E4	B20 O16 E4	B20 O17 E3	B20 O18 E3	B20 O19 E3
2	2	3	4	6 S1	8 S2 E8	B10 S3 E8	B12 S4 E8	B14 D5 E7	B16 D6 E7	B18 D7 E7	B20 D8 E6	B20 U9 E6	B20 U10 E6	B20 U11 E5	B20 O12 E5	B20 O13 E5	B20 O14 E4	B20 O15 E4	B20 O16 E4	B20 O17 E3	B20 O18 E3
3	2	3	4	5	6 S1	8 S2 E8	B10 S3 E8	B12 S4 E8	B14 D5 E7	B16 D6 E7	B18 D7 E7	B20 D8 E6	B20 U9 E6	B20 U10 E6	B20 U11 E5	B20 O12 E5	B20 O13 E5	B20 O14 E4	B20 O15 E4	B20 O16 E4	B20 O17 E3
4	1	2	3	4	5	6 S1	8 S2	B10 S3 E8	B12 S4 E8	B14 D5 E7	B16 D6 E7	B18 D7 E7	B20 D8 E6	B20 U9 E6	B20 U10 E6	B20 U11 E5	B20 U12 E5	B20 O13 E5	B20 O14 E4	B20 O15 E4	B20 O16 E4
5	*1*	*2*	*3*	*4*	*5*	*6*	*8* *S1*	*B10* *S2*	*B12* *S3*	*B14* *S4* *E8*	*B16* *D5* *E8*	*B18* *D6* *E7*	*B20* *D7* *E7*	*B20* *D8* *E7*	*B20* *U9* *E6*	*B20* *U10* *E6*	*B20* *U11* *E6*	*B20* *U12* *E5*	*B20* *O13* *E5*	*B20* *O14* *E5*	*B20* *O15* *E4*
6	N	1	3	4	5	6	7	8 S1	B9 S2	B10 S3	B12 S4	B14 D5 E8	B16 D6 E8	B18 D7 E7	B20 D8 E7	B20 U9 E7	B20 U10 E6	B20 U11 E6	B20 U12 E6	B20 O13 E5	B20 O14 E5
7	N	1	2	3	4	5	6	7	8 S1	B9 S2	B10 S3	B12 S4	B14 S5	B16 D6 E8	B18 D7 E8	B20 D8 E7	B20 D9 E7	B20 U10 E7	B20 U11 E6	B20 U12 E6	B20 O13 E5
8	N	1	2	3	4	5	6	7	8 S1	B9 S1	B10 S2	B11 S3	B12 S4	B14 S5	B16 D6	B18 D7	B20 D8 E8	B20 D9 E8	B20 U10 E8	B20 U11 E7	B20 U12 E6
9	N	1	2	2	3	4	5	6	7	B8 S1	B9 S1	B10 S2	B11 S3	B12 S4	B13 S5	B14 D6	B16 D7	B18 D8 E8	B20 D9 E8	B20 U10 E8	B20 U11 E7
10	N	1	2	2	3	4	5	6	7	8	9 S1	B10 S1	B11 S2	B12 S3	B13 S4	B14 S5	B15 D6	B16 D7	B18 D8	B20 D9	B20 D10 E6

Leg Damage Special Effects

Locations 20,22 (Hips) +1B +1E
Locations 26,27,28,29 (Lower Leg) +2B -3E
Locations 30,31 (Feet) +4B -5E
Damage Effects: Bruise Points cannot get E, F, or B results
Impairment Effects: Leg Strength, Dexterity, Skills, Stamina, Running Speed

Weapon Effects

Hydrostatic shock	+1B	+2E	+1S	+1D	+1U	+1O
Blunt instruments	+1B	-3E				
Burns	-5B	-3E				
Sharp weapons						
Puncturing weapons	-3B	-1E	-2S	-2D	-2U	-2O

Damage Level

Roll	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20+
1	1	2	4	6 E9	8 S1 E9	B10 S2 E8	B12 D3 E8	B14 D4 E6	B16 U5 E6	B18 U6 E6	B20 U7 E5	B20 O8 E5	B20 O9 E5	B20 O10 E4	B20 O11 E4	B20 O12 E4	B20 O13 E3	B20 O14 E3	B20 O15 E3	B20 O16 E2	B20 O17 E1
2	1	2	3	4	6	8 S1	B10 S2 E8	B12 D3 E8	B14 D4 E7	B16 U5 E7	B18 U6 E6	B20 U7 E6	B20 O8 E5	B20 O9 E5	B20 O10 E5	B20 O11 E4	B20 O12 E4	B20 O13 E4	B20 O14 E3	B20 O15 E3	B20 O16 E2
3	1	2	3	4	5	6	8	B10 S1	B12 S2 E8	B14 D3 E8	B16 D4 E7	B18 U5 E7	B20 U6 E6	B20 U7 E6	B20 O8 E5	B20 O9 E5	B20 O10 E4	B20 O12 E4	B20 O13 E4	B20 O14 E3	B20 O15 E2
4	N	1	3	4	5	6	7	8	B10 S1	B12 S2 E8	B14 D3 E8	B16 D4 E7	B18 U5 E7	B20 U6 E6	B20 U7 E6	B20 O8 E5	B20 O9 E5	B20 O10 E5	B20 O11 E4	B20 O12 E4	B20 O13 E3
5	*N*	*1*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*B10* *S1*	*B12* *S2* *E8*	*B14* *D3* *E8*	*B16* *D4* *E7*	*B18* *U5* *E7*	*B20* *U6* *E6*	*B20* *U7* *E6*	*B20* *O8* *E5*	*B20* *O9* *E5*	*B20* *O10* *E4*	*B20* *O11* *E4*	*B20* *O12* *E3*
6	N	1	2	3	4	5	6	7	8	9	B10 S1	B12 S2	B14 D3 E8	B16 D4 E7	B18 U5 E7	B20 U6 E6	B20 U7 E6	B20 O8 E5	B20 O9 E5	B20 O10 E4	B20 O11 E3
7	N	1	1	2	3	4	5	6	7	8	9 S1	B10 S1	B12 S2	B14 D3	B16 D4 E8	B18 U5 E7	B20 U6 E6	B20 U7 E6	B20 O8 E5	B20 O9 E5	B20 O10 E4
8	N	1	1	2	3	4	5	6	7	8	9	B10 S1	B11 S1	B12 S2	B14 D3	B16 D4	B18 U5 E8	B20 U6 E7	B20 U7 E6	B20 O8 E5	B20 O9 E4
9	N	1	1	2	2	3	4	5	6	7	8	9	B10 S1	B11 S1	B12 S2	B13 D3	B14 D4	B16 U5	B18 U6 E8	B20 U7 E7	B20 U8 E5
10	N	1	1	2	2	3	3	4	5	6	7	8	9 S1	B10 S1	B11 S1	B12 S2	B13 S2	B14 D3	B15 D4	B16 D5	B17 U6 E6

Whole Body and Eventually Fatal Damage Tables

Weapon Effects

Burns +4E, -4B

Damage Effects: Bruise Points cannot get E, F, or B results

Impairment Effects: All

Since damage is uniform, there is no roll. Damage is as shown on this table. Remember to use the average AV of the character against Whole Body Damage.

Damage Level

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20+
1	2	3	4	5	6	7	8	B8	B9	B9	B10	B10	B11	B11	B12	B12	B13	B13	B14	B15
	S1	S2	S3	D4	D5	D6	D7	D8	D9	U10	U11	U12	U13	U14	O15	O16	O17	O18	O19	O20
															E14	E13	E12	E11	E10	E9

-1 per DL over 20+, DL 40+ is F

Eventually Fatal Table - Use this table if an E result ever comes up from damage. The letter abbreviations are explained below. Treat any result of E20 or greater as not eventually fatal.

p - Phases t - Turns m - Minutes h - Hours d - Days

Roll	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1p	2p	4p	1t	2t	4t	8t	2m	4m	8m	16m	30m	1h	2h	4h	8h	16h	1d	2d	4d
2	2p	4p	8p	2t	4t	8t	16t	4m	8m	16m	32m	1h	2h	4h	8h	16h	32h	2d	4d	8d
3	3p	6p	12p	3t	6t	12t	24t	6m	12m	24m	48m	90m	3h	6h	12h	1d	2d	3d	6d	12d
4	4p	8p	16p	4t	8t	16t	32t	8m	16m	32m	64m	2h	4h	8h	16h	32h	64h	4d	8d	16d
5	5p	10p	20p	5t	10t	20t	40t	10m	20m	40m	80m	150m	5h	10h	20h	40h	80h	5d	10d	20d
6	6p	12p	24p	6t	12t	24t	48t	12m	24m	48m	96m	3h	6h	12h	24h	2d	4d	6d	12d	24d
7	7p	14p	28p	7t	14t	28t	56t	14m	28m	56m	112m	210m	7h	14h	28h	56h	112h	7d	14d	28d
8	8p	16p	32p	8t	16t	32t	64t	16m	32m	64m	128m	4h	8h	16h	32h	64h	128h	8d	16d	32d
9	9p	18p	36p	9t	18t	36t	72t	18m	36m	72m	144m	270m	9h	18h	36h	3d	6d	9d	18d	36d
10	10p	20p	40p	10t	20t	40t	80t	20m	40m	80m	160m	5h	10h	20h	40h	80h	160h	10d	20d	40d

Quick Results Table - This is a simplified version of the previous tables, with simplified results. S results mean you must make a Willpower roll by half (u) or take a -10 modifier to all actions on the next Phase. Daze is the same, but for 1d6 Phases. U means make the Willpower roll by half or be unconscious for 1d6 minutes, and O is the same, but for 1d6*10 minutes. E results go to the quick Eventually Fatal Table.

Head/Neck Damage

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20+
N	1	1	1	2	2	2	3	3	4	4	5	5	6	6	7	B7	B8	B8	B9	B9
		S	S	S	S	S	S	S	S	D	D	U	U	O	O	O	O	O	O	O
											E8	E8	E7	E7	E6	E6	E5	E4	E3	E2

Torso Damage

N	N	1	2	3	4	5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19
				S	S	S	S	S	D	D	D	D	D	U	U	U	U	U	O	O
									E13	E13	E12	E12	E11	E10	E9	E8	E7	E6	E5	E3

Arm Damage

1	2	3	4	5	6	8	B10	B12	B14	B16	B18	B20	B20	B20	B20	B20	B20	B20	B20	B20
						S	S	S	S	D	D	D	D	U	U	U	U	U	O	O
										E8	E8	E7	E7	E7	E6	E6	E6	E5	E5	E5

Leg Damage

N	1	3	4	5	6	7	8	9	B10	B12	B14	B16	B18	B20	B20	B20	B20	B20	B20	B20
									S	S	D	D	U	U	U	O	O	O	O	O
										E8	E8	E7	E7	E6	E6	E5	E5	E4	E4	E3

Eventually Fatal

5t	10t	20t	40t	10m	20m	40m	80m	3h	5h	10h	20h	40h	80h	5d	10d	20d	---- Not fatal ----

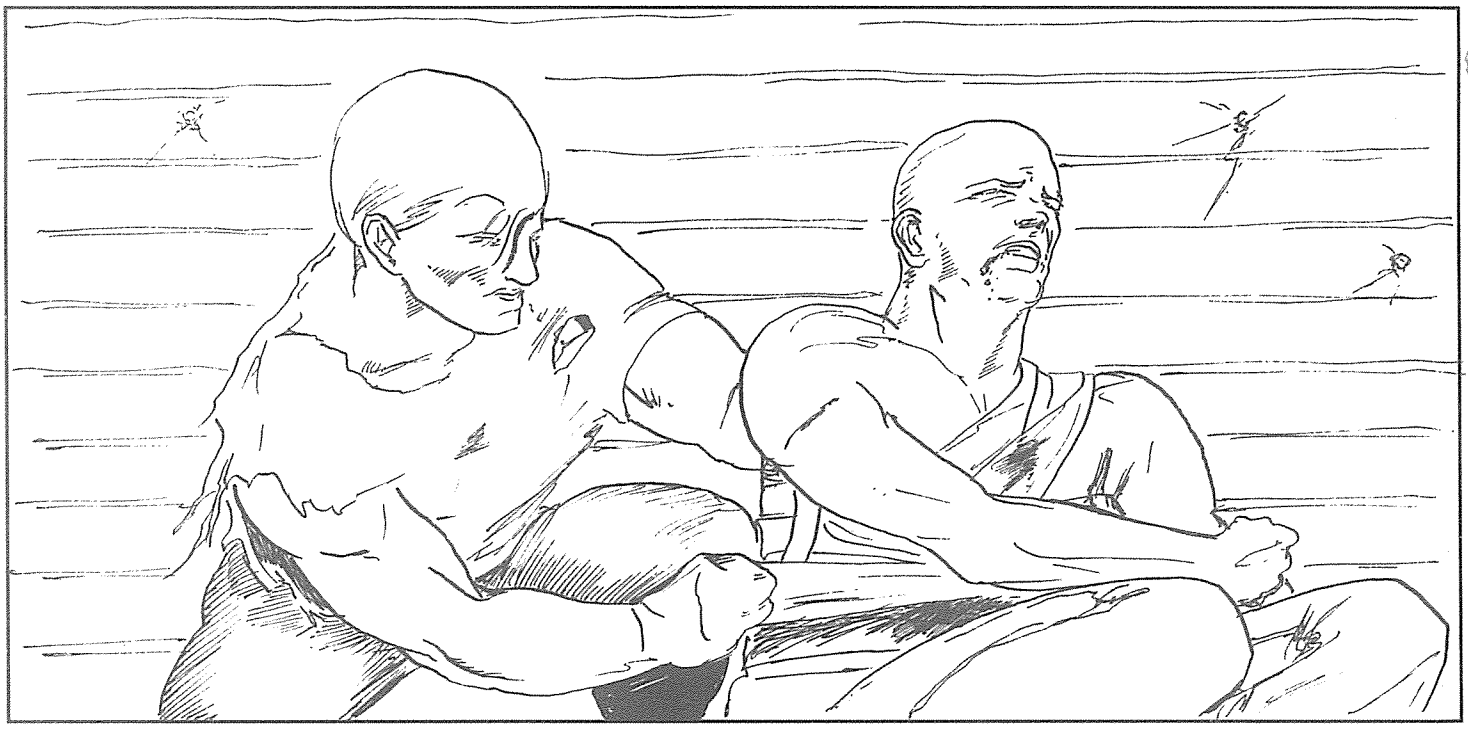
Use of Medical Skills - Medical skills may be needed if a character is wounded or dying. First Aid and Medicine skills will delay the period before death occurs from an eventually fatal result, or prevent the fatal results altogether. If a character with First Aid makes a roll on a dying character, the Eventually Fatal result may be shifted 2 columns to the right for each point the roll was made by. A roll on this skill may be made once per turn. Attempts on severely injured characters (less than 1 turn to live) may be made immediately, with a -10. Further rolls (regardless of who makes them) get a negative modifier equal to the number of tables shifted. If an Eventually Fatal result goes off the table to the right, the treatment given is good enough that the wound is no longer eventually fatal.

Example - A character has their arm badly sliced open during combat, giving an eventually fatal result of 4 minutes (roll of 1 on the 9 column). After 1 minute, the combat is over, and a character with a First Aid skill of 10 tends to the rapidly bleeding injury. They spend 4 times the normal time, or 40 seconds in "preparing" to make a skill roll, which gives them a +4 to their First Aid skill. Rolling 1d20, they get a 6. Since 10 with a +4 modifier is a 12, the roll is made by 6. This means the result is shifted 6x2=12 columns to the right, to the "21" column. Since there is no "21" column, the bleeding has been stopped entirely, and the wound is treated well enough that the character will recover.

If the wound starts in or is modified into the shaded area of the table, The basic injury is beyond First Aid skill and cannot be helped by it. This usually means internal hemorrhaging, organ dysfunction, peritonitis, etc. Medicine skill must be used on such wounds.

A roll on this skill may be made once each 10 minutes. For each point the roll is made by, the result may be shifted 4 columns to the right. Further rolls (regardless of who makes them) get a negative modifier equal to the number of columns shifted. Rolls on Medicine skill are not affected by previous rolls on First Aid skill. There are modifiers to the use of these skills, as follows.

Modifier	Amount
Skill user has complete set of tools appropriate to the use of the skill (Paramedic kit, hospital, drugs)	TL-5
Skill user has basic tools for use of skill	TL-10
Skill user has no tools for use of skill	-10
Skill user has properly trained assistance (cumulative, up to +10)	+5 per
Specialized tools for this injury available	+5
User of skill attempts to perform skill on self (varies with use)	-1 to -20
Double normal time is spent(cumulative, up to +8)	+2



Example - Using the previous injury, an untrained person attempts to treat the injury (First Aid skill of 4). They do not prepare, but instead just roll once every 10 seconds for success. On the sixth roll (1 minute later), they roll a 2. This makes their roll by 2, so the result is shifted 4 columns to the right. The wound still bleeds heavily, but is slowed to where the character will not die for a full hour. Hopefully, the character will get better attention by then.

This system reflects actual situations. An eventually fatal wound can be stabilized, but without modern medicine and surgery, the patient is likely to die quickly of complications. A well trained team works better than a single person.

In the equipment list, first aid or med kits should have two bonuses. One is for the use of First Aid skill, and the other is for Medicine skill.

Healing

Recovery - If a character is injured or impaired, they will need time to recover. Each impairment is treated as a separate wound for healing purposes. A group of small wounds will heal faster than one large one. Check the table below. Cross-reference the impairment and the Constitution of the character. There will be two numbers, separated by a "/". After a period of days equal to the first number, the impairment will be decreased by 1, an impairment of -7 going to a -6, for example. This is repeated with the new level of impairment, the wound gradually healing, and the character gradually recovering full use of the injured part of the body. The number after the "/" is the total number of days it will take for the injury to heal, if you are not keeping track of the gradual reduction of impairment.

For Bruise Point damage, the time given is in hours, not days. For Stamina recovery, use the amount of Stamina points lost as an impairment, with a time increment of 10 minutes of sleep or rest, or 1 hour if the character is in a state of "active" rest, like horseback riding, or any other activity which can be restful, but not enough so that the character can sleep.

Most characters in a hospital with competent medical care can usually be treated as having a Constitution of 20 or better. Outpatient care (treat and release) may be counted as receiving trained medical care, but any sort of adventuring is usually fair or poor conditions, as well.

Example of Healing - A character was involved in a knife fight and received 2 impairments, a -5, and a -3. The Constitution of the character is 10. The impairment of 3 will take a total of 3 days to heal, and the 5 will take 7 days. These impairments heal simultaneously, so after 3 days the first wound would be entirely healed, and the second would be have 4 days left. If the character was engaged in moderate activity, the times would be doubled. If the character stayed in a modern hospital, their Constitution might be counted as a 20, which means the -5 would be entirely healed in 5 days.

To simplify this, you may add up the impairments instead of treating them separately, and quarter(u) the time needed for healing. Using the previous case as an example, the character would now be entirely healed in 5 days. If the character had taken impairments of 1,4, and 6, it would take 8 days for them all to be healed.

	Impairment																		
Con	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20
1	3/3	3/6	4/10	5/15	6/21	7/28	8/36	9/45	10/55	12/67	14/81	16/97	100+	100+	-	-	-	-	-	-
2	3/3	3/6	3/9	4/13	5/18	6/24	7/31	8/39	9/48	10/58	12/70	14/84	100+	100+	-	-	-	-	-	-
3	3/3	3/6	3/9	3/12	4/16	5/21	6/27	7/34	8/42	9/51	10/61	12/73	14/87	100+	-	-	-	-	-	-
4	3/3	3/6	3/9	3/12	3/15	4/19	5/24	6/30	7/37	8/45	9/54	10/64	12/76	14/90	100+	-	-	-	-	-
5	2/2	2/4	2/6	3/9	3/12	4/16	5/21	6/27	7/34	8/42	9/51	10/61	12/63	14/67	16/83	100+	-	-	-	-
6	2/2	2/4	2/6	2/8	3/11	3/14	4/18	5/23	6/29	7/36	8/44	9/53	10/63	12/75	14/89	100+	-	-	-	-
7	2/2	2/4	2/6	2/8	2/10	3/13	4/17	5/22	6/28	7/35	8/43	9/52	10/62	12/74	14/88	100+	-	-	-	-
8	1/1	2/3	2/5	2/7	2/9	3/12	3/15	4/19	5/24	6/30	7/37	8/45	9/54	10/64	12/76	14/90	100+	-	-	-
9	1/1	1/2	2/4	2/6	2/8	2/10	3/13	4/17	5/22	6/28	7/35	8/43	9/52	10/62	12/74	14/88	100+	-	-	-
10	1/1	1/2	1/3	2/5	2/7	2/9	3/12	3/15	4/19	5/24	6/30	7/37	8/45	9/54	10/64	12/76	14/90	100+	-	-
11	1/1	1/2	1/3	2/5	2/7	2/9	3/12	3/15	4/19	5/24	6/30	7/37	8/45	9/54	10/64	11/75	12/87	100+	100+	-
12	1/1	1/2	1/3	2/5	2/7	2/9	3/12	3/15	3/18	4/22	5/27	6/33	7/40	8/48	9/57	10/67	11/78	12/90	100+	-
13	1/1	1/2	1/3	2/5	2/7	2/9	3/12	3/15	3/18	4/22	4/26	5/31	6/37	7/45	8/53	9/62	10/72	11/83	12/94	100+
14	1/1	1/2	1/3	2/5	2/7	2/9	3/12	3/15	3/18	4/22	4/26	5/31	5/36	6/42	7/49	8/57	9/66	10/76	11/87	12/99
15	1/1	1/2	1/3	2/5	2/7	2/9	2/11	3/14	3/17	3/20	4/24	4/28	5/33	5/38	6/44	7/51	8/59	9/68	10/78	11/89
16	1/1	1/2	1/3	1/4	2/6	2/8	2/10	2/12	3/15	3/18	3/21	4/25	4/29	5/34	5/39	6/45	7/52	8/60	8/68	9/77
17	1/1	1/2	1/3	1/4	2/6	2/8	2/10	2/12	3/15	3/18	3/21	4/25	4/29	5/34	5/39	6/45	6/51	7/58	8/64	9/73
18	1/1	1/2	1/3	1/4	2/6	2/8	2/10	2/12	2/14	3/17	3/20	3/23	4/27	4/31	4/35	5/40	5/45	6/51	6/57	7/64
19	1/1	1/2	1/3	1/4	1/5	2/7	2/9	2/11	2/13	2/15	3/18	3/21	3/24	4/28	4/32	4/36	5/41	5/46	6/52	6/58
20	1/1	1/2	1/3	1/4	1/5	2/7	2/9	2/11	2/13	2/15	3/18	3/21	3/24	3/27	4/31	4/35	4/39	5/44	5/49	5/54
21	1/1	1/2	1/3	1/4	1/5	2/7	2/9	2/11	2/13	2/15	3/18	3/21	3/24	3/27	4/31	4/35	4/39	5/44	5/49	5/54
22	1/1	1/2	1/3	1/4	1/5	2/7	2/9	2/11	2/13	2/15	3/18	3/21	3/24	3/27	4/31	4/35	4/39	5/44	5/49	5/54
23	1/1	1/2	1/3	1/4	1/5	2/7	2/9	2/11	2/13	2/15	2/17	3/20	3/23	3/26	3/29	4/33	4/37	4/41	5/46	5/51
24	1/1	1/2	1/3	1/4	1/5	2/7	2/9	2/11	2/13	2/15	2/17	3/20	3/23	3/26	3/29	4/33	4/37	4/41	5/46	5/51
25	1/1	1/2	1/3	1/4	1/5	1/6	2/8	2/10	2/12	2/14	2/16	2/18	3/21	3/24	3/27	3/30	4/34	4/38	4/42	5/47

If a character is active or engages in strenuous activity, they are counted as only healing for 1/3 of a day. If engaged in moderate activity, count as only healing for 1/2 of a day. The table is based roughly on the following formula:

Impairment healed=(Con/10)x(1-(Body Taken/Total Body)).

There are various modifiers to the character's Constitution, as follows:

Modifier	Amount
Poor or unsanitary conditions	-10
Fair conditions	-5
Average conditions (food and rest)	+0
Receiving trained medical care	+Skill
Character in hospital	+5
Tech Level	TL-10

This table is also used to determine time for recovery from Bruise Point damage, or impairments due to exhaustion, starvation, etc. Simply multiply the appropriate time unit for recovery of that impairment by the numbers on the table.

Example - If a character with a Constitution of 10 took a bruising impairment of -15, it would take 64 *hours* to be totally recovered.

Example - If a character with a Constitution of 10 took a -15 modifier to Strength due to Stamina losses, it would take 64 times *15 minutes*, or 16 hours for them to get back to full Strength.

Example - Recovery from drugs is based on 1/10th the maximum effect time. So, a character with a Constitution of 10 who uses a drug that gives them a +5 to Strength and lasts 5 hours, would "recover" it like a -5 impairment, with .5 hour time units, Strength going down instead of up.

Armor Effects

Armor - Any armor worn by a character may reduce the effects of damage to that location. Armor is represented in an x/y fashion, where "x" is the total armor value (AV), and "y" is the amount the armor will stop without any effects to the character. Spaced rigid armor, like a combat suit, usually has a y value equal to x or slightly less, like 40/40. Rigid armor, such as plate, usually has a y value of about half the x, like 10/5. Flexible armor, like mail or a bulletproof vest, will have a y of about one-fourth the x, like 8/2. Use these proportions as a guideline when creating your own armor. *You may use "R" or "F" after an AV as a form of shorthand to denote an armor type, like 10R or 8F.*

When a character is struck by any type of weapon, and the damage rolled, immediately subtract the y value from the damage. Any remaining damage (up to the AV remaining) is counted as damage 2 types higher than originally inflicted by the weapon. Any remaining damage goes straight to the character, having totally penetrated the armor. If the damage type goes above Type V, like a Type IV hit made two types higher, no damage is done.

Example of Armor Use - If a character wearing 10/5 armor took 12 points of Type I damage (say a bullet), it would be worked like this.

First, 2 points would go straight through the armor without being affected. 12 points of damage minus 10 points of armor. This does 2 Body Points and zero Bruise Points. Simple enough.

Second, since the armor is 10/5, 5 is subtracted from the 10 points affected by the armor, leaving 5 points.

This 5 points is converted to Type III damage (two types higher, representing blunt trauma), and the character takes 2BP and 3BR from that part of the hit. Adding in the 2BP and 0BR done by the damage that got through, the total is 4BP and 3BR hitting the character. Without armor, it would have been 12BP and 0BR. Protection is its own reward.

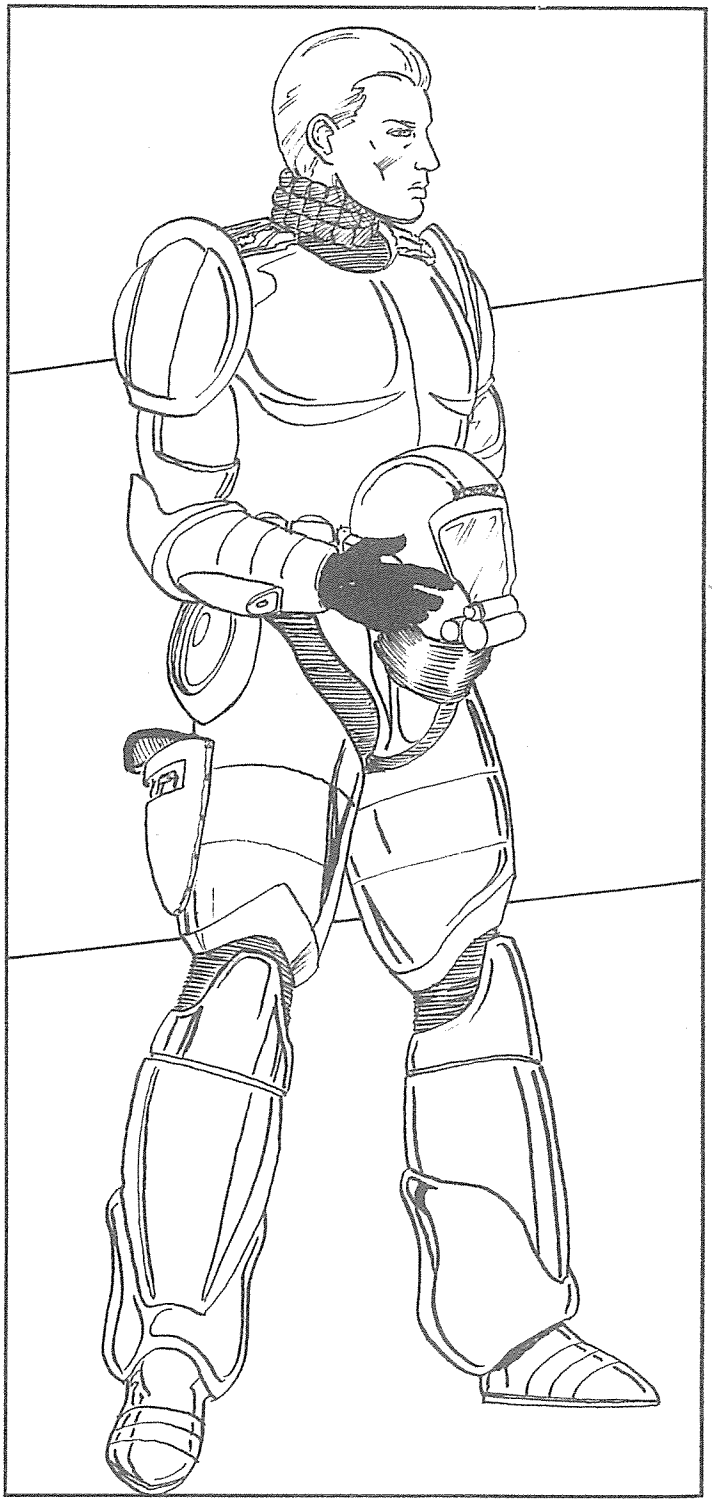
Example of Armor Use - A character with 12/6 armor is hit for 6 points of damage (any type). Since 6 points of damage are stopped directly by this armor, nothing gets through at all, although the character still notices being hit.

Multiple Damage Hits - All damage stopped by armor is assumed to be a blunt instrument for purposes of injuring a character. However, if armor is totally penetrated, what gets through may be damage of a different kind. You may treat the effect as two separate wounds if you wish, like a blunt attack for damage armor stops, and a cutting attack for the rest, as in the case of a sword blow. This is realistic, but it may be too cumbersome for you. *If this is the case, count the type of damage as whatever did the most damage on that hit. In the previous example, 2 points of damage were Type I, and 5 were Type III, so it would all be considered damage from a blunt instrument because the armor stopped more than it let through. If the damage reduced by armor is small (less than 20%) compared to the total damage inflicted on the character, disregard the damage that was reduced due to armor because the effect will be small compared to the rest of the damage.*

Mixed Armor - If a character wears several layers of armor on the same location, you should do the following. Add each part of all the armor values together, to get an overall rating for the combination.

Example - A 4/1 armor worn under a 6/3 armor would have a total effect of 10/4.

You should make sure common sense is applied when this is done. Usually, this means that armors with a higher x/y ratio are on the inside, like wearing ballistic cloth beneath a suit of combat plate.



Armor Materials

Armor Materials - Almost everything a character wears can be used as armor. Below is a listing of some of the different body armor materials that will be common in the high-tech **SpaceTime** universe, or on some of the less developed planets in known space. This listing is repeated on the SpaceTime Aid Sheet.

Armor Material	Armor Value	BP	Mass
Heavy Cloth(Denim)	1/0	2	.04
Thin Leather(Leather Jacket)	2/0	2	.06
Thick Leather(Heavy Boots)	3/0	3	.11
Hardened Thin Leather	3/1	3	.08
Hardened Thick Leather	4/2	4	.14
Quilted Heavy Cloth	4/1	3	.18
Kevlar 29(TL10)*	5/1	2	.06
Pulvar D(TL13)*	7/1	2	.05
Tynweave(TL15)*	9/2	2	.05
Zero-G Composites(TL13)	10/5	3	.15
Ceramalloy(TL15)	14/7	3	.10
Steel Mail(TL5)	10/2	6	1.00
Steel Plate(TL5)	11/5	7	1.40
Face-hardened Steel(TL10)	17/8	8	1.40
Crystaligned Steel(TL13)	20/10	8	1.40
Supercrysteel(TL15)	24/12	8	1.40

* Ballistic cloth gets 1/4(u) its AV vs. thrusts and puncture wounds from sharp weapons.

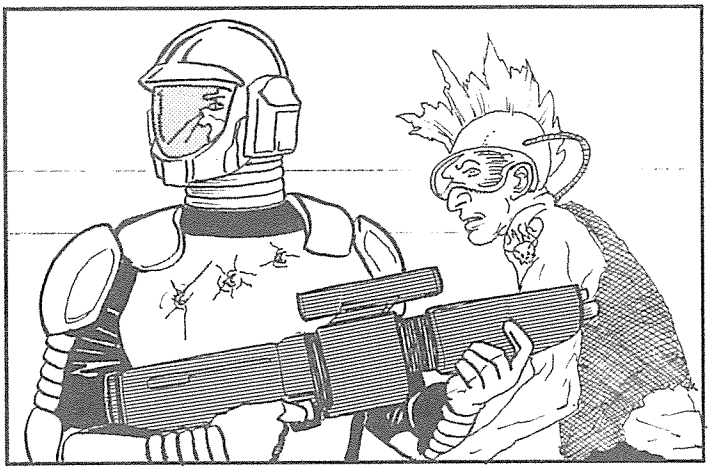
The mass listed is for both sides of a hit location, and the Body Points are for 1 side. Thicknesses up to 5 times greater may be had for any one of these armors, and down to 1/10(d) as great. The AV, BP, and mass are all increased by the same ratio. Armor may be worn at full effectiveness beneath other armor. Both parts of the Armor Value add together.

Miscellaneous Armor Materials - Below is a listing of miscellaneous materials that may crop up in the game as armor, cover, or casualties of a poor shot. The mass given is for an area approximately 15cmx15cm. This is about the area of a single hit location, but the mass given only counts for 1 side.

Armor Material	Armor Value	BP	Mass
Light wood, 15mm	1	1	.17
Heavy wood, 15mm	2	2	.27
Dirt, 25mm	3	1	1.25
Granite, 10mm	3	1	.60
Ice, 25mm	4	1	.51
Cement, 10mm	3	2	.51
Glass, 5mm	1	1	.29
Water, 40mm	1	-	.90
Aluminum Alloy, 4mm	8	7	.24
Steel, 4mm (TL5)	11	7	.70
Bulletproof Glass(TL11), 4mm	7	6	.35
Bulletproof Glass(TL13), 4mm	9	3	.25
Bulletproof Glass(TL15), 4mm	11	2	.20
Street Sign	4	3	.20

Armor Attrition - Even the best armor can be battered and hacked to pieces with time. If a location of armor is done damage, its AV is reduced by 1/2(d) of the fraction of Body Points that are done.

Example - A 7/3 armor with 6 Body Points per location takes 9 points of damage from a hit. This means that 2 get through the armor entirely. These are applied to the armor as well as the character. The armor takes 2 points out of its 6, or 1/3. Half of this is 1/6, so the AV of that location is now 7-1=6. Beams, bullets, arrows, and weapons which leave small holes will do 1 Body Point to armor if it is penetrated. *To eliminate bookkeeping, the GM may just tell the players that their armor is getting ragged at appropriate intervals and have them replace it or reduce its overall AV. Also, cosmetic damage to armor is readily apparent, showing that characters have been in a fight recently.*



Special Armors - With the wide variety of weapon types, some armors may be designed specifically to stop one form of attack, and be poor against others. The most obvious example would be lasers. An armor specifically designed to reflect laser fire might be nothing more than a reflective layer mounted on paper-thin plastic. This would be virtually useless against any physical attack, but have the advantage of very low weight. Armors in **SpaceTime** are assumed to affect all attacks on a relatively equal basis. If you design your own custom armor types, it is suggested you use terminology that is easily interpretable by the standard nomenclature.

Example - For instance, 1/1(10L) might be a 1/1 armor that stops the first 10 points of laser hits, or 3/1(20S) might be a 3/2 armor that stops the first 20 points of a stunner.

The exact effects depend on the setting of your campaign, and any special weapon types you make available to the characters.

Armor vs. Speed - This is covered fully in the Encumbrance section (p.73). Large amounts of armor will reduce the speed of a character. Each 10% of capacity carried over the first 10% is a -2 modifier to Physical Speed. You may wish to say that if the encumbrance is caused by worn armor, the modifier to Speed is a -4 instead of a -2. especially for arm and leg armor.

Movement/Travel

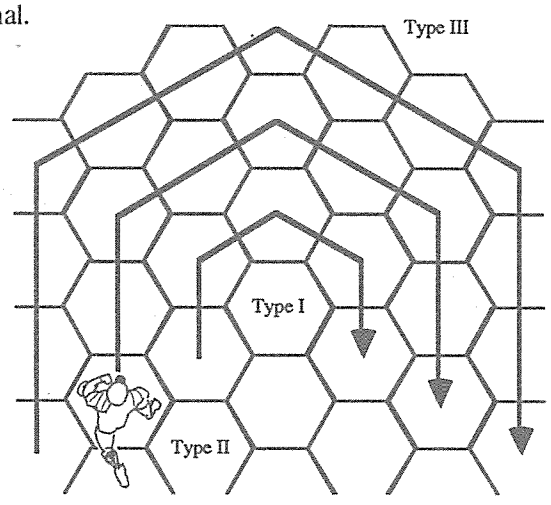
Foot Movement - A person on foot can cover about 1m/sec at a normal walk, or roughly 30 kilometers in 8 hours. Type I movement is any movement of up to 2 meters per phase. A Stamina roll should be made after each half kilometer travelled. If failed, Stamina is reduced by 1 point. As this slowly subtracts from Stamina, mark the reduced levels on the character sheet. Each time the roll is made, it gets a cumulative -1 modifier that is not reset until a roll is failed.

Example - After a half kilometer of walking, a character makes a Stamina roll. The roll is successful, meaning they suffer no effects of exertion. After another half kilometer of travel, the character makes another Stamina roll. This one takes a -1 modifier to reflect the previous effort. If made, the character still feels no exertion effects, but the next roll will get a -2. If the roll is failed, the character takes a -1 to all Attributes affected by Stamina loss.

Jogging is Type II movement, and is any movement greater than 2 meters and up to 5 meters per phase. A Stamina roll should be made after each 100 meters travelled at this rate, with the previous modifiers applying.

Flat out running is Type III movement and is any movement greater than 5 meters per phase. A Stamina roll should be made after each phase of movement at this rate, with the previous modifiers applying. A character's maximum running speed is 9 meters per phase, modified by running skill (p.35).

Turn Modes - A moving character can make a 60 degree turn every hex equal to the type number of their movement. Type I can turn in every hex, Type II in every other hex, and Type III in every third hex. If using Type I movement, the turn may be to any facing. Tighter turns may be attempted, but the character may fall unless a Dexterity roll is made with a -3 modifier per each hex tighter than normal.



Belly Down - A character may crawl along on their stomach at the rate of 1 meter per 3 phases. The character will be treated as prone for combat purposes.

Crawling - Crawling along on hands and knees can cover 1 meter per phase. A character will be treated as prone for combat purposes while doing this as well.

Changing Position - Going from one position (prone, kneeling, upright, etc.) to another takes a full phase to do, and any combat action attempted on that phase is counted as hip firing.

Creature Movement - For creatures which have different movement rates than humans, Type I movement is up to 1/4(u) of top speed, Type II is up to 1/2(u), and Type III is up to full speed.

Hazardous Ground - This would be loose gravel, wet leaves, or any slightly slick surface. A Dexterity roll must be made each phase Type III movement is used on a turning maneuver. All other Dexterity rolls get a -2 modifier.

Dangerous Ground - This is ice, deliberately slicked terrain, or any surface where slipping is very easy. A Dexterity roll must be made each phase of movement, and all other Dexterity rolls get a -5 modifier.

Acceleration and Deceleration - A character may accelerate up to 3 meters per phase, and decelerate up to 6 meters per phase. The movement each phase is after acceleration or deceleration.

Diving Rolls - A diving shoulder roll must be done in the direction the character is moving. The distance covered before landing is equal to 1/2 the velocity of the character, and the character will stop in the hex after that. The character will retain the velocity they had at the start of the dive. In order to complete the roll, a Dexterity roll should be made with a -5. Catfall skill may be used as a positive modifier to Dexterity. A character is at a -6 to be hit by projectiles or energy while in a diving roll, and cannot use weapons.

Falling - If a character falls, they may take damage. The Damage Level a character takes from a fall is determined from the following table.

Height(meters)	Damage Level
0-2	1d10-8
3	1d6-4
4	1d4-1
5-6	1+1d2
7-8	1+1d3
9-10	2+1d4
11-13	3+1d6
14-17	4+1d8
18-20	5+1d8
21-25	7+1d8
26-30	10+1d6
31-40	12+1d6
41-50	14+1d6
51-60	16+1d4
61-70	18+1d2
70-100	20
100+	20+

Damage from falling will be to one area of the body per Damage Level the character takes, so a character falling 5 meters might get two hits at a Damage Level of 2, or three hits at a Damage Level of 3. A character who makes a Catfall skill roll can choose the areas. A character who fails must make a Dexterity roll with a *positive* modifier equal to the Damage Level to do so. Each area will take the Damage Level result as damage from a blunt instrument. Damage taken will be both in BP and BR. Different surfaces will modify the effective height. Hard ground will be a +5 modifier, rocky ground a +10, soft ground a -5, deep mud a -10, and deep water a -18.

Jumping - A character can jump a horizontal distance in meters equal to ((3x(Velocity+Speed)-BP)/10)+1 meters, plus or minus 1d20 centimeters.

Example - A character moving 8m/sec, with a Speed of 10 and 30BP will be able to jump 3.4 meters, plus or minus 1d20 centimeters.

If the landing point is lower, the amount it is lower may be added to the distance (up to 3 meters). If over 1.5 meters lower, a Dexterity roll must be made to avoid a fall. If the landing area is higher, the distance jumped is decreased by 3 times the height difference. The base distance also gets a -1 modifier for each point of Strength used in carrying. A character may jump vertically a distance of 1/10th their horizontal jump, or (3x(Velocity+Speed)-BP)/100+.1 meters, plus or minus 1d10 centimeters.

Example - Using the numbers from the previous example, the character would be able to jump up .35 meters, plus or minus 1d10 centimeters.

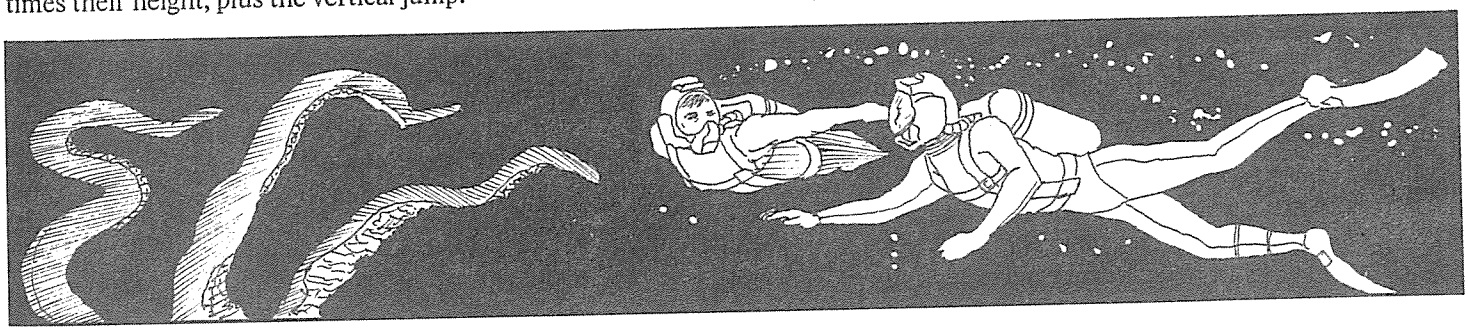
The maximum height a person can reach with their hands is 1.5 times their height, plus the vertical jump. The highest vertical obstacle you can throw your body over is .6 times their height, plus the vertical jump.

Water Visibility - Visibility in water is strongly situation dependent. Visibility can range from 70 meters in clear water to virtually zero in muddy rivers or swamps. The GM should decide a reasonable amount, based on current conditions, with random occurrences of better or worse visibility. Visibility can drop very quickly, especially if there is a lot of activity to stir up sediments, etc.

Foot Movement - Up to .1 meters of water depth, there is no speed reduction to running, but the area is treated as Hazardous Ground. Up to .5 meters, each .1 meter of depth will be a -2 modifier (*or -1 meter per phase, whichever you prefer*) to running speed. From .5 meters to chin level, each .2 meters will be a -1 modifier (or -.5 meters per phase) to running speed, but running speed will never drop below 1 meter per 2 phases. Note that the modifiers for depth are based on a "normal" human. Short or tall individuals will be affected more or less.

Breath Holding - A character may hold their breath for a number of actions equal to (Stamina+Willpower)x4, plus 1d10. Use the current levels of the Attributes. The 1d10 is rolled secretly by the GM. If the character exceeds the amount of time, a Willpower roll must be made each phase, with a cumulative minus of the actions used after the time limit. If this roll is failed, the character passes out and may drown.

Resting counts as 1 action, swimming as 3 actions, and any strenuous underwater activity as 5 actions. A scuba tank or rebreather will work for about 5000 actions at TL10, +1000 per TL after that. A TL10 scuba tank is good for about a half hour of swimming. For longer duration, more than one tank can be carried, depending on the Strength of the character, with a maximum tank weight of the character's lifting capacity.



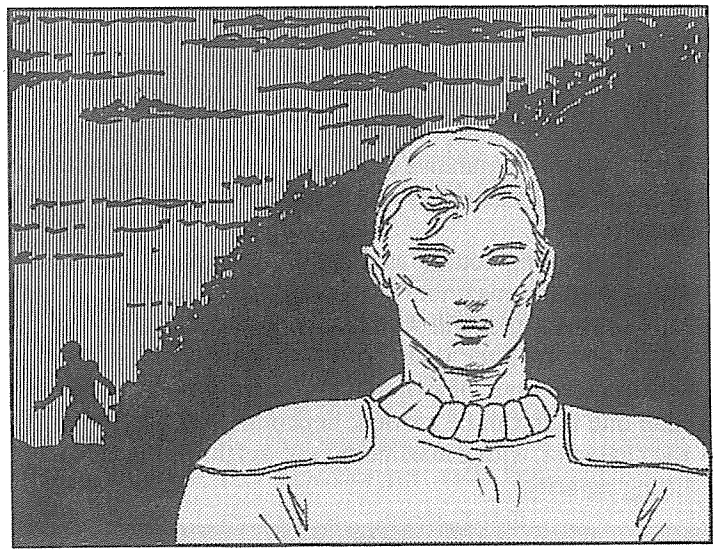
Water Movement - It isn't always on land that problems (i.e. adventures) occur. Characters may find themselves shipboard, or face water-borne perils thousands of kilometers from the ocean.

Swimming - Swimming may be done in water over 1 meter deep, as long as the character is using less than 1/10 their *current* maximum carrying capacity (they sink if using more). Normal swimming speed for humans is 1 meter per phase, plus an extra meter every (20-Strength) phases (count 20 and greater as 19). If the character is fully clothed, the Strength bonus is lost because of the extra drag this creates.

Underwater Encumbrance - Bulky loads underwater are very unmanageable due to the increased drag of the water, but compact ones may be easier to carry. Water has a density of 1. Anything with a density of less than 1 will tend to lift the character. Wood or styrofoam are good examples. This is usually offset by the larger size of such objects. Anything with a density greater than 1 will tend to submerge the character. For purposes of load carrying, many items will be "lighter" when underwater. The amount lighter depends on the density. Steel, with a density of about 7, would be 1/7th lighter. Stone, with a density of about 2, would weigh 1/2 as much, etc.

Lights/Equipment

Light - The level of light available will have an effect on Perception, Skills, and combat. For game purposes there are 4 light levels: Daylight, Twilight, Night, and Total Darkness. Daylight is the equivalent of normal daytime conditions, or a well lit room. The ambient light level is high enough that everything can be clearly seen. Twilight is the level you would have during a very overcast day, shortly after sunset, or in a dimly lit bar. Sight Perception rolls get a -4 modifier in Twilight, as do skills affected by dim light levels. Night conditions are equivalent to those found after sunset on a clear night, and is the equivalent of starlight or some moonlight. A room illuminated only by twilight would count as having this level of light. Sight Perception rolls get a -8 modifier, as do skills affected by the lack of light. Total Darkness is just that, and is equivalent to being in a cave without a light. It is dark. Sight Perception rolls cannot be made, and skills affected by lack of light get a -15 modifier. These are general guides. If you want something between Total Darkness and Night, feel free to extrapolate.



Artificial Light Sources - Most characters will quickly gain access to vision enhancement equipment, which will negate darkness penalties, but there may be situations where they need some low tech means of seeing in the dark.

Torch/Lantern - A torch or lantern will provide Twilight equivalent out to 2m, and Night out to 5m.

Flashlights - The range of a flashlight depends on its size and TL. In general, they project in a 30 degree cone, which for a certain distance provides Daylight illumination. Out to three times this distance it provides Twilight illumination, and Night out to three times the Twilight range. So, a flashlight on the equipment list might have a rating of 6/18/54, meaning that you could make Perception rolls vs. anything in the beam out to a range of 54 meters.

The illumination from area lights drops off the same way, but for the same light source is only 1/3 as efficient. So, if the previous flashlight could be made area effect, it would be 2/6/18 instead of 6/18/54.

Any flashlight will act as a Twilight area light for a radius equal to its Daylight rating to account for scatter from the beam.

Equipment - Your average character is not comfortable unless they have a team of Sherpas to carry everything they think they might need. Extreme examples of this are things like sword caddies (Hmmmm, a giant. Nebish, hand me the +5 Sword of Giant Cleaving). The GM should *always* make sure the characters have enough capacity to carry all the items they say they have, with "accidents" to take care of excess strongly recommended. Almost any piece of equipment you can think of can be obtained in **SpaceTime**, either through application of money or kinetic energy. There are two different formats for equipment. These are for normal items, and clothing/armor. These categories should cover most of the character's needs. Not all of the spaces on a format may be used, depending on the specific item. If an area is unused, place a dash through it.

Equipment Format - This is the format used for most kinds of equipment.

#	Name	Range	OL	Cap	AV	BP	Mass	Sz	TL	Cost
4	Pocketcom	Pow 1	100hr	P-1	2	2	.30	S	13	500

- Item number, for easy reference.

Name - Name of item.

RG - Range of item under ideal conditions, for lights this is for Daylight/Twilight/Night. Radios will have a Pow x rating. The range of the radio in km is the Pow of the transmitter times the Pow of the receiver. Example: A Pow 2 wrist communicator and a Pow 100 vehicle radio would be able to communicate up to 2x100=200km.

OL - Operating life of item in normal use. This could be how long a lantern burns on a charge of oil, or how long a radio will run on one set of batteries. Many high-tech items last indefinitely due to low power consumption or solar cells, and have an "∞" here.

Cap - If item has a limited operating life, this is what the item uses for power, and how much is required for a full charge.

AV - Armor Value of item.

BP - Body Points of item.

Mass - Mass of item in kilograms.

Size - The size of the item for carrying purposes. A /n means that the item covers n locations.

TL - The Tech Level needed to manufacture the item, or when it first saw common use.

Cost - The cost of the item in credits.

Notes - Additional information about item. This will include information not covered by the other parts of the format.

Electricity - Items that use electricity will be common any world where the technological level has reached the equivalent of our own 1920's or better (TL9). Electrical sources are not standardized across the worlds, or even in the same one, so what can be plugged in at one place will probably not work at another. To counter this, many planets manufacture "planet" and "export" versions of an item. The planetary version is designed to work using the common

power source on that planet. The export version has a built-in power converter, which will take whatever power is fed in, and convert it to something the device can use. This usually makes the item cost about 25 percent extra, but has no appreciable effect on other stats. Universal power converters may also be bought. You plug the converter into the wall, and the device into the converter. This is cheaper in the long run, but a little more bulky.

Electrical Item Format - Electrical items will have their power requirements listed under "Capacity". There will be a number, the letters "A" or "D", and another number.

Example - A TL11 home computer might have a rating of 120A1.

The first number is the voltage requirement. Any voltage within 10% of this will work. The letters show the type of current needed by the device, "A" representing alternating current, like we get from wall outlets, and "D" representing direct current, like that from a battery or battery charger. The last number is the current required by the device in amperes, or amps. Batteries are rated in the same way, but the last number is the total number of amps per hour they can generate before being discharged. Batteries cannot be AC, nor can they be discharged in less than 10 minutes. Weights given for an electrical item *do* include the power source if batteries. Batteries are fairly standardized, and a number of smaller batteries can almost always be substituted for a larger one. If you add voltages, you average the current, and if you add currents, you use the lowest voltage.

Example - A battery with a rating of 10DC5 would generate 10 volts. A device with a power requirement of 10DC1 would run for 5 hours (5/1) off of this battery. This battery could be replaced by any number of smaller batteries whose voltage equaled 10. The total capacity might be less, however. If it was only 10DC4, the device would only run for 4 hours (4/1) off of the smaller batteries.

Clothing Format - This is the format used for clothing and armor.

#	Name	Locations	AV	BP per loc	Mass	TL	Cost
2	Hvy. gloves	Hands	3/1	2	.30	11+	20

- Item number, for easy reference.
Name - Name of item.
Loc Covered - Locations covered by the item.
AV - Armor Value of item.
BP per Loc - Body Points of item per location.
Mass - Mass of item in kilograms.
TL - The Tech Level of the item.
Cost - Cost of item in credits. This is at the TL of manufacture. Obsolete items may be less, but supply and demand may push up prices on obsolete equipment if nothing better is available.
Notes - Additional information about the item. This will include information not covered by the rest of the format.

Equipment Damage - Equipment is given an Armor Value and Body Points. The first represents the amount of abuse the item can take without being damaged, and the second is how much damage it can take before breaking. When equipment loses Body Points, it may either be reduced in capacity, break, or both. What happens is dependent on the equipment. A radio might break, but binoculars might still be useful if only one half is damaged. The chance of a failure of some sort is a roll on 1d20, the number needed being the modifier found after finding the BP taken on the same column as the total BP.

Example - If an item took 5 BP out of 10, it would be half damage, and the number on 1d20 or less would be a 10. For easy fractions like 1/2, 1/4, etc., just roll a smaller die, or figure it out in your head, like a 1 on 1d4 for 25% damage, or a 1 or 2 on 1d6 for 33% damage.

Normal items will automatically break after taking 1/2(u) of their BP. Equipment worn on the body acts as armor, but no damage gets through until the item has lost all its BP on one location (in most cases).

Example - A character is struck by a bullet in the left hip. Fortunately, their radio was there, and is struck first. If the radio has an AV of 3, and 2BP, 5 points would be subtracted from the damage that strikes the character. The radio would be totally destroyed.

Equipment Bulk - Equipment, gear, weapons, etc., come in various sizes. The listed Chance to Hit is the chance in 20 that the object will be hit *if the location it is worn on is hit*. The Mass is the approximate mass of a random item with this bulk. Examples of equipment bulk are given below.

Bulk	Example	Chance to Hit	Mass
Very Small(VS)	Penknife	4	.1kg
Small(S)	Shoe, dagger	8	1kg
Medium(M)	Typewriter	14	5kg
Large(L)	Chair, Tire	18	20kg
Very Large(VL)	Sofa, person	-	100kg
Ext.Large(EL)	Compact car	-	500kg
Huge 1(HG1)	Truck	-	2000kg
Huge 2(HG2)	Large Truck	-	4000kg
Huge 3(HG3)	Tractor-Trailer	-	20000kg

Each size increase is roughly four times the size of the next smallest level. So, four VS items equal one S item, etc. This doesn't always apply, and exceptions should be made for especially compact or bulky items in a size range.

Equipment Accessibility - Equipment stashed in packs, pockets, etc., will take several seconds to get at. To get at any item worn on the belt or outside of clothing takes a phase. To get at items in pockets, boots, etc., takes 2 phases. Items that require elaborate work to get at, such as inside winter clothing, will require 3+1d3 phases to get at. Items in a pack require 6+2d3 phases to get at, unless specifically placed for easy access, when they will take 4+1d2 phases. Using these guidelines, the GM should be able to make consistent and reasonable times to get at other things.

Encumbrance/Repair

Encumbrance - Up to 10% of carrying capacity may be carried with no effect on movement or combat. Carrying capacity is Strength squared in kilograms, and assumes a load that is evenly distributed and fairly compact. Carrying 10% of your capacity in ping-pong balls would not weigh you down, but would take up so much space that you would be ineffective doing anything else. A dead weight such as a carried person will be more encumbering than an equivalent weight in a good backpack. Each 10%(u) of your carrying capacity after the first is a -2 modifier to Speed. This cannot be lowered to below 1. Each 10% is also a -2 modifier to running speed (*This is usually 1 m/sec*). Skills are not directly affected, but may be affected because of the off-Phase penalty on actions. The character will get fewer actions without a minus, and the minus will be larger when it does occur.

Repair - Damaged items can be repaired with the appropriate Repair skill. The appropriate Repair skill is averaged(u) with the skill for operation of the equipment. For a car, this would be Mechanical Repair and Automobile Driving. A grav car might be Electronics and Hovercraft skill. The average is the chance of effecting a repair. You can go for a jury-rigged repair, a normal repair, or a detailed repair.

A jury rigged repair means that a successful repair brings the item to barely functional condition. If a 1 is rolled on 1d20 each time it is used, it will break again. 1 is added to this roll per use.

A normal repair covers only the damaged areas and little or no cosmetic repair will be performed. If the repair is successful, 1/2(u) of the BP of damage will be restored. If the roll is failed, further attempts may be made, each one getting a positive modifier of +2.

A detailed repair is a complete overhaul of the device, complete with cosmetic repair. If the repair is successful, 90%(18 out of 20)(u) of the damage is repaired. Successive attempts are as for a normal repair.

If the fraction of BP left or greater is rolled on the repair roll, the item needs spare parts for the repair, and cannot be repaired with tools alone. The exact parts needed are found out after 1/10 the time is spent on the repair.

Example - If an item with 20 BP took 4 in damage, it would have 16 left. If the repair roll is 16 or greater, the repair will require spare parts and cannot be performed solely by tools. If the item originally had 10BP, 4 out of 10 equals 8 out of 20. So, if the repair roll was 12 or better, parts would be needed.

Repair Time - Repairs can take time. This can be an excuse to stay somewhere, for the GM to keep characters in a given area, or an unpleasant delay when you would much rather be somewhere else.

The time in minutes for a repair will be:

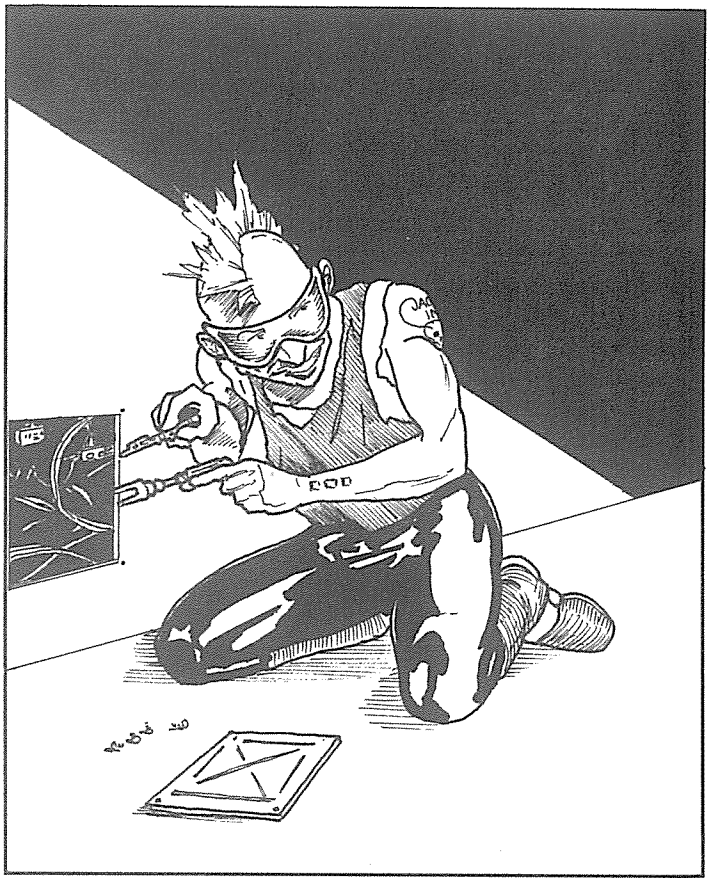
$$4x(\text{BP lost})x(\text{AV of item})^{.5}x(\text{Complexity of item})$$

The complexity of the item depends on its overall design, or more particularly, the parts that are broken.

Non-mechanical	1	Electrical	2
Simple mechanical	2	Electromechanical	5
Regular mechanical	3	Electronic	6
Delicate mechanical	4	Miniaturized	10

Jury-rigged repairs take 1/4(u) this time, normal repairs take this amount of time, and detailed repairs take twice this amount of time. The time may be divided by up to 3 if multiple people are working on the repair.

Example - An item that has a complexity of 3 (a pistol) is being repaired. It has lost 2BP, and originally had an AV of 9. The time in minutes between repair rolls will be 4x2x3x3, or 72 minutes (1.2 hours). This time might be modified by the tools available and the number of people helping. Now, if your gunsmith charges 40Cr per hour, you may rack up quite a bill, especially if he fails a roll or two. The repair might require welding and machining, as well as lots of parts and fine tuning. In a modern setting, a new gun is probably in order. Parts replacement will reduce the repair time by up to 3/4, *after* you get the parts.



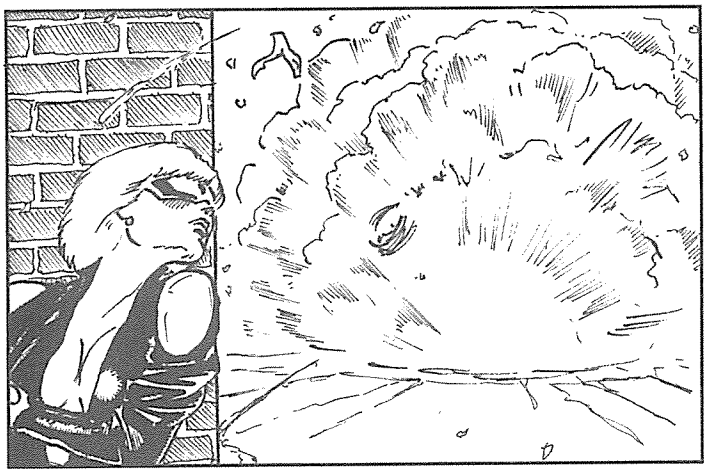
Tool Kits - Tool kits may be bought for just about any type of repair, ranging from a general mechanical tool kit, to specialized kits designed for a specific skill and specific use (the Tori Maxifusion II reactor repair and maintenance kit...) It is up to the GM to determine the exact stats of a tool kit a character wants, balancing size, capability and cost.

Explosives

Explosives - This section covers explosives, explosions, and other similarly nasty things that the characters will want to get their hands on for increasing the local entropy quotient.

Explosive Damage - Explosives are rated by the amount of damage .1 kilogram can do. There will be 2 Damage Values, one for blast effect, and another for fragmentation effect (if any). Full effect of the explosion is felt in the hex of detonation. Each hex further out for the next 4 hexes will halve the DV, then every other hex for the next 8 hexes, then every third hex for the next 12 hexes, etc. The DV is rounded down and is Type III damage. Any damage that is explosive in nature will have an "E" after the DV. An example of drop-off with range is below. The initial explosion has a DV of 1000E (roughly 6.7 kilograms of TNT).

Range(m)	0	1	2	3	4	6	8	10	12	15	18	21
Damage	1000	1000	500	250	125	62	31	15	7	3	1	0
Av.Body	275	275	137	68	34	17	8	4	2	1	0	0



Damage Allocation - Damage allocation from explosions uses the Whole Body Table. The average AV of the character is used to protect from the blast. The average AV is the total of the AV on each location, divided by 30.

To reflect the sometimes fickle nature of explosions, the GM should allow severely injured players the option of a 1d20 die roll. Subtract this from the Damage Level the character takes, and add 5. This will usually (but not always) decrease the damage done.

Deafening - Any explosion may temporarily deafen a character. The Damage Level the character takes is counted as an eventually fatal result. The time gotten from this is the amount of time the character is deafened by a blast. If the character takes any damage whatsoever, the minimum effect is an E0 result. The net result of this deafness is that the characters eardrums may have been damaged, and all Perception rolls based on hearing get an automatic -15. The effects will start to wear off after the time has elapsed, the Perception modifier going down by 5 each time period equal to the initial period of deafness.

A good way to simulate a character's deafness is to make the "deafened" player unable to communicate with the other players, except by hand signals etc. The player could be forced to wear earplugs, or leave the room until everyone else is done planning.

Blast Knockback - A reasonable explosion will throw a character back from the force of the blast. The character will be knocked back a number of meters equal to the DV at the character with a -18 modifier. Kneeling characters will be thrown 1/2(d) this distance, and prone characters 1/10(d) this. Treat such knockback as a fall from an equivalent height.

Explosive Types - Several different types of explosives are listed below, with all information that should be needed for use in play. It is strongly urged that players limit their fascination with explosives to the characters.

Explosive	TL	DV(.1kg)	Detonation Ease	Sensitivities
Black Powder	5	2E	5	Flame,sparks
Dynamite	8	11E	12	Severe shock
Plastique	9	14E	17	Nothing
Pulverite	13	18E	20	Nothing

Black Powder - The oldest of explosives, its use dates back over a thousand years in China. In Europe, one of the first recorded uses was at the battle of Crecy in 1346. Black powder must be in an enclosed space to have an explosive effect, otherwise it will just go "POOF!". This may be useful at night for temporarily blinding an enemy, especially if mixed with an equal part of powdered magnesium. Black powder is sensitive to any type of sparks or flame. The necessary ingredients can be found or refined nearly anywhere on a habitable planet.

Dynamite - Dynamite is a stable form of nitroglycerin, made by absorbing it into charcoal, diatomaceous earth, sawdust, or anything that can totally absorb it. Old dynamite may start to sweat out pure nitroglycerin (Detonation ease=2), with predictable consequences.

Plastique - Plastique is a common high explosive from TL9 to TL12. It or similar compounds are used for a wide variety of commercial and military applications. It is made from TNT or other explosives, with plasticizers added to make it more malleable.

Pulverite - This is a generic name for any high explosive more powerful than currently available. Its manufacture is probably complex, but not beyond the capabilities of a determined individual. It is probably restricted to military use.

Detonators - Detonators are usually metal tubes about the size of a person's little finger. They are most likely designed to be set off with a fuze (up to TL8) or electricity (TL9+). A detonator will have an efficiency from 1 to 20, and if it goes off while touching a character, will have a DV of 1/2 this amount (Type III). This is sufficient to remove fingers in a lot of cases.

Detonation Ease - If the sum of the detonator efficiencies used on a charge is equal to or greater than the Detonation Ease, the charge goes off. Otherwise, it doesn't, and the detonators are lost. Explosives may be detonated by accident. If an explosive is sensitive to an attack, it will go off if it takes 1/2 the Detonation Ease in BP. If not sensitive, it must take 3 times the Detonation Ease before it will go off. The damage must be done in 1 phase. This is a general rule, so use your own judgment. For instance, any flame applied to black powder will probably set it off.

Grenades - Grenades are small explosive charges designed to temporarily or permanently incapacitate an enemy. In the former case, they are simply a small explosive charge, perhaps with enhanced sound and/or flash. In the latter case, the explosive is surrounded by thousands of tiny fragments. These cause serious wounds close in, but slow rapidly, and have low damage potential past 20m. Exceptions are low-tech grenades, which may break into large fragments, which retain lethality up to several hundred meters.

Below are grenade stats. Assume each masses .30kg. The number of fragments is *per target*, and *each* has the listed DV (Type I). Each fragment rolls for hit location.

TL8-TL9 Grenade

Range	0	1-3	4-10	11-25	26-50	50-200
DV	83	65	48	36	28	23
Average	46	36	26	20	15	13
Frags	3d4-2	2d4-2	1d4-2	1d4-3	1d6-5	1d20-19
Expl.	23E	11E	1E	1E	0	0

TL10-TL12 Grenade

Range	0	1	2	3	4	5	6-9	10-14	15-20
DV	62	60	56	50	42	30	15	8	3
Average	34	33	31	28	23	17	8	4	2
Frags	12d6	8d6	4d6	4d3	3d3	2d3	1d3+1	1d3	1d2-1
Expl.	18E	9E	4E	2E	1E	1E	0	0	0

TL13-TL14 Grenade

Range	0	1	2	3	4	5	6-9	10-14	15-20
DV	80	75	70	60	50	35	25	15	4
Average	44	41	39	33	28	19	14	8	2
Frags	12d6	8d6	4d6	4d3	3d3	2d3	1d3+1	1d3	1d2-1
Expl.	24E	12E	6E	3E	1E	1E	0	0	0

TL15 Grenade

Range	0	1	2	3	4	5	6-9	10-14	15-20
DV	100	90	80	70	60	45	30	20	8
Average	55	50	44	39	33	25	17	11	4
Frags	12d6	8d6	4d6	4d3	3d3	2d3	1d3+1	1d3	1d2-1
Expl.	30E	15E	7E	3E	1E	1E	0	0	0

Improvised Grenade

Range	0-1	2-3	4-5	6-7	8-12	13-20	21-40
DV	40	30	20	15	12	6	3
Average	22	17	11	8	7	3	2
Frags	3d6	2d6	2d3	1d3	1d3-1	1d6-4	1d8-7
Expl.	55E	25E	6E	2E	0	0	0

Grenade Use - Once in hand, a grenade takes 2 phases to use: 1 to pull the pin or light it, and 1 to throw it. Grenades use Improvised Hand Weapons skill or any skill with thrown objects in general. For each point the roll was missed by, the grenade will be off by the distance to the target modified by that amount. Roll 1d6, 1 being towards the throwing character and going clockwise. The grenade will go off in 4 phases if a regular grenade, or in a amount of time specified by the user if an improvised charge with a fuze.

Tossing Them Back - If a grenade can be reached and grabbed before it goes off, the character with it can toss it away in a random direction like any other thrown object. If the character wishes to designate a target, this takes an extra phase. Feel lucky?

Stun and Flash Grenades - Stun grenades will have just the explosive effect of a grenade of that TL. This will usually incapacitate a person at close range, and can seriously injure them. Apply all damage twice if the grenade goes off in an enclosed space. Flash grenades will temporarily reduce a character's sight Perception, like being blinded by a laser sight (p.47), with the addition that if the character can make a Willpower roll with a -10, they take no effects (they avoid instinct, and look *away* from an incoming object). Flash grenades will affect anyone within the explosion radius.

General Fragmentation - Fragmentation weapons are given a Fragmentation Effect (FE). The FE equals the DV of the fragments, and 4 times(u) the number of fragments. The FE is cut in half at a range of 4 hexes, then again at 9, 15, 22, 30, etc. The number of fragments that hit is rolled like a Damage Value, the number of Body Points done instead being the number of fragments that hit.

Example - A FE of 40 means each fragment has a DV of 40I, and there are 1d10 fragments. At a range of 4 hexes, the DV would go to 20I, and the number of fragments to 1-5, etc.

In general, the DV of fragments does not exceed 100. So, a higher FE than 100 will cover a larger area, but the DV of individual fragments will probably not exceed 100.

Cover vs. Fragmentation - Cover may shield some or all of your body from fragments. Cover must be completely penetrated before the character is hit, and then only remaining damage is applied against the character. One part of the body may be used to shield another. If the shielded location is rolled, it has a 16 in 20 chance of protecting the location it covers. Position will reduce the number of fragments that hit as though it were an explosion.

Cover vs. Explosions - Squatting or kneeling will modify the DV of an explosion by -2, going prone by -5. Cover will subtract its AV from the explosion strength, but only to a maximum modifier of -16. If the cover is totally destroyed by the explosion, it will have an FE equal to the DV of the explosion with a -15 modifier, like hiding behind a wooden wall that is reduced to splinters.

Shaped Charges - A shaped charge will have its full DV only over the area covered by the charge. In all other directions it usually gets a -18 modifier. A shaped charge will have an "SH" after the DV.

Underwater Explosions - For explosions, the ranges for halving the DV are multiplied by 4, and for fragmentation, divided by 4.

Flame Weapons - Flame weapons are incredibly cruel. Fire as an attack acts differently from normal attacks. The first phase, the fire acts as though all normal armor were 4 times its normal value. Count only the total AV, flame not doing blunt damage. The second phase the armor counts as doubled. The third phase it counts as normal, and every phase after that it is halved, down to 1/16th its normal value. Armors that are flammable will be destroyed when the damage from the fire starts getting through the armor, as for normal armor attrition. If a character is on fire from a flaming liquid, the locations hit take damage every phase, the DV going down by 1 per phase. If the whole body is involved, use the Whole Body table. A flamethrower counts as a DV of 50I. A molotov cocktail has a DV of 8I, and a Flaming Deathwish or other flaming drink has a DV of 4I. Anyone unfortunate enough to inhale flaming liquids or superheated air will shift the damage result 1d10 columns.

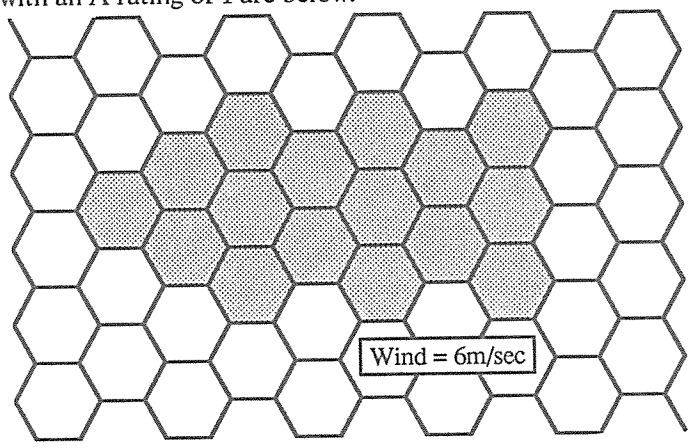
Example - A character is in a fully enclosed environment suit with an AV of 16 when they are hit with a flamethrower. The first phase, the flamethrower does an average damage of 28 points, but the armor of the character is quadrupled to 64, so there is no damage. Next phase, the armor only counts as 32 vs. the damage, and it is getting warm inside. On the third phase, the armor only counts as its normal 16, and so the character takes 12 points of damage over their entire body. And so on...

Gases - Gases are usually designed to cover a large area with a drug or chemical. Gas containers, or gas grenades will have a rating in the form A/B/C, where A is the radius of the area that will be affected and receive 1 dose of the chemical, B is the number of Combat Turns the gas will linger after release, and C is the number of phases the container will release the gas. Normally, 1 dose will be inhaled every 3 phases. At a distance of 1/2 A, it will be 2 doses every 3 phases, and 4 doses at 1/4 A or less.

Example - A tear gas grenade with a rating of 6/10/10 will have an effective radius of 6 meters, with a cloud that will persist 10 Combat Turns, and will expel gas for 10 phases.

If any wind is blowing, the gas will not form a circular area. If there is no wind, the cloud will spread out at 1m/sec until it reaches maximum radius. If the wind is 1 or 2m/sec, the cloud will spread in a 120 degree arc, at wind velocity. A will be multiplied by 3. Between 3 and 5m/sec, it will spread in a 60 degree arc, and A will be multiplied by 5. Between 6 and 10m/sec, it will spread in a 60 degree cone out to a width of 3 meters and stay at that width. A will be multiplied by 6. At wind velocities grater than this, the gas will disperse too rapidly to have an effect unless it is extremely potent.

Gas containers with an "E" in the C area are explosive. The contents will cover a circular area, regardless of wind. This area will move at wind velocity, and 1/2 the wind velocity will subtract from A each phase until the cloud is dispersed. Examples of wind drift for a tear gas grenade with an A rating of 1 are below.



Mines - Mines are generally explosive devices designed either to injure a person or kill a vehicle. Anti-personnel mines will either be designed to attack one character, or a group of characters. The US Claymore mine is a prime example of the latter, as is the German "Bouncing Betty" of WWII fame.

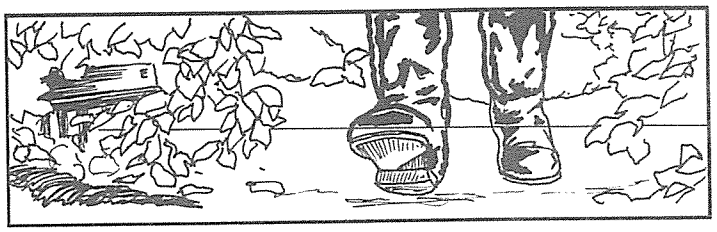
An individual effect mine will probably have a DV high enough to incapacitate the leg of a soldier of that TL. As armor improves, this becomes more difficult. A TL15 anti-personnel mine is a good mine against TL9 vehicles!

An antipersonnel mine is not designed to kill, but injure enough that the victim will need medical help, taking them out of the action, slowing down the rest of the group, and consuming medical resources of various types.

A group effect mine will act as a grenade. If it has a circular effect, it acts normally. If in a 30 degree arc, divide the range to the target by 5 for fragment purposes, and then treat as a grenade.

Example - A character 40m from a directional mine would be treated as being 8m from a normal grenade.

Specialty Mines - Mines are usually cheap, and designed to be used in quantity, but there are special purpose designs available that take advantage of technology, for an extra charge. Options available include adjustable time delays up to several days, replaceable sensor modules for different targets, remote activation/deactivation, harrassment models that go off for the second or third target to pass, etc. Many antipersonnel grenades can have these features as well, and can function in the role of mine or grenade equally well.



Megaforce - This section covers the use of weapons that should be too powerful to let characters (or players) get their hands on. Some items are just too powerful, too powerful defined as something which cannot be defended against. Nuclear weapons are a good example. No level of body armor or skill will protect you from an H-bomb. Megaforce items are potential group-killers and campaign-wreckers, so use them sparingly. On the off chance that such weapons work their way into your campaign, (and because I have a love for weapons of total, random, indiscriminate destruction) rules for such things follow.

Artillery - Anything too big to be shoulder fired is classified as artillery. This includes cannons and anti-tank guns, but not bipod or tripod mounted weapons.

Cannon - Below is a listing for various types of modern cannons, from TL8 (circa 1900) on up. The base DV is always used, and 1 of the other Damage Values may be used. The base is for solid shot(AP), and the others are explosive and fragmentation or cannister rounds. The fourth column is the DV for energy weapons of that TL. All of these weapons use the modern artillery range steps. Average damage will apply in most cases. These are general numbers. Specific weapons and ammo types will vary.

	AP	HE	Frag	Energy
TL8 light	160I	6E	6I	n/a
TL8 medium	480I	50E	65I	n/a
TL8 heavy	1200I	320E	160I	n/a
TL9 light	200I	8E	8I	n/a
TL9 medium	600I	65E	80I	n/a
TL9 heavy	1500I	400E	200I	n/a
TL10 light	240I	10E	10I	n/a
TL10 medium	700I	80E	100I	n/a
TL10 heavy	1800I	500E	250I	n/a
TL11 light	300I	12E	12I	n/a
TL11 medium	900I	100E	130I	n/a
TL11 heavy	2300I	630E	320I	n/a
TL12 light	375I	15E	15I	n/a
TL12 medium	1100I	125E	160I	n/a
TL12 heavy	2900I	780E	400I	n/a
TL13 light	475I	20E	20I	550I
TL13 medium	1400I	160E	200I	1600I
TL13 heavy	3600I	975E	500I	4000I
TL14 light	600I	25E	25I	750I
TL14 medium	1750I	200E	250I	2200I
TL14 heavy	4500I	1200E	620I	5600I
TL15 light	750I	30E	30I	1000I
TL15 medium	2200I	250E	320I	2800I
TL15 heavy	5600I	1500E	780I	7300I

These values may vary depending on nationality, shell type, and gun design. The very high FEs represent huge numbers of small projectiles having a cumulative effect. The maximum DV is never greater than 100I. All of these weapons are usually vehicle mounted, although tripod mounts may be available for light weapons (Use RC4 table).

Firing Artillery - All these weapons are classified as artillery. Here is a list of modifiers to use with these weapons.

Range - Modern (TL8+) artillery will use the following range tables.

Range	1-10	11-30	31-100	101-250	251-500	501-750	751-1000
To Hit	x5	x4	x3	x2	+16	+8	+6
Damage	+3	+3	+2	+2	+0	-2	-2

Range	1001-1250	1251-1500	1501-1750	1751-2000	2001-2250
To Hit	+2	-2	-8	-12	-18
Damage	-4	-4	-6	-6	-6

Range	2251-2500	2501-2750	2751-3000	3001-3500	3501-4000
To Hit	-22	-24	-26	-27	-28
Damage	-8	-8	-8	-10	-10

Range	4001-5000	5001-7000	7001-11000	11001-15000
To Hit	-30	-32	-34	-36
Damage	-12	-12	-14	-16

Target Movement - The relative movement of the target will modify the chance to hit.

0	Target not moving
-2	Target moving 1-5 meters per phase
-6	Target moving 6-10 meters per phase
-14	Target moving 11-25 meters per phase
-30	Target moving 25+ meters per phase

Firer Movement - The relative movement of the firer affects the chance to hit, but to a greater degree.

0	Firer not moving
-4	Firer moving 1-5 meters per phase
-8	Firer moving 6-10 meters per phase
-16	Firer moving 11-25 meters per phase
-30	Firer moving 25+ meters per phase

Size Modifiers - Use the size modifiers for equipment, but subtract 20 from the amount to reflect the coarser targeting of a heavy weapon.

Consecutive Shots - Using the location of previous shots to correct your aim is a cumulative +2 modifier, up to a maximum of +10.

Damage Modifiers - The DV of explosives and shaped charges is not dependent on the range to the target.

Misses - If a shot misses with one of these weapons, it is still going to land somewhere, and where it hits may be important. If so, roll 1d20 on the table below.

Roll	Result
1-7	Hit is in front of target
8-16	Hit is to rear of target
17-18	Hit is to right of target
19-20	Hit is to left of target

The amount the roll was missed by counts as a modifier on the range to the target. Cross-reference the two on the UMC. The result is the magnitude of the miss. Roll 1d6 in the appropriate arc to see exactly which direction the miss is in if necessary.

Example - A 10 was needed to hit, and a 14 was rolled. The roll was missed by 4, so cross-referencing the 10 column with a modifier of 4 gets a result of 2. The distance of the miss is the distance to the target with a modifier of 2. If the range was 1000m, the hit would be off by 100m.

Man-Portable Heavy Weapons - Below is a short list of some of the more common man-portable heavy weapons.

Weapon	DV	IA	Mass/per shot	AV/BP	SZ	Cost
TL9 antitank	1900SH	2	6.0/2.0	6/4	S/4	300
TL10 antitank	2000SH	2	7.0/2.0	6/4	S/4	500
TL11 antitank	2500SH	2	8.0/3.0	6/4	S/4	700
TL12 antitank	3100SH	2	9.0/4.0	6/4	S/4	900
TL13 antitank	3600SH	2	10.0/5.0	6/4	S/4	1100
TL14 antitank	4100SH	2	11.0/6.0	6/4	S/4	1300
TL15 antitank	4600SH	2	12.0/7.0	6/4	S/4	1500

This only covers the basic launcher. Sophisticated electronic sights and other accessories will increase the IA by 1 or 2, and cost several KCr, depending on capability.

Splatter Weapons - Fluid weapons tend to cover an area with their effects. In general, 1/2 a liter will cover 1 hex. To find the radius of a vertical or near vertical impact, multiply the number of liters used by 2. This is the number of hexes covered. See the chart below to get the radius.

Hexes filled for a radius of 0 = 1
Hexes filled for a radius of 1 = 7
Hexes filled for a radius of 2 = 17
Hexes filled for a radius of 3 = 35
Hexes filled for a radius of 4 = 59

Divide the leftover hexes by the radius+1, and roll 1d6. If this is equal or less than that result, the impact splashes the fluid out to the next highest radius.

To get the full splash, the fluid must be moving at a velocity in m/sec equal to or greater than the quantity of fluid in liters. If not, the fluid will splatter at the amount equal to its velocity, and spread out at 1 meter per 5 phases. For low angle impacts, the area of effect is a line whose length is 1/2(u) of the total hexes in length, with a width in hexes to either side equal to what the radius would be for a normal impact. The length of the sides is always 2 less than an adjacent side closer to the center.

Example - A 2 liter bottle of gasoline is dropped on a fire. Checking the table, this will fill 1 hex, and has a 50% (3 in 6) chance of splashing out to a radius of 1 hex. If this was thrown at a low angle, it would have a 50% (3 in 6) chance of filling only 1 hex, but if it didn't, it would fill an area 4 hexes long, and 3 hexes wide at the widest point.

Very high velocity impacts may be narrower and longer, or splatter debris like an explosion. An average 1 second burst from a portable flamethrower is 3 or 4 liters.

Nuclear Weapons - I frown on the use of nuclear weapons in this game, but like heavy armor, heavy artillery, and heavy rocks, they may come into play. The formulas for determining damage and radiation at a given range require a scientific calculator to use, but that is the price you have to pay for using such weapons. These formulas are not exact, but are a fairly close approximation for weapons in the 10 kiloton to 2 megaton range. The results are the maximum amount of damage that the bomb can inflict. Terrain, detonation height, etc., may lower these figures up to half. Damage is Type III.

DV of nuclear explosion at range of 1km =

$$(\text{Kiloton rating of bomb})^{1.7} = X$$

DV of nuclear explosion at range of nKm =

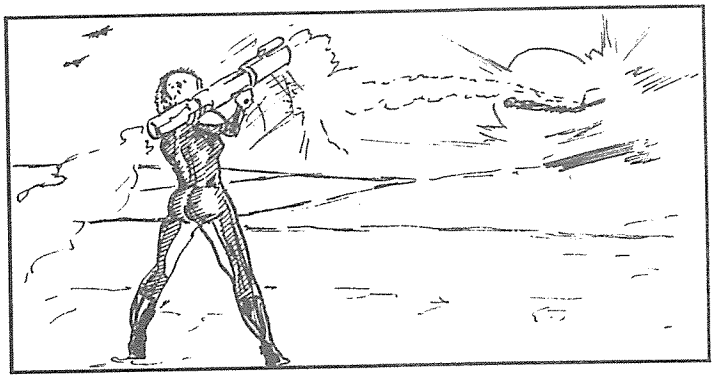
$$X/(n^{3.6})$$

Radiation exposure at range of 1km =

$$(\text{Kiloton rating of bomb})^{1.2} \times 430 = X \text{ rads}$$

Radiation exposure at range of nKm =

$$X/(n^{9.6})$$



DV	Effects on structures	Effects on people
7.5K+	Total destruction	Vaporization
4-7.5K	Only largest structures recognizable, and they are beyond repair	Vaporization
2-4K	Skeletal remains of larger structures remain, very strong structures severely damaged	Death by overpressure and thermal radiation
500-2K	Large steel and cement structures damaged, all private residences destroyed	Death by overpressure and thermal radiation
200-499	Only the sturdiest of houses survive, but are still badly damaged	Death by overpressure and thermal radiation
75-199	Cars overturned, most stone or brick dwellings severely damaged	3rd degree burns on exposed skin, blindness if facing blast, organ damage from overpressure
25-74	Wooden structures severely damaged, nearly all on fire	3rd degree burns on exposed skin, minor lung damage from overpressure
10-24	Wooden structures damaged	2nd degree burns on exposed skin
1-9	Wooden structures slightly damaged, glass broken	2nd or 1st degree burns on exposed skin

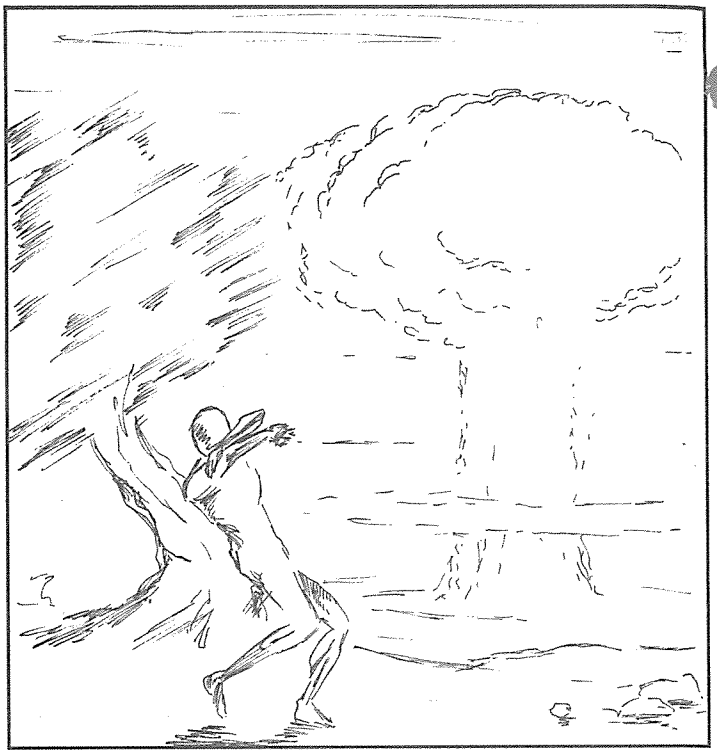
This in no way fully describes the carnage and horror a nuclear blast causes at close range.

Radiation Damage - Radiation damage is cumulative, but the total received is reduced by 10%(n) each month. A running total should be kept if this is necessary. The effects given for the listed exposures occur each time the exposure crosses a 50 rad level, i.e. 100, 150, 200, etc. Only the effects from the highest rad level occur.

Example - If a character were exposed to 230 rads, they would get the effects of the 100-249 rads exposure level 3 times, at the 100, 150, and 200 rad level. If they were exposed later to 30 more rads, they would feel the effects at the 250 rad level, but only once, and would not suffer the 100-249 effects again.

Exposure to radiation sources is in a rad/hr level, i.e. exposure to 20 rad/hr for 3 hours is a total exposure of 20x3=60 rads. Any exposure over .1 rad/hr is very unhealthy, although low exposure can be tolerated quite a while before effects are noticed.

Characters can have excess radiation "flushed" from their systems. This does not remove effects of past damage, or reduce any effects from current exposure, but it does "reset" their cumulative exposure level. The cost for this is 10KCr per 100 rads, with a minimum cost of 10KCr. Attributes lost due to radiation may be "augmented" back up to their previous levels, but this *does* count towards the maximum level of augmentation the character can get.



Exposure	Effects
0-99	None
100-249	After 2d3 hours, the character will experience Weakness-Nausea-Vomiting, proceeding as a disease with an Effect Time Time of 1 hour and maximum effect time of 24 hours. The character will feel fine for 4d4 days, after which the character will feel a Depressant effect for the next 1d3 days. Attributes are recovered at the normal rate.
250-599	After 1d3 hours, the character will experience Weakness-Nausea-Vomiting-Diarrhea-Pain-Depressant effects, with an Effect Time of 30 minutes, and a Maximum Effect Time of 36 hours. After this, the character will feel fine for 4d4 days, after which all the previous effects will return. There is a percent chance equal to 1/10 the exposure that the character will die from this point or at higher exposure. All Attributes will recover at the normal rate, but there is 2% chance per point lost on an Attribute that 1 point of that Attribute will be lost permanently.
600-999	The character will feel all the symptoms for 250-599 rads, but they will be twice as severe, and they will start to be felt after 1d2 hours. There is a 10% chance per point of Attribute lost that that point will be lost permanently. All Attributes will recover at 1/2 rate. All hair will be lost, but 2d50% will grow back eventually.
1000+	The character dies in 1d6 days unless rolling 00 on d%. Otherwise, treat as 600-999 rads.

Vehicles - The heading "Vehicles" generally covers any means of personal transport the characters may acquire, but usually applies to those that mass 100 tons or less, like cars, tanks, grav sleds, yachts or perhaps small orbital shuttles. Full fledged spacecraft (and space combat) is covered in a separate supplement.

All vehicles will follow a certain format. This will define the vehicle for the game. All vehicles are shown in a top view on a 1 meter hexagonal grid, so you can see how they fit on a Combat Display. In some cases, front or side views may be shown as well. The circle on the vehicle description is 3 meters in radius, and is there for use in TimeLords. An "x" on the vehicle drawing indicates a hatch or door to the vehicle.

Vehicle Format - The following is an explanation of the terms used on the vehicle sheets.

Armored - This shows that the vehicle is built to resist damage from projectiles, and generally is armored all the way around. Small obstacles, melee weapons and most handguns will have little or no effect on such a vehicle.

Unarmored - This means the construction of the vehicle is not designed to resist weapon attacks. While it may be tough, it has many weak areas, or vulnerable spots where a small weapon can disable it, or easily affect the passengers.

Name - The official name of the vehicle being described.

Seating - The number of people the vehicle was built to accommodate. An extra 50%(u) can be carried, but each 10% gives all passengers an extra -2 on all skill rolls due to crowding.

Mass - This is the mass of the vehicle in kilograms.

Carrying Capacity - This is the load the vehicle is capable of carrying. This includes driver and passenger mass.

Length - The length in meters from the furthest front projection to the furthest rear projection on the vehicle.

Width - The maximum width of the vehicle in meters.

Height - The maximum height of the vehicle with all the hatches, etc. closed.

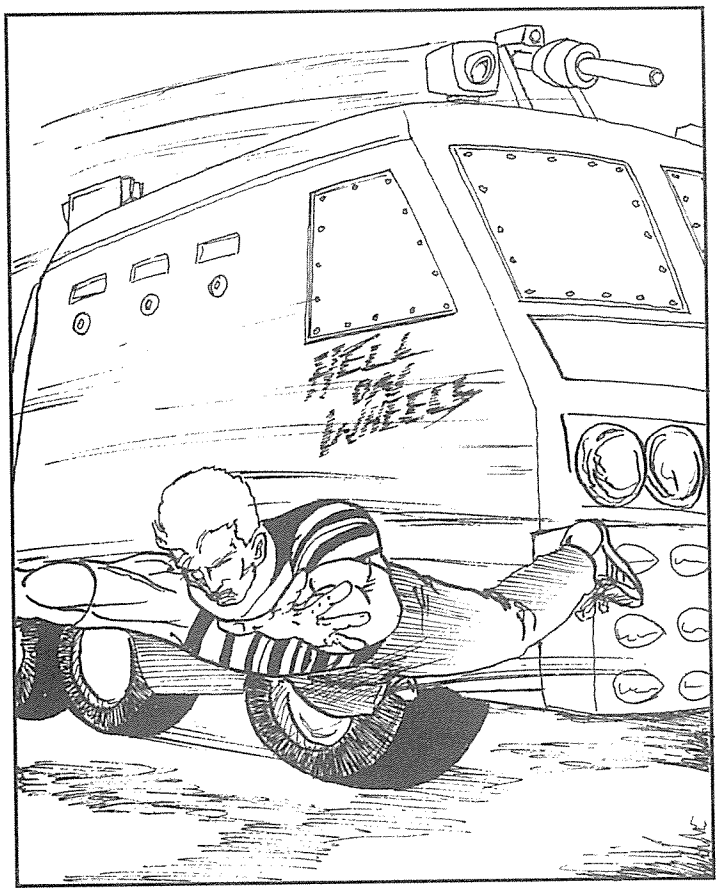
Max Speed/Min Speed - The maximum speed the vehicle can obtain under optimum conditions in m/sec. For flying vehicles, this will be followed by the minimum speed the vehicle is capable of remaining aloft at. Flying vehicles which can hover will have a minimum speed of 0. If no minimum is listed, assume hover capability.

Acceleration/Deceleration - The maximum increase/decrease in speed per phase. This works as follows. Subtract the base acceleration from the current speed of the vehicle. If the result is 0 or below, this is the current acceleration of the vehicle. If not, then subtract 1m/sec from the acceleration of the vehicle and subtract this from any remaining amount. This is repeated until the total is 0 or less, or the acceleration reaches 1m/sec. The last number subtracted is the level of acceleration the vehicle is capable of at this speed.

Example - If a vehicle with an acceleration of 5m/sec was going at a speed of 12m/sec, it could accelerate 12 - 5 - 4 - 3 = 0, 3m/sec, or from 12m/sec up to 15m/sec.

Deceleration is just a straight amount subtracted from the speed of the vehicle each phase. Vehicles move after acceleration or deceleration is applied.

Climb/Dive - This is used only for vehicles that have vertical movement capacity. This is the maximum vertical velocity the vehicle may maintain, and dive is the maximum amount that may be safely added to the normal maximum while in a dive.



Turn Mode - All vehicles have a base turn mode, based on their handling ability. In general, the turn mode is the number of m/sec acceleration the vehicle can pull in a turn. This amount divided by 10 is the number of gees the vehicle can do.

Example - A sports car might have turn mode of 9, meaning it can pull .9 gees in a tight turn.

A vehicle can make a 60 degree turn in a number of meters equal to the velocity of the vehicle squared, divided by the turn mode.

Example - If the sports car in the previous example was going 20m/sec (72kph), it could make a 60 degree turn every 400/9=44 meters.

This turn can be gradual, to follow the contours of any road the vehicle might be on. With the exception of tracked vehicles, most vehicles have a minimum number of hexes for each turn equal to their length. A list of distances required for different turns and velocities is on the next page.

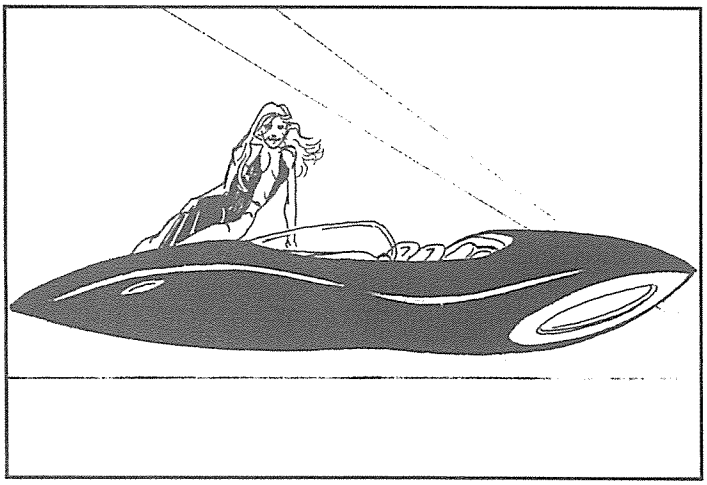
Velocity	kph	Turn Mode 5	8	10	15	20
0	0kph	0	0	0	0	0
3	11kph	2	1	1	1	1
5	18kph	5	3	3	1	1
8	29kph	13	8	6	4	3
10	36kph	20	12	10	7	5
15	54kph	45	28	22	15	11
20	72kph	80	50	40	27	20
25	90kph	125	78	62	42	31
30	108kph	180	112	90	60	45
40	144kph	320	200	160	107	80
70	252kph	980	612	490	327	225
100	360kph	2000	1250	1000	667	500
150	540kph	4500	2812	2250	1500	1125
200	720kph	8000	5000	4000	2667	2000
300	1080kph	18000	11250	9000	6000	4500
400	1440kph	32000	20000	16000	10667	8000
500	1800kph	50000	31250	25000	16667	12500

Range - This is the maximum range of the vehicle on one charge of fuel or energy. This presumes a cruising speed of 60% of maximum, and optimum conditions.

Fuel Capacity - The is the amount of fuel or energy needed for one charge, and type of fuel needed.

Armor - This is the amount of armor various portions of the vehicle have. A value of 0 means that the area does not protect the inside of the vehicle, but hits may strike areas with an AV, like equipment. Any special area like tracks, tires, reactors, etc. will be followed by the BP of that area, for purposes of being damaged, like 10,5BP. If no BP are specified, use half the AV as a reasonable estimate.

Armament - This will list the armament the vehicle has (if any), where it is located, and how much ammunition is carried for each weapon.



Sighting Mechanism - This will tell any modifications the sighting mechanism (if any) has on the "To Hit" roll for vehicle mounted weapons.

Turret Traverse - This is the maximum rate at which any turret on the vehicle may pivot.

Notes - A brief history and/or assorted information on the vehicle.

Land Vehicle Special Rules - Land vehicles is a term that includes any form of land transport, including animals, so there may be terms on the creature listing that will refer back to this section. Long term movement (p.83) deals almost exclusively with land movement, as this is what most characters will deal with.

Air Vehicle Special Rules - Air vehicles will also refer to flying creatures (should you need them), and some of the air vehicle terms may be used to describe them.

Power Turns - Air vehicles may make power turns, if the vehicle relies upon or has large aerodynamic surfaces. Up to the deceleration of the craft may be put into a turn. The vehicle is slowed by this amount, and the square root(u) of the deceleration is added to the turn mode.

Example - A plane with a deceleration of 9 and a turn of 10 goes into a power turn. As long as the plane keeps decelerating, its effective turn mode will be 13 instead of 10.

Extra Climb - A climb of more than the normal maximum may be made if horizontal velocity is sacrificed. Up to the maximum deceleration of the vehicle may be used, and the climb may be increased by 2 meters for every 3 meters of horizontal velocity lost.

Example - The plane in the previous example has a normal climb of 5m/sec. By climbing more than the engine is capable of, the climb is temporarily increased to 11m/sec, but at a cost of 9m/sec of speed lost per phase.

Air vehicles have a stall speed. If the craft ever goes below this speed or departs controlled flight, roll 1d20 on the Accident Table each phase, and subtract the skill of the user, plus 5. In addition to other effects, the vehicle will dive an amount equal to the current speed times the fraction the roll is missed by.

If a craft exceeds its turn mode *speed* because of an Accident Table result or exceeds maximum speed because of a dive, it must make a roll on 1d20. Find the modifier to the maximum safe speed that gives the current speed.

Example - If the maximum safe speed was 100m/sec, and the craft was doing 110m/sec in a dive, the safe speed has been exceeded by 10%, which is a modifier of 2.

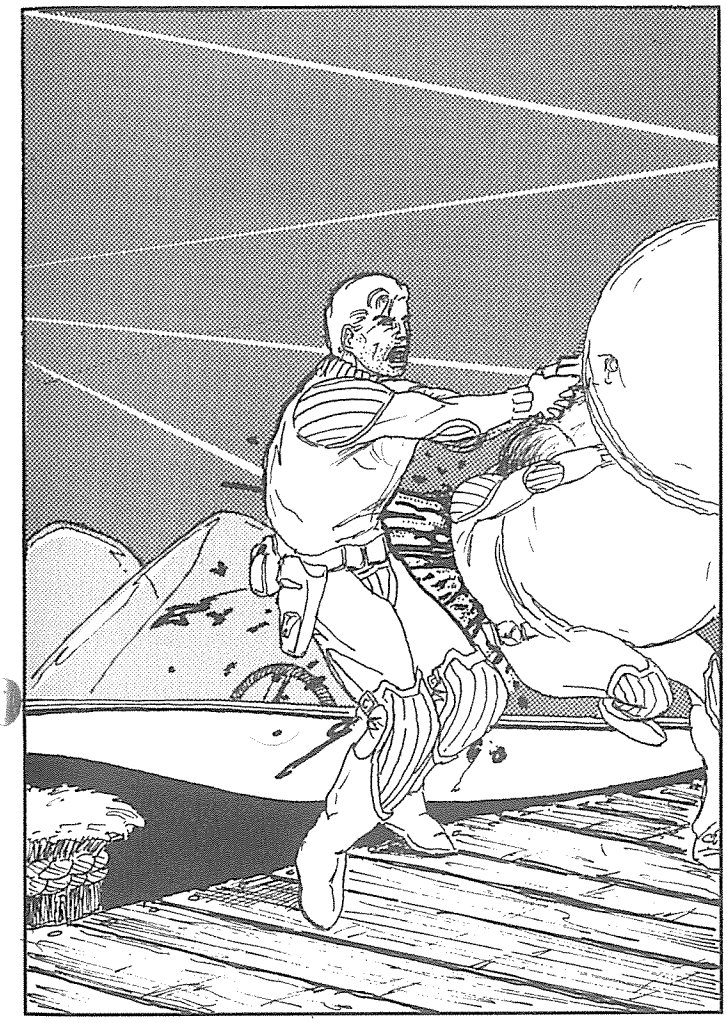
If this number or less is rolled on 1d20, there has been a structural failure of some type. The craft loses 5% of its BP per point the roll was made by, with a minimum of 1, even if the roll is made exactly. Then roll for failure of the damaged part.

Pulling Out of Dives - Due to lift, turn mode may be *voluntarily* exceeded when pulling out of a dive. Up to twice the deceleration may be put into turn mode, as a power turn (use the square root of the doubled amount). A roll must be made for each -1 modifier to turn mode, as above.

Example - A vehicle with a turn mode of 10 and deceleration of 8 could get an effective turn mode of 14, but will suffer some damage from the strain on an 8 or less.

Damage to Flying Machines - Damage to flying machines from dives or spins is to the control surfaces or front armor (windshield), damage from attacks is to a random location.

Water Vehicle Special Rules - Water vehicles includes any water creature, and some of the terms will be used on the creature listing. They maneuver as land vehicles, but cannot skid, and any damage taken may eventually sink the vessel. When a vessel is loaded to 150% of cargo capacity, it sinks.



% of BP done by hit	% of capacity	every x minutes
<5	5	60
5-10	5	20
11-20	5	5
21-30	5	1
31-40	10	1
41-50	20	1
51-60	30	1
61-70	50	1
71-80	70	1
81-90	90	1
91-100	100	1
100+	100	.5

Ships may have a sinking modifier which adds or subtracts from the % of damage done. Small boats will usually have an addition, larger ones a subtraction. Ships with bilge pumps will have a note on how much bailing capacity they have.

Long Term Movement - Vehicles or people restricted to the ground can rarely cover their optimum movement in a day due to terrain, weather, etc. The following guidelines will give you a general idea of travel times for any long journeys the characters are on.

Remember to only use modifiers appropriate to the transport in question. A grav vehicle might be affected by following poor roads, but the condition of the ground makes no difference. A packed dirt track is as good as pavement for people on foot, etc. Modifiers are cumulative, but most terrain should be passable very slowly, even if the modifiers forbid. In this case the Speed reduction should be a -19, and the Range Reduction a -18.

Modifier	Speed Reduction	Range Reduction
Optimum conditions	+0	+0(paved road)
Good conditions	-4	-4(dirt road)
Fair conditions	-8	-8(dirt track)
Poor conditions	-15	-10(off road)
Rugged hills	-8	-8
Mountains	-12	-14
Ground is wet	-2	-2
Ground is muddy	-4	-4
Ground is icy	-15	-4
Swamp	Only if vehicle has water movement	
Light Forest	-4	-2
Dense Forest	-10	-6
Night(no night vision)	-6	-0
Per 1/4(d) of capacity	-2	-2
Per 25cm of snow	-2	-2

Example - A ground crawler is traveling on a dirt road through hills and is carrying 1/2 its capacity. This gives a negative modifier to its maximum safe speed of -4 plus -8 plus -4, or a -16. If it had a normal maximum speed of 100kph, it would be 20kph in this terrain. The range reduction is identical in this case, so if it had a normal range of 500km on a tank of fuel, here it would be reduced to 100 km.

Short Term Movement - Use the Speed Reductions from Long Term Movement to get the maximum safe speed for a given terrain. To drive faster than that is unsafe and will require a Skill roll from the driver *each phase*. The driver gets an automatic +10 to their skill before other modifiers are applied. Skill rolls also get a negative modifier equal to the percentage the safe speed was exceeded by. If the final roll is failed, roll on the Accident Table.

Example - If the maximum safe speed was 40kph and the actual speed was 50kph, the modifier would be -5, because 10kph (the difference) is 25% of 40kph. The total modifier in this case would be a +5.

If a turn is attempted without having gone the required distance for the vehicle's turn mode, a roll for an accident must also be made. In this case, find the maximum speed that would allow such a turn safely, and use the difference to find the modifier to the driver's skill. If an accident occurs, roll 1d20 on the following table and modify the roll by +1 for each negative modifier on the Skill roll.

Accident Table

Roll	Result	
1-8	Land Vehicle	Vehicle turns 1 hex facing to the left or right, and skids in direction it was originally moving. Roll 1d6. On a 1-3, it is to the right, on a 4-6 it is to the left. If done on a turn, change the roll by 1 towards the direction of the turn.
	Other vehicle	Maneuver is half as severe as intended.
9-12	Land Vehicle	As 1-8, but vehicle moves in the direction it is now facing.
	Other vehicle	Maneuver is half as severe as intended, up to limits of vehicle.
13-16	Land Vehicle	Vehicle skids straight forward, loses 1/2(d) its velocity, and turns 1 hex facing to one side (see 1-8).
	Other vehicle	Maneuver attempted is not completed and vehicle continues on present course.
17-19	Land Vehicle	Vehicle skids forward and stops, facing randomly.
	Other vehicle	Maneuver is in wrong direction, and half as severe as original maneuver was intended.
20-24	Land Vehicle	Vehicle skids forward and stops, faces randomly, and rolls onto side.
	Other vehicle	Maneuver is in wrong direction.
25-30	Land Vehicle	Vehicle rolls straight forward a number of times equal to its meter per phase movement divided by 4. Roll 1d6 for final orientation. 1-2, lands on bottom, 3-4, on top, 5, on right side, 6, on left side. Each aspect (top, bottom, front, rear, wheels or tracks) takes a number of BP equal to velocity of the vehicle divided by 4 in Body Points. Armor does not affect this. Passengers will also take this amount unless a 4 or less is rolled on 1d20, when they will take damage as though buckled in, which is the velocity divided by 2d6+2. This is whole body damage, and the characters take an equal amount of Bruise Points.
	Other vehicle	See 20-24
31-39	Land Vehicle	As 25-30, but vehicle is on fire (if possible). Roll 1d20 each Phase. On a 1 or 2, the fire has reached the passenger compartment and the characters will start to take damage. Subtract 1 from the roll each turn.
	Other vehicle	See 20-24
40+	Land Vehicle	Vehicle crashes, rolls, and burns. Any given occupant is dead unless a 1 is rolled on 1d20. this case, they take a Damage Level of 10+1d10 on the Whole Body table.
	Other vehicle	See 20-24

Vehicular Damage - If vehicles are hit by weapon fire, roll 1d20 for a special effect on the Vehicle Special Effect Table, then roll 1d20 on the Vehicle Hit Location Table. The arcs for a vehicle are diagonals going through the corners of the vehicle. A high or low shot has a chance in 20 of hitting the top or bottom equal to the angle divided by 4.

Vehicle Special Effect Table

Roll	Result
1-2	Glancing Blow. Multiply AV by 1d4+1.
3-4	Stun. If weapon has a DV of 100I or better, and AV of the target is 40 or better, the crew is stunned and unable to act for 1d6-1 phases. Roll time for each crew member.
5	Fuel Tank Hit. If the DV of the weapon is greater than 3 times the AV of the target, there is a chance of explosion. Roll 1d10. 1-2 Vehicle explodes, 19 in 20 chance of death for each passenger. 3 Vehicle is on fire, count as accident result of 31-39. 4-10 Vehicle loses 1d20/20 of fuel. If exploding ammunition is used, subtract 1. If vehicle has an anti-explosion fuel tank, add 2. For each extra multiple of the DV, subtract 1.
6	Brake Hit. Lose 1d6/6 of deceleration.
7	Steering Hit. All Skill rolls get a modifier of -1d6.
8-20	Normal Hit

Vehicle Hit Table

Roll	Location
1-6	Motive system hit. This is the engine or whatever performs this function for the vehicle. If totally destroyed, roll again and ignore this result. Armor doesn't count against the results of the second roll.
7	Non-Vital hit. This includes things like radios, mirrors, headlights, etc.
8-10	Propulsive system hit. This is the wheels or whatever performs this function on the vehicle. If totally destroyed, roll again as for 1-6. On applicable vehicles, tires are hit on a 1-3 on 1d6 from the sides, and on a 1-5 from the ends. The wheels are hit otherwise. Roll on the Special Effects Table.
11-19	Cargo or passenger hit. This is hit somewhere in passenger or cargo area of the vehicle. Assign each passenger and piece of luggage a number from 1 to twice the capacity of the vehicle. Example: On a 4 passenger vehicle, this would be a 1 to 8. Then roll a die closest to this amount, such as 1d8. If any number chosen comes up, that passenger or item was hit and takes damage. If weapon had a DV of 100I or greater, or was explosive or shaped charge, the rest of the passengers will take 1/4 this amount in Whole Body damage.
20	Non-Vital hit.

If shooting at end with engine, subtract 4. If shooting at end away from engine, add 4.

Chase Combat

Chase Combat - Vehicles are an ever-present part of the SpaceTime universe, and there is no law stating that combat can only occur between people on foot. In many cases, a vehicular firefight will be short and brutal, and can be handled using the normal rules. In other cases, it will be a shoot-out between vehicle weapons only, leaving little room for characters or strategy. However, in some cases, there may be prolonged chases, or situations where neither side has much effect on the other due to vehicle armor, limited ammo or other mitigating circumstances. Then, the following rules will apply, and be referred to as Chase Combat.

Layout - Initially, the GM should set things up on a sheet of hex paper using the expanded scale of 5 meters per hex. For high-speed combat, a larger scale may be desired, up to 25 meters per hex. The actual terrain doesn't matter, just the relative position and distance of the combatants. Regardless of kibitzing, remember that only one character will be driving the vehicle, and what that person says is how the vehicle moves. In order to enforce the chaos of a high-speed vehicle combat, you may wish to have all players write down their actions for each phase, without the players being allowed to communicate beforehand.

Terrain - The circumstances will dictate the starting terrain, although this may change over the course of the combat, especially at high speeds.

Terrain will be one of three types: Open, Restricted, and Very Restricted.

Open terrain is terrain with no obstacles, and usually unlimited maneuvering room. More specifically, it is terrain where the major factor in any chase will be the acceleration and top speed of the vehicles involved. Specific examples might be a dogfight, or stretch of open desert highway. There may be some restrictions on maneuvering, like the desert highway, but none on top speed.

Restricted terrain has some obstacles, but requires a lot of maneuvering skill in order to keep up a high speed. an example of this would be a secondary highway, with many curves or uneven patches, or an aerial chase among skyscrapers.

Very Restricted terrain has many obstacles, and most maneuvers done are very severe. The vehicles involved will never be able to reach their maximum speed in Very Restricted terrain. An example of this would be driving in a residential neighborhood, or major city.

These can be very important, because they give advantages to one type of vehicle or driver.

Terrain	Advantage to:
Open	Faster vehicle
Restricted	Maneuverable vehicle
Very Restricted	Best driver

Sequence - Each phase, each driver involved will state one of three intentions, the pursued stating before the pursuer. How successful an action is depends on terrain, vehicle, and driver skill. See below.

Terrain	Close	Dodge	Run Away
Open	T,A	M,S	T,A
Restricted	A,M,S	M,S	A,M,S
Very Restricted	M,S	M,S	M,S

T - Top speed
A - Acceleration/Deceleration
M - Turn mode
S - Driver skill

Each phase, check which vehicle factors will apply. For instance, in a straight line chase, top speed will not become a factor until one vehicle has reached it, and the other hasn't. Or for the person in front to close, they would use deceleration instead of acceleration.

All applicable vehicle factors are added, and if applicable, a roll is made by the driver on the appropriate vehicle skill. The amount the roll is made or failed by is added to the vehicle total.

Maneuvers - The following actions are what takes place during a maneuver.

Closing The driver attempts to reduce the distance between the vehicles. If both vehicles try to close, the attempt is automatically successful. Hand weapon fire gets the modifier for relative firer movement.

Dodge The driver may be trying to close or run away, but most of their efforts are towards making the vehicle more difficult to hit. The vehicle gets a negative modifier to be hit equal to the modifier for relative target speed, plus the amount the driver's skill is made or failed by. The occupants of the vehicle get firer relative movement, *plus* an additional minus equal to the turn mode of the vehicle. Note: A dodge may also work by decreasing visibility, like putting heavy traffic between you and a pursuer. The net effect is the same.

Run Away The driver attempts to increase the distance between the vehicles. Again, if both vehicles are attempting this, the attempt is automatically successful. Weapons fire gets the modifier for relative firer movement.

The total number for each vehicle is compared. The high total is successful, and gets to change vehicle distance and relative positioning by the following amounts.

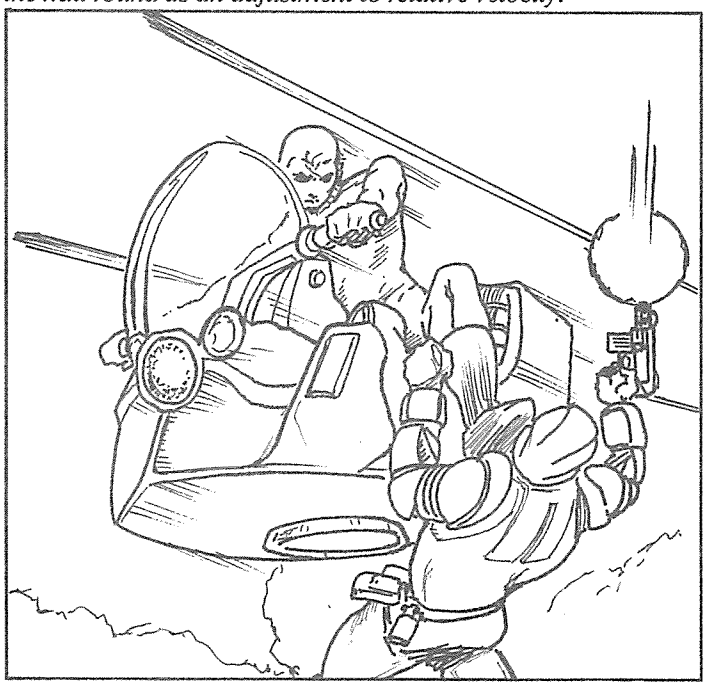
Terrain	Change distance by
Open	Difference in Acceleration
Restricted	Difference in Acceleration, Turn mode
Very Restricted	Difference in Turn mode, Skills

Note that some results can have multiple consequences. A character losing a roll with a dodge still gets to dodge, but the other vehicle gets its action. If they won with their dodge, they would get the dodge and the

other vehicle would *not* get their action. If the difference in amounts is not sufficient for a full hex change (5 or more), then the GM can either have the amount saved for the next phase, or give a 1 hex movement to the winner, regardless.

In the case of an attempt at interception, like closing from the front or side, there is little chance of increasing the distance until one side is actually chasing the other. In this case, the distance is decreased by any closing velocity, and then the winner gets to add or subtract to this distance.

Example - If one car was closing from the side with a relative velocity of 10m/sec, the cars would still close by 10m regardless of who won, but then the winner would get to increase or decrease this amount, *which would carry over to the next round as an adjustment to relative velocity.*



Multiple Pursuit - A pursued vehicle will be limited in the ways it can affect multiple pursuers. Especially in the case of an intercept chase, moving away from one pursuer may well bring you closer to another. This requires skill on the part of the player in moving on a large-scale map, rather than the skill of the character, although exceptionally good skill rolls should be counted as brilliant decisions of the character, and may result in special circumstances. These could range from surprise moves, making opponents run into obstacles, or other advantageous use of local terrain.

Speeding things up - Especially on the larger scales, situations may become static, no one gaining or losing ground at a significant rate. To fix this, make the number of seconds per round equal to the meters per hex, and multiply any effect by this as well. If there are characters using hand-held weapons, allow them the same number of actions, and use the average number for their chance to hit, to determine the number of hits on opposing vehicles or people. Remember to do the same for the NPC's as well.

Example - A 10m/hex scale would have 10 second turns, and any change of distance because of skill rolls would be multiplied by 10 as well.

Ramming - A vehicles moving into the same hex as another vehicle will ram. The winner of that particular round of movement is the rammer, while the other vehicle is the target. Both drivers immediately make a skill roll, but the *target* multiplies their skill by the ratio of their vehicle mass to the ramming vehicle's mass. The difference in how much the rolls were made or failed by is treated as a result on the Accident Table for the loser. Sometimes this is catastrophic, like causing a land vehicle to flip or skid to a stop (17 or better), but is likely a skid or facing change. An additional effect is to subtract this amount from the loser's total on the next phase. This also applies to hand weapon fire.

Example - A 4,000kg truck bumps a 2,000kg car. The driver of the car makes a driving roll on half their skill, and the truck driver makes a normal skill roll. If the driver of the truck made their roll by 2, and the driver of the car failed by 3, the car would take a result of 5 on the Accident Table and an additional -5 to weapons fire.

Most rams will cause surface damage, but others may cause mechanical damage. Multiply the relative velocity of the impact by the ratio of vehicle masses to get the effective DV of the ram, which is counted as Type I damage. Ram damage affects both vehicles equally.

Example - A 10,000kg tank rams a 1,000kg taxi with a relative velocity of 10m/sec (22mph). The effective DV is 100I, which does an average of 55BP to both vehicles. The tank ignores this, while the taxi takes about 50BP, which is sufficient to destroy whatever part of the vehicle was hit.

Special effects are rolled for, and normal vehicle hit locations apply. Some interpretation by the GM may be necessary. A tank running over a car might have a high enough DV that all passengers are affected (vehicle crush).

The speeds of the vehicles are averaged, with the difference split as the ratio of masses, as described earlier.

Example - In the previous case, the relative velocity was 10m/sec, and the ratio of vehicle masses was also 10, so the tank would only lose 1/10th of the difference in speed, or 1m/sec. The taxi would gain the rest, or 9m/sec.

Passengers take impact damage from a ram in a different fashion. They do not compare their mass to the ramming vehicle, but are treated as though the velocity difference was a distance fallen. Restraints will modify this downward by their TL. They will *not* protect a character from an accident that disintegrates a vehicle, or spreads it over a large geographical area. People struck by a vehicle will also take falling damage, but the Damage Level is reduced by 1 for every 3 points of subtraction the armor has (the "y" part of the "x/y" armor formula). After receiving most of the velocity difference, they may also take falling damage again, when they land (Assume 30 meters of travel per phase). Assume the vehicle is hit with 1 point of damage for every Damage Level the person takes. Large animals or heavily armored people may cause 2 or 3 points of damage DL.

Example - A car going 20m/sec hits a pedestrian. The ped takes damage as though they had fallen 20 meters, or a DL of 5+1d8. If the final DL was 12, the car would take 12BP, and roll on the Vehicle Hit Table for location. A front-engined vehicle would probably be hit in the engine.

The Environment - To steal a line, Nature is a green mother. The environment can be very nasty at times, and can play a large part in wilderness adventures, especially for poorly equipped characters.

Cold - For game purposes, humans are assumed to be able to survive indefinitely at temperatures of 10 degrees Celsius and above (50 degrees Fahrenheit to you non-metric types) if they keep dry and out of the wind. For each 5 degrees Celsius below this, characters will suffer a cumulative Whole Body Damage Level of 1 per hour, to a maximum Damage Level of 1 per 5 degrees, *which they will take each hour.* If parts of the body are much better covered than others, roll only for the affected parts, using Burn Damage. If a location gets a total impairment of 15 or greater, it is totally numb and frostbitten, and if the impairment reaches 20, it must be amputated. Armor or clothing will help negate the effects of cold weather. Each point of armor adds 5 degrees to the effective temperature. Winter clothes will add 10 degrees per point, and are denoted like 4/2C (Cold weather). Metal-based armor acts as one point of armor vs. cold, and negates wind effects. Each 1m/sec (3.6kph or 2.25mph) of wind will effectively lower the temperature by 1 degree. All wet locations are treated as 5 degrees colder, and wind effects are tripled. A character can negate the effects of cold by exertion. 5 degrees of temperature may be negated by making 4 Stamina rolls per hour. If failed, these have the normal effect, and a 19 or 20 always fails in this case.

Heat - No effects of heat are felt until the temperature gets above 30 degrees Celsius (86 degrees F). All Stamina rolls get a -2 modifier per 5 degrees above this, as do Constitution rolls for thirst purposes. Clothing, water, and wind effects are the same, whether to the benefit or detriment of the character. Remember that encumbered characters will need to make more Stamina rolls.

Gravity - Many habitable worlds have different gravities than Earth. Any world between about .5 and 1.5 times Earth gravity is suitable for long-term occupancy, and manned exploration is possible at up to 2 gees without artificial aid. Powered armor or other movement aids allow exploration at up to 4 gees, but humans will have extreme difficulty in doing anything requiring muscle use.

Characters will take a *maximum* of -2 to all physical actions per .1 gee the gravity differs from what they are used to. Some actions are not affected by different gravity. Firing a laser would not be any harder, but throwing a grenade would. In general, actions requiring movement of the whole body, quick movements, or low velocity projectiles (bows, etc.) will be affected. This negative modifier is the maximum, and may be reduced by use of the skills High G and Zero G.

Example - In the .4g Martian gravity, physical actions take a -12 to those unaccustomed to the lower gravity. If a character had a Zero G skill of 8, they could ignore this minus if they rolled an 8 or less before an action that would be affected. If they rolled a 12, they would have missed the roll by 4, and would only take a -4 instead.

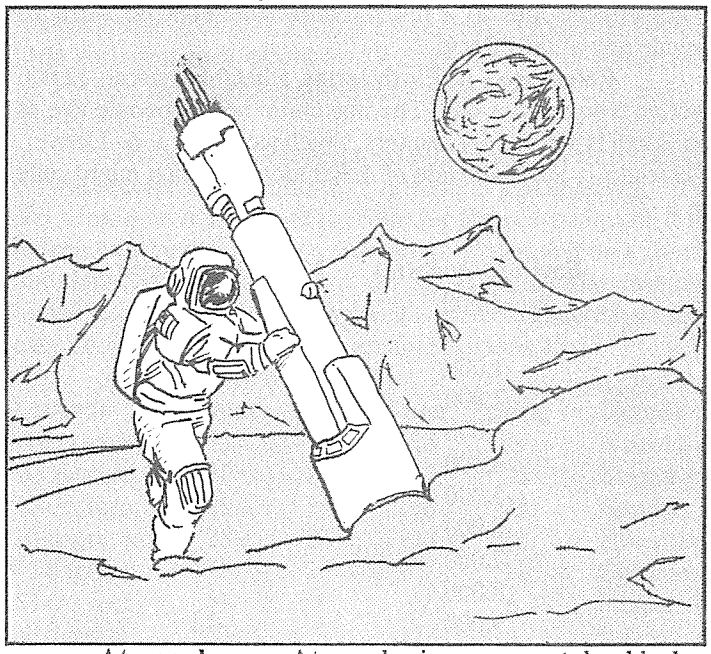
High gravity affects each character differently. Their weight is multiplied by the gravity, and the difference between this and their *normal* weight is counted as permanent encumbrance. Strong characters have a definite edge. Overweight ones are at a substantial disadvantage.

Example - An 80kg character in 1.5g gravity will "weigh" 120kg, and so be carrying an extra 40kg load. For a character with a Strength of 10, this is 40% of their carrying capacity. For a character with a Strength of 14, it is only 20% of their maximum load.

Low gravity works differently. The maximum load of the character is divided by the new gravity to get the load they can carry. But, they still take minuses to Speed based on the actual mass of the load, to take its inertia into account. Running *speed* is affected by the "felt" weight, and the acceleration and deceleration of the character is reduced by the fraction of the load over their normal maximum.

Example - A character with a Strength of 10 in .5g conditions could carry 200kg instead of their normal maximum of 100kg. However, they would still take a -2 to Speed for each 10kg of load carried after the first. Their running speed would be affected every 20kg of load, rather than every 10kg.

Example - The above character in .1g could lift 1000kg, but would only be able to accelerate and decelerate 1/10 as fast while doing it.



Atmosphere - Atmospheric pressure tolerable by humans is a fairly narrow range. Within this range, changes are usually felt as an effect on the Stamina of a character. Thin atmospheres have less oxygen, giving the character less energy to perform physical labor with, and thick atmospheres are "soupy", and require more effort to breathe. Most characters will come from "normal" atmospheres, but you can choose backgrounds that place them in denser or thinner atmospheres than normal. A planet's atmosphere can be rated on a +/- scale, where "+" is thicker, and "-" is thinner. Earth normal is "+0", or at the middle. Anything other than this is different enough to cause some physical effect.

An atmosphere rating, whether "+" or "-", is a negative modifier to the Stamina of a character. For purposes of making Stamina rolls, this minus and any others are applied before the roll is made. Characters in vastly different pressures will tire very quickly, and notice even the smallest of exertions. If a character is not from a "+0" atmosphere, the minus they take is the *difference* between the atmospheres.

Example - A character from a +2 atmosphere moving to a -2 atmosphere would take a -4 to all Stamina rolls. A character moving from a -2 to a -6 would also take a -4 modifier.

A difference of 20 or more means the character is incapable of making Stamina rolls. Any Stamina roll automatically fails, with normal results. Regardless, they will pass out in a number of minutes equal to their Stamina, minus 1 for each point of difference over 20, with a minimum of 1 minute. They will suffer permanent brain death from oxygen starvation in an equal number of minutes after that.

Vacuum is a special case of atmosphere, that is, none. Treat it as any other atmosphere too thin too breathe, but in addition, the character takes a *cumulative* whole body effect of 1 each *phase* they are exposed.

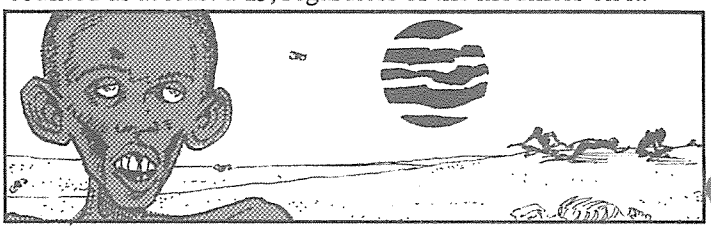
Thin or thick atmospheres can be negated by respirators, oxygen tanks, or any other device that supplies the character with the right amount of oxygen. Vacuum has other effects, and so a full pressure suit must be worn to negate any of the effects.

Reference - In Earth terms, a height of about 12,000 meters is equal to a -20. The maximum height people live at on Earth is about 5,000 meters, which would be a -6. Denver, Colorado is at an altitude of 1,600 meters, which might only be a -2.

Earth Altitude(m)	Minus to Stamina
-1,000	-0
0	-0
1,000	-1
2,000	-2
3,000	-3
4,000	-5
5,000	-6
6,000	-7
7,000	-9
8,000	-11
9,000	-13
10,000	-15
11,000	-18
12,000	-20

Food - There are essentially 4 types of food that are available. These are Natural, Dehydrated, Canned, and Gorp. Natural foods are unprocessed foodstuffs such as fresh fruit or vegetables, and raw meat. Rations for 1 day will weigh 1.2kg, and have a bulk of 1 Medium. Dehydrated foods are like natural foods, but with all water removed, reducing significantly both their weight and bulk. Rations for 1 day will weigh .4kg and have a bulk of 2 Small. Canned foods are those such as we have now, packaged either in metal cans, sealed pouches, or in glass jars, as home canning is done now. Rations for 1 day will weigh 1.1kg, and be 2 Small in bulk. Gorp is any sort of high energy food concentrate, and 1 days rations will be 1 Small in bulk and weigh .25kg. The latter is meant to keep you alive and is generally not a taste treat. Canned and natural food have .7 liters of a characters daily water requirement per day of food. Dehydrated food or Gorp supplies no water to the character.

Starvation - Starvation is counted as Whole Body damage for purposes of impairment. It usually takes a long time for starvation to kill a person. Each day without food, the character must make a Constitution roll, with a negative modifier equal to the total modifiers on Stamina for that day. (An active person requires more food) If failed, the character suffers an impairment of -1 to all abilities and rolls. Any roll of 16 or greater automatically fails for this purpose. When the impairment reaches -20, the character lapses into a coma and will die in 1d10 hours. When a starving character gets food, they will recover the impairment like Body Point damage, except that the Constitution of the character is counted as at least a 15, regardless of the modifiers on it.



Thirst - A character will require 2 liters of water a day to avoid dehydration, +1 liter for each -3 modifier(d) to Stamina from exertion. Exception: Thick or thin atmospheres have no effect on water consumption. One Constitution roll is made every 6 hours, and the impairment is the amount the Constitution roll is missed by. The Constitution roll gets a -2 modifier for each 5 degrees C over 30, and a -5 for each liter of water the character went without (cumulative). A roll of 12 or better fails, regardless of Constitution, but unless the actual modified Constitution roll is failed, the minus is only -1. Impairment is recovered as lost Bruise Points when the character gets water, with Constitution counted as at least 15.

Example - Pete Donald, with a Constitution of 10, is stranded in the desert, expecting friends to pick him up. The last of his water was used yesterday. Being intelligent, he tries to find some shade to rest in. After 6 hours in the 35^{0} heat, he makes a Constitution roll. Since it is very hot, the roll gets a -2. Although he has no water, the effects will not occur until the next roll, since each 6 hour period requires .5 liters in his current state. A Constitution of 10 with a -2 means Nick needs a 9 or less. Rolling, he gets a 10, and takes a -1 to all abilities. After 6 more hours, he makes another roll, this one getting an extra -5 for the water he needs. A 10 with a -7 modifier is a 7 or less. Rolling again, he gets a 14, and so takes an additional -7 to all his attributes. While he will probably survive the cooler night, the next day will probably finish him off unless the expected help arrives.

Hunting - Hunting allows characters to live off the land. If a successful roll is made for a hunting attempt, use an appropriate table to determine game type for the area. The more the roll is made by, the better the find, or the closer the range. Then, the game must be killed using some weapon or skill at the disposal of the hunters. This could be simple, like shooting deer with a rifle from 200 meters, or very difficult, like hitting a rabbit with a thrown rock.

Hunting Out an Area - Unless the game supply is defined to be infinite, eventually all the animals in an area will either be eaten or move out. This may happen if the characters find an area where they decide to heal up, regroup, or train themselves in needed skills. The larger the animal, the sooner this will be. Use the following table to determine how many days the game supply will last. The area hunted out will extend over an area of 100 square kilometers (5.6km radius). If the animal hunted is a herd animal, multiply the final amount by 2d6. The final result should be divided by the number of people in the group.

Mass of animal	Number of days before area is hunted out
<1kg	1d100 x 100 + 100
1-10kg	1d20 x 20 + 20
11-50kg	1d10 x 10 + 10
51-100kg	1d8 x 8 + 8
101-500kg	1d4 x 4 + 4
501+kg	1d2 x 2 + 2

Sleep - A character will require a certain amount of sleep each night to be at full efficiency. Each day without adequate sleep is a -1 modifier to all the character's actions, and getting no sleep at all is a -2 modifier. These are cumulative, to a maximum of -10. The modifiers will add to and are recovered like exertion modifiers (15 minute recovery period) once the character gets a normal sleep pattern started.

Optional - Characters who are awake during a time when they are normally asleep will get an additional -2 to all their actions. This disappears at the and of the "sleep" period.

Weather - To determine weather, roll 1d20 each day. Add (the average rainfall in centimeters per year/50(n)) to this roll. Then consult the following table.

Roll	Weather
1-9	Clear, 0% cloud cover
10-12	10% cloud cover
13-14	30% cloud cover
15-16	50% cloud cover
17-18	70% cloud cover
19	90% cloud cover
20+	Precipitation

If there is precipitation, the quantity will be 2 x(1d3/1d3))centimeters, adding 10% per 100cm of rain a year over the first 100, and subtracting 10% per 10cm a year below 80.

For average winds during this period, roll 2d10 and see below. If the precipitation is exceptionally heavy, the characters are on an ocean coast, or it is a season for storms, add up to 3 to the roll.

Roll	Winds	Equivalent
1-8	0-1m/sec	Very light breeze(3 kph)
9-15	2-3m/sec	Light breeze(10 kph)
16-18	4-5m/sec	Moderate breeze(15 kph)
19-20	6+1d6m/sec	Stiff breeze(30 kph)
21	10+1d10m/sec	Heavy winds(50 kph)
22	20+1d20m/sec	Gale(100 kph)
23	20+2d20m/sec	Hurricane(150 kph)

Average Temperatures - Here is a listing of average temperatures for each season based on Earth latitude. For planets with average seasonal variation, the numbers should work equally well, although the actual latitudes may be different. For planets with little axial tilt or seasonal change, use the appropriate numbers for Fall and Spring, but subtract 20 degrees of latitude from the winter temperature, and add 20 degrees of latitude to the summer temperature. For areas with extreme seasonal variation, add 20 degrees latitude to winter temperature, and subtract 20 degrees latitude from the summer temperature.

Example - On Earth at 30^{o} latitude, the seasonal temperatures are 28,22,13, and 21 degrees. On a planet with little variation they would be 19,22,23, and 21 degrees, and on a planet with high variation they would be 30,22,-7, and 21 degrees.

The average temperature will vary daily, so roll 2d10 on the second table. Subtract 2 if there is precipitation. The roll should be made more extreme for the season by one if in a deep continental interior, less extreme by one if on a coast, and less extreme by two if on an island. The average temperature listed is for continental areas. Climate isn't this easy, so remember that this is an approximation.

Latitude	Summer	Fall	Winter	Spring	Sample
0 degrees	31	30	28	29	Nairobi
10 degrees	30	27	23	26	Saigon
20 degrees	29	24	18	23	Bombay
30 degrees	28	22	13	21	Houston
40 degrees	23	13	1	11	Chicago
50 degrees	19	7	-7	6	Prague
60 degrees	15	1	-13	1	Juneau

Roll	Variation
0-2	-20
3-4	-10
5-6	-5
7-8	-3
9-13	+0
14-15	+3
16-17	+5
18-19	+10
20	+20

Rainfall by Area - Here is a list of typical geographies, with their average rainfall in centimeters, modifier to the roll, and average amount of rain in centimeters per storm.

Area	Rain/year	Modifier	Average
Temperate forest	120	2	2.0
Rain forest	400	8	2.6
Dry desert	0	0	.6
Moderate desert	30	1	1.0
Grasslands	80	2	2.0
Monsoon(wet)	300	6	2.4
Monsoon(dry)	40	1	1.2

Many areas will fall into one of these categories. For instance, Antarctica is covered in ice, but gets very little actual snowfall in many areas, so it would be a desert for purposes of precipitation.

Alien World Generation - If designing a new world for your adventurers, there is no need for pages of esoteric tables. Make it up as you go along, but keep it reasonable. If the planet is inhabited, think how your design will affect the culture. For instance, compare the progress of the metal-poor S.Pacific islands with continental metal-rich cultures. Will the weather promote an indoor or outdoor society? Will the major transportation be land, sea or air? Do conditions require unusual evolutionary patterns for life to exist? Aside from the intellectual exercise, there is little point in spending hours generating a planet if none of the characters will ever go there. Make up some adventure possibilities, and then design a planet to fit them. Space is big enough that almost anything is possible.

Creatures - Creatures are usually the non-intelligent animals that occupy a world. They may be malevolent, benevolent, or just not care. This usually depends on whether they are hungry or not.

Creature Format - Creatures will have a format like that below. Blank forms are available for making a more compleat bestiary than the small one available.

Name:

Strength	:	Bravado	:	Length/Height:	
Dexterity	:	Perception	:	Mass:	
Constitution	:	Appearance	:	Max velocity:	
Intelligence	:	Stamina	:	Preferred habitat:	
Willpower	:	Spec. Attacks	:		
Body Points	:	Bruise Points	:	Armor Material:	
Speed	:	Armor Value	:		
Size Var.:		Food Value	:		

Notes: _____

All Attributes and Secondary Attributes serve the same purpose as those for humans. For creatures with purely animal intelligence and cunning, the Intelligence will be followed by an "A". Genetically engineered animals may have intelligences equal to or greater than some humans. Likely candidates for this would be chimps, dolphins and perhaps dogs. For most purposes an animal intelligence is equal to 1/10 its value in human intelligence as far as creativity and cleverness go. Other characteristics are as follows.

Length/Height - This is the longest resting dimension of the creature in meters.

Mass - This is the mass of the creature in kilograms.

Max Velocity/Phase - This is the maximum distance the creature can move in one phase.

Preferred Habitat - This will be in the form of 3 letters, separated by a slash. The first letter is either E, equatorial, T, temperate, or A, arctic. The second is P, plains, H, hills, or M, mountains. The last is D, dry, N, normal, or W, wet. This indicates the preferred habitat of the creature. A "*" in any position means no preference.

Special Attacks - Any attacks the creature has will be here. Check the notes for special attack information.

Armor Value - The natural armor value of the creature.

Food Value - How many man/days of rations can be gotten from a properly butchered creature.

Size Variation - The maximum or minimum size multiple the creature can vary from the norm.

Armor Material - The type of armor and the number of locations of same that can be gotten from a dead creature.

Notes - General info pertaining to the creature.

Size Variations - Randomly encountered creatures may be larger or smaller than the norm. For random variation, roll on the appropriate tables below. STR, CON, WIL, BRV, PER, STA, Mass (therefore BP and BR), Length/Height, Max Velocity, AV, Food Value, Armor Material, all attacks, and all modified by these will be modified by the variation. To determine if there is a size variation, roll 1d10 on the first table. If there is a size variation, roll 1d10 on the appropriate table to see the magnitude. Size variations always round up.

Size Variation (1d10)

Roll	Direction
1-2	Smaller
3-9	No change
10	Larger

Down to -15	
Roll	Var.
1-4	-5
5-7	-10
8-10	-15

Down to -10	
Roll	Var.
1-5	-5
6-8	-7
9-10	-10

Down to -5	
Roll	Var.
1-6	-2
7-10	-5

Up to +10	
Roll	Var.
1-5	None
6-10	+10

Up to +20	
Roll	Var.
1-7	+10
8-10	+20

Up to +40	
Roll	Var.
1-5	+10
6-8	+20
9-10	+40

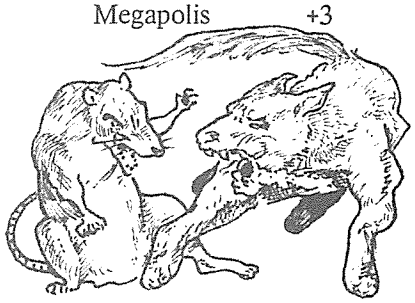
Up to +100	
Roll	Var.
1-4	+10
5-7	+20(2x)
8-9	+40(3x)
10	+100(6x)

General Random Encounters - Below is a general random encounter table, usable just about anywhere. It is intended to help you use your imagination or give you an excuse to be arbitrary.

Small creatures are things like squirrels, rabbits, snakes, cats, or dogs. Medium creatures would be deer, large dogs, wolves, or other man-sized creatures. Large creatures would be bears, lions, moose, elephants, etc. Intelligent creatures are usually humans, and a natural hazard could range from quicksand to getting mugged, depending on area.

Tech Level	Modifier
1	-11
2	-10
3	-9
4	-8
5	-6
6	-4
7	-2
8	+0
9	+2
10	+4
11	+6
12	+8
13+	+10

Area Type	Modifier
Wilderness	-5
Rural	+0
Town	+1
City	+2
Megapolis	+3



Random Encounter Table(1d20)

Roll	Encounter	Roll	Encounter
1	Medium Creature	11	Intelligent Creature
2	Large Creature	12	Medium Creature
3	Small Creature	13	Small Creature
4	Natural Hazard	14	Medium Creature
5	Large Creature	15	Small Creature
6	Intelligent Creature	16	Natural Hazard
7	Medium Creature	17	Intelligent Creature
8	Small Creature	18	Intelligent Creature
9	Natural Hazard	19	Intelligent Creature
10	Intelligent Creature	20	Intelligent Creature

Non-Player Characters - Non-Player Characters, or NPC's, are the inhabitants of the world that aren't player characters. The GM must run their personalities as that person would react when in contact with the characters. Taking into account the diverse cultures and alien viewpoints of this future society can be difficult. Don't try to confuse the players with obscure terminology and futuristic slang, just to give your campaign a certain "feel". As inhabitants of this future, the characters will automatically know what certain common terms mean, whereas the players may not. However, if the background of a character does not prepare them for encounters with certain subcultures, confusing the *player* might be the best way to get realistic results from the *character*. Asking an NPC to repeat something might tell the NPC that the character is an "outsider", something the player might not want. However, if the character doesn't ask, they could misinterpret what was said, maybe leading to more trouble later.

NPC Format - NPC's will have all the attributes and characteristics a player character has, plus a short equipment list and a list of skills that are likely to be used. Also included are personality notes for reference, and a short history, if needed. Sample NPC's are in the back of the game, with blank NPC sheets for your personal use.

General NPC Reactions - The general reaction of a random NPC to a character is determined as follows. Add both character's Appearances. Then roll 1d50.

If less than the total, the reaction is favorable. If failed, the reaction is ambivalent. If greater than twice the total but less than three times the total, the reaction is unfriendly. If the roll is greater than three times the total, the reaction is hostile.

The intensity of the reaction is inversely proportional to the chance of getting the reaction. Also, take into account different standards of appearance. While a business suit would be good in a business setting, it might not be good on the street, and mirrored contacts and steel fingernails probably wouldn't impress a corporate VP.

These reactions may be modified by actions ("Drinks are on me!") or reputation ("You know who I am...feel lucky?"), and the more a character blends in or is similar to the NPC (clothing, language, etc.) the better any reaction is likely to be.

Creature Reactions - Creature reactions are done the same way, but ambivalent or positive reactions usually mean the creature leaves. A hostile reaction usually means the creature will act threatening, but will not attack unless provoked. Reactions of creatures should be modified for circumstance, like stepping on a snake.

Automata - While true artificial intelligence (AI) is uncommon in the SpaceTime universe, highly sophisticated computers are everywhere. While they might be without creativity or feelings, they are sophisticated enough to mimic these, and a wide variety of other human traits. Most computers designed for public access (answering services, etc.) are designed to have a certain "robotic" quality, as many people still become offended if they believe they were talking to a person, and find out it isn't. This is purely artificial, and computers can perfectly duplicate all human speech patterns they have knowledge of.

Most robots are not anthropomorphoid (human-like), but rather are designed for specific functions. These may cater to aesthetic appearance, such as for household use, or be starkly functional, like a cargo handling robot. Also, robots are only used where they are more practical than people, because people are cheaper for many jobs, and much more flexible in their decision-making.

For game purposes, robots may be NPC's, creatures, vehicles or a combination of the above. A simple robot delivery van would be little more than a special purpose vehicle, but a cultural liaison robot might sophisticated enough to be an NPC as well.

A robot capable of self-reprogramming and capable of mimicing human behavior would be an NPC, while a rampaging computerized tank would probably be a creature or vehicle.

For creature/human robots, two locations must be designated as the CPU or "brain" of the device. If hit, treat as a skull hit. Four locations must be designated as power sources or control centers. These are treated as torso hits. Apply damage as you would for a living creature. Use any appropriate hit location table. Automata will not take any S,D,U,or O results. A result of B means that the impairment is doubled, and an F result is a "kill". Bruise Points have absolutely no effect.

For vehicular robots, treat the operating computer as one or more passengers, depending on its sophistication. If the robot is hit, treat as a vehicle hit, and if the computer is hit, treat as any other piece of damaged equipment. If it breaks, the vehicle is no longer controlled.

Robots will vary in the Attributes they possess or need. They will have no recovery unless self-repairing, hence their Constitutions will be 0. Even self-repairing robots may simply work like equipment repair, again with a Constitution of 0.

Stamina represents the power supply of the device. Rolls are not made by automata for Stamina. They lose a point of Stamina any time a roll would have to be made, but do not have effects on other Attributes. When Stamina reaches 0, they run out of juice and stop.

Aliens - Man is not always the dominant intelligent form on a planet. In SpaceTime, the area of known space is populated entirely by humans, but the existence of the Bogeymen proves that we are not alone in the universe. Perhaps your particular campaign will have alien races to begin with, or maybe a First Contact will be made in the course of play.

Aliens are just that...alien. Non-human intelligences should be more than humans in funny looking costumes. It is highly unlikely that the course of an alien civilization will closely parallel ours. Language, customs, social structure, government...all will be different in varying ways, though possibly recognizable. Any race you have seen in other games or works of fiction can be incorporated into a SpaceTime campaign, and if the alien psyche lends itself, alien PC's are possible.

Alien Character Generation - As GM, you need to figure out how character generation will differ from normal humans. In any game, many players will choose whichever race, profession or character type that gives them the greatest game advantage. So, if your aliens are noticably superior than humans, more players will opt for aliens, and if humans are superior, vice versa.

Simple changes in the standard character generation are Attributes and skills. If an alien race is better at a particular Attribute than humans, it should be cheaper. If they are worse, it should be more expensive. The best way to do this is say that the cost is for a level a given amount lower or higher than the base.

Example - If your aliens are much stronger than humans on the average, say Strength costs an amount equal to a Strength of 2 points lower. So, a Strength of 10 costs the number of points for a Strength of 8 instead.

The same applies to skills. Certain branches or fields of knowledge may be more easier or more difficult for an alien mind. A race of coldly calculating aliens may find it more difficult to learn intuitive or creative skills, but very easy to learn scientific disciplines.

The Appearance of aliens is based on how the alien looks/smells/tastes to others of that race. The farther from human the alien is, the lower the human-based Appearance. From a human viewpoint, all aliens of a given race will have about the same visual Appearance. How friendly an alien is will only be found out through character interaction.

Alien physiology should have its advantages and disadvantages. An alien with four arms has a definite advantage in melee combat. This could be countered by giving fewer Skill or Attribute points, or perhaps giving a physical disadvantage like a slower running speed. If a certain physical characteristic gives an advantage in combat, it should definitely be offset by a disadvantage elsewhere in the character generation. Also, any advantage or disadvantage should be clearly defined, and the player should know about the effects. For instance, can the four-armed alien use four weapons at once? If not, why? If so, what kind of modifier applies in combat? Be prepared to make decisions on the spot, as characters discover talents that you hadn't considered.

Drugs - Drugs, whether beneficial or harmful, may come into play. Drugs are complex, and the format and effects reflect this to an extent. Bear with this. Drugs will follow the format below.

Name	- Maldemerol
Infiltration Method	- C
Normal Dose	- 1g
Effect Threshold	- 1 minute
Effect Time	- 10 minutes
Maximum Effect Time	- 1 hour
Effects	- (Nausea, Dizziness)4
Treatment	- Total inactivity
Notes	- Causes total appetite loss

Name - Name of drug

Infiltration Method - This is how the drug is administered. There are 4 methods.

1.Ingestion(I) - The drug must be swallowed to have effect.

2.Respiration(R) - The drug is an aerosol or a gas and must be inhaled. Inhalers are common.

3.Contact(C) - The drug will work through simple skin contact. Skin-patch drugs are common.

4.Injection(N) - The drug must enter the blood-stream directly, either through injection or a wound.

Normal Dose - This is the dose that will have the given effects on a 100kg or less person. For each 1/2(u) of this mass, the dosage may be halved. Multiples or fractions of this dosage will multiply or divide the Effect Threshold, Maximum Effect Time, and Effects(n). For Effects, the magnitude, not the quantity, is affected. Maximum Effect Time may not be changed by more than a factor of 3.

Effect Threshold - This is the amount of time before any effects of the drug are felt. If a Constitution roll is made at this time, the effects will not be felt for another period equal to the Effect Threshold. After this time, the roll must be made with a -5 modifier, cumulative if this roll is made. If the roll is made 4 times, the drug effects will not be felt.

Example - An effect threshold of 10 minutes means that 10 minutes after the drug enters the body, the character must make a Constitution roll to avoid the first effects.

Effect Time - Every time period equal to the Effect Time, the character must make a Constitution roll to avoid the next effects of the drug. If the roll is failed, the next effect of the drug is felt.

Example - An Effect Time of 5 minutes means that every 5 minutes, the character must make a Constitution roll to avoid taking the current effect of the drug.

Maximum Effect Time - The time after which the drug will no longer have any effects. Impairment is recovered as Body Points, but the base time period is 1/10th the Maximum Effect Time.

Example - A Maximum Effect Time of 5 hours means that the character will stop taking any new effects 5 hours after receiving the drug. Any effects will wear off like regular impairments, in this case with a .5 hour time increment. So, if the drug had given the character a -10 modifier to Strength, this would wear off like any other -10 impairment, with the previously mentioned half hour "healing" period.

Effects - The effects of the drug. Effects in parenthesis are repeated the number of times at the end of the parenthesis. Sequential effects are separated by a dash, and simultaneous effects are separated by a comma.

Example - (Nausea)3-Vomiting, Pain-Dizziness means the character will experience three episodes of nausea, followed by vomiting *and* pain, followed by dizziness.

Treatment - The treatment to counteract the drug. Once administered, all Constitution rolls get a +10 modifier.

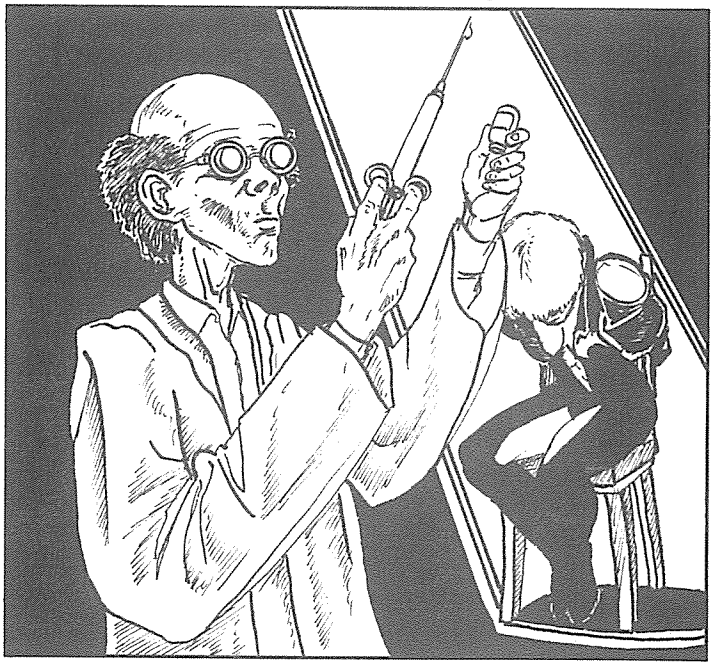
Notes - Other pertinent information on the drug.

Drug Effects - Drug effects affect the entire body, and may affect Attributes, Body Points, Bruise Points, and skills. The effects are modifiers to the listed stats, and are cumulative, not treated as separate impairments.

Effect Format - Only the effect will be given with the disease or drug, so the effects must be looked up. The effect name will be given first, then any statistic affected, and the maximum modifier that can be applied to that statistic. These will be abbreviated follows. MMD means Maximum Modifier.

Example - A MMD of -10 means that no matter how bad the character fails Constitution rolls, the total effect of that drug on an Attribute, Skill, etc. will not exceed -10.

The drug effects on an attribute, skill or characteristic may not be greater than this for any effect. Damage to BP or BR is counted as damage rather than a modifier. This is then used to get a Damage Level.



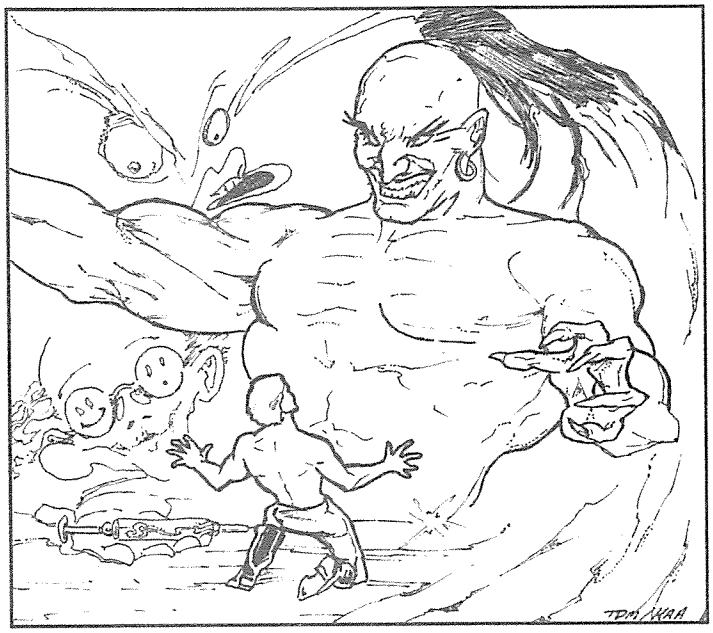
Effect Listing - Following are the drug and disease effects. Either by themselves or in combination, these should be able to duplicate any disease or drug effect. Some drugs have special effects, or serve only to prevent other effects. These "specials" will be described in the "Notes" section.

Nausea - BRV, APP, PER, SKL, MMD
-1d4 -1d4 -1d3 -1d2 -13
Notes - If more damage in BP or BR is done to the character's abdomen than 1/2 their Constitution, vomiting will occur.

Vomiting - STR, CON, BRV, APP, PER, BRP, SKL, MMD
-1d2 -1d3 -1d4 -1d4 -1d3 -1d4 -1d6 -15
Notes - Character must rest for 1d3 minutes after vomiting unless a Willpower roll is made.

Dizziness - DEX, PER, POW, SKL, MMD
-1d3 -1d3 -1d2 -1d2 -15
Notes - If Dexterity drops to 1/2(u), all actions will require a Dexterity roll to complete.

Pain - All but BP and BR, MMD
-1d2 -10
Notes - When Willpower drops to 1/2(u), the character must make a Willpower roll to avoid losing consciousness.



Diarrhea - APP, STA, MMD
-1d2 -1d2 -5
Notes - The character must stop to relieve themselves every 1d% minutes.

Itching - APP, MMD
1d3 -5
Notes - Scratch, scratch.

Stupor - INT, WIL, PER, SKL, MMD
-1d4 -1d4 -1d3 -1d4 -18
Notes - When Intelligence and Willpower drop to their minimum, the character becomes a mindless zombie, unable to act unless told what to do. The character is allowed to make one Intelligence roll per turn. If the roll is made, they may act for 1d10 phases before lapsing back into stupor. Only one attempt may be made per turn.

Cramps - SKL, BRP, BDP, MMD
-1d2 -1d3 -1d2 -15
Notes - Cramps may affect a specific location.

Paralysis - STR, DEX, SKL, MMD
-1d2 -1d2 -1d2 -20
Notes - Paralysis counts as a whole body effect, although certain locations may be affected more than others. An example would be being struck by a dart or weapon. In this case, one area (head, torso, arm, leg) will be affected double. Paralysis affects running speed as it does Strength.

Antibiotic
Notes - Used against any wound or damage classified as an infection. It will have a rating from 1 to 10. In the hands of a physician, it will be an addition to their Medical skill for purposes of preventing long term Eventually Fatal results. In the hands of a layman, it has half(d) this effect.

Relaxant - STR, WIL, APP, SKL, MMD
-1d2 -1d2 +1d2 -1d2 -10,+5
Notes - This can be used for drunkenness.

Depressant - WIL, APP, PER, MMD
-1d3 -1d2 -1d3 -6
Notes - Character may become morose and moody.

Stimulant - STR, BRV, PER, STA, SKL, MMD
+1d2 +1d2 +1d2 +1d2 -1d2 -10,+5
Notes - Character will be feeling more intense emotions than normal.

Coma
Notes - All Attributes are lowered to 0. Character will be unconscious for 1d10 x 1d10 x 1d10 days, and may be mistaken for dead unless a Medical skill roll is made. Three attempts may be made. If all are failed, the character will be presumed dead by comrades.

Anesthetic - WIL, SKL, MMD
+1d3 -1d2 -15,+8
Notes - The character is feeling less pain, and thus can tolerate damage better.

Tremors - DEX, SKL, MMD
-1d2 -1d2 -15
Notes - Dexterity is treated the same way as it is for Dizziness.

Convulsions - All, MMD
-1d6 -16
Notes - No normal actions are possible during convulsions. If a character receives an Eventually Fatal result because of BP damage, they have swallowed their tongue and begin to suffocate. A successful roll on any medical skill will negate this. Other damage to the character is normal, as the muscle contractions can snap bones and pull ligaments.

Blindness - PER, MMD
-1d3 -20

Notes - When Perception reaches 0, the character is blind, and must make all Perception rolls based on other senses. If Perception goes to 1/2(u) normal, the character must make Perception rolls to see anything relating to a skill.

Deafness - PER, MMD
-1d3 -20

Notes - When Perception reaches 0, the character is deaf and cannot make Perception rolls based on hearing.

Weakness - STR, STA, MMD
-1d3 -1d3 -16

Notes - The character will feel excessively tired, but sleep will not help.

Anoxia - STA, BRP, BDP, MMD
-1d3 -1d6 -1d3 -20

Notes - When Stamina reaches 0, the character will go unconscious and be counted as receiving an E2 result.

Hallucinogen

Notes - The character will be unable to act coherently while under this effect. Roll 1d20 to see what actions the character takes for each effect period. Some hallucinogens will have a number to modify this roll by.

Roll	Effect
1-2	Character will be lucid and be able to act normally.
3-16	Character sits and does nothing.
17	Character wanders aimlessly, but is jumpy and sees things that aren't there.
18	Character believes they have super powers that they don't (flight, invulnerability, calculating 8x8 determinants in your head).
19	Character will flee screaming from unseen terrors.
20	Character goes berserk, attacking randomly with anything handy.

Unconsciousness - BRP, MMD
-1d6 -20

Notes - The damage is treated as cumulative, the character taking effects of each Damage Level as reached.

Notes on Infiltration Methods - Up to .5 grams of a substance may be placed on a dart or arrowhead. 2 Body Points must be done to deliver the full dose. For blades, 1 gram may be applied per 10cm of blade. For multiple hits, assume each removes the drug from one 10cm blade section.

Designing Your Own Drugs - Designing custom drugs is just a matter of figuring out what you want it to do, and filling in the blanks. Most drugs will have a treatment to counteract the effects. All of the drugs in the drug listing are custom designed, although some are similar to existing drugs.

Diseases - Diseases, like drugs, may come into play. Planetary authorities usually require extensive vaccinations at least a month before arrival at a civilized planet, and full medical documentation to prove no unknown organisms are being brought in from outside. Still, diseases mutate and change, and explorers setting foot on a new world always have the chance to catch something they weren't prepared for. Exploration teams almost always face quarantine upon return, until they have been checked over in minute detail.

As with drugs, diseases have a format which tells everything that needs to be known about the disease.

Name	- Tastru flu
Contagion Factor	- 10
Infiltration Method	- R
Incubation Time	- 1 week
Effect Time	- 1 day
Maximum Effect Time	- Chronic
Effects	- (Stupor)4
Treatment	- Remove infection source
Notes	- Victim is very gullible

Name - Name of disease.

Contagion Factor - The chance in 20 of contracting the disease if exposed to the proper infiltration method. Any Constitution over 10 may use the amount over 10 as a negative modifier to this roll. The converse applies for Constitutions below 10.

Infiltration Method - Identical to that for drugs.

Incubation Time - Equivalent to Effect Threshold.

Effect Time - Identical to that for drugs.

Maximum Effect Time - Identical to that for drugs.

Effects - Identical to that for drugs.

Treatment - Identical to that for drugs.

Notes - Identical to that for drugs.

Designing Your Own Diseases - About the same as designing custom drugs. Many diseases will pick up nicknames, usually based on where they were first discovered, like the "Fomalhut flu". A few weird new diseases are on the disease listing.

Psionics

Psionics - In SpaceTime, psionic or mental powers are *entirely* optional. Characters with these abilities will find that they are not very powerful, and of limited use.

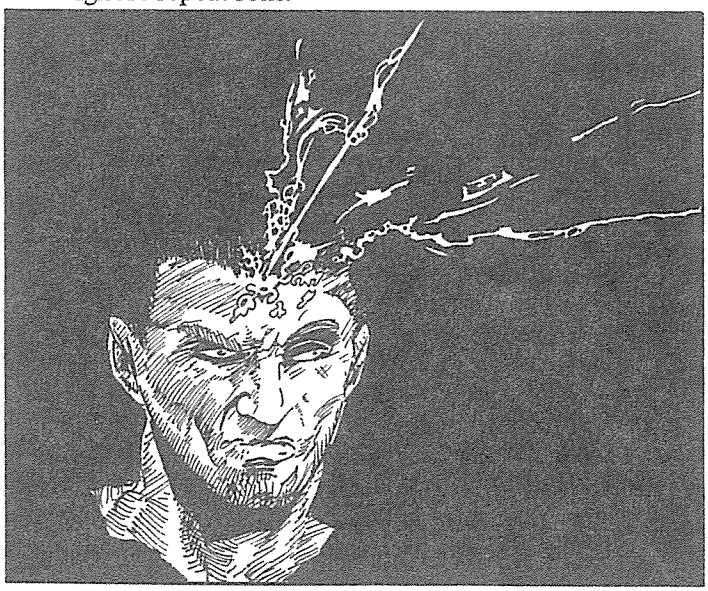
On most worlds psionic powers of a sort exist, though only in trace amounts. Perhaps it originates in the large part of the brain (larger in some than in others) that is unused. In some worlds it is used to its fullest, and on others remains unknown. The potential for the ability seems to be genetic, and its prevalence may have depended on the historical background of the planet. In a place where such power was considered evil, it would be suppressed. However, if persons with these abilities were honored or respected, then it would be more likely that such individuals could meet, marry and pass the ability on to the next generation. On Earth, native ability is fairly rare, although many individuals have potential. The average Power for Earth-based characters is about a 6.

Psionic Ability - Psionic ability in useful amounts is rare, especially on the part of player characters. Each character will have a Power attribute to represent any psionic ability or resistance to same that they might have. This is bought as an initial Attribute if you will use Psionics in your game.

Power	Power Level
0-9	0
10-20	1
21-35	2
36-55	3
56-80	4
etc.	

A Power Level of zero means the character has no potential at all, and since Attributes are only increased through use, their Power will never increase.

If a character has a Power Level of 1 or more, and the GM allows them to start with active Psionics, roll to see how many abilities are possessed, and then roll to see which ones. Ignore repeat rolls.



Roll	# of Psionic Abilities
01-25	1 Passive
26-44	1 Active
45-64	2 Active
65-79	1 Passive, 2 Active
80-90	1 Passive, 3 Active
91-93	2 Passive
94-95	1 Active, 2 Passive
96-97	2 Active, 2 Passive
98	3 Active, 2 Passive
99	4 Active, 2 Passive
00	Choice of any 3

Roll	Active Abilities
01-07	Telekinesis
08-14	ProbMod
15-20	Pyrokinesis
21-25	Lightning Calc
26-40	Empathy
41-50	Telepathy
51-60	Foresight
61-70	Clairaudience
71-85	Clairvoyance
86-92	Astral Project.
93-97	Cell Regen.
98-00	Teleportation

Roll	Passive Abilities
01-20	Rightness
21-55	Empathy
56-85	Invisibility
86-90	Luck
91-00	Danger Sense

Whether or not a character starting the game with potential actually has any abilities is solely up to the GM. The potential may be unknown, or the character is unable to learn how to use it on their own. This could force them to seek training, while avoiding the pitfalls of anyone who fears these powers, or who would use the character to achieve their own ends.

How to use Power - A character wishing to use an ability must make an adjusted Willpower roll. The character must see how many points of Willpower they can "spare" at the moment, and then roll equal to or less than that amount to get the effect. Willpower used by certain actions is below.

Willpower	Action
0	Lying down or sitting
1	Standing or eating
2	Making small talk
2	Walking on even ground
3	Walking on uneven ground
3	Running on even ground
4	Running on uneven ground
(Skill/2)	Using a skill

This reflects the concentration required to use the power and the distracting effects of other activity. Characters using all their Willpower are obviously concentrating, and anyone looking for power use will notice it. The more Willpower unused, the more naturally the character acts.

Area of Effect - Most abilities are point effect, meaning that they affect a small area, like a hit location or single individual. A larger area may be filled. To fill a hex with an effect costs will halve the effect. Halving the effect again allows the character to fill 4 hexes. The hexes must be touching each other. For targeting purposes, a hex is an extremely large object.

Effects - Most powers have an effect equal to the Willpower used on them, times the Power spent. A character can only spend their Power Level in any one Phase. The effect is divided by the Power of the target, which is always counted as at least 1. This ratio is a measure of success, and usually a ratio of less than 1 indicates failure of some type. Powers use the RC4 range table if it would apply to that power, and the character is treated as having a skill of 10 to target the power with. If RC4 doesn't apply, range is unlimited, and can be interstellar with no time lag.

Psionic Abilities, Active - Active psionic abilities are those which must be consciously thought about to be used. Active abilities cost Power to use, and cost 1 point to use per level used per phase. These are recovered at 1 per hour.

Example A character with a Power of 12 could use it at Level 1 for 3 phases before their Power went to 9. Their Power would be at Level 0 then, so they could no longer spend any points. In addition, a character automatically has to make a Stamina roll as a result of the energy burned, with a minus of the amount of Power used.

Telekinesis - The ability to move matter by mental pressure or the channeling of other forces. Each point of effect may move 10kg, or count as an AV of 1 over the area of effect. If used to move a living object, divide the effect by the Power of the target.

Pyrokinesis - The ability to heat objects by mental power. Each point of effect will raise the temperature of the air in the area of effect by 5 degrees C per phase. This may quickly cause surface effects on flammable substances.

Telepathy - This is basically mind reading, and can be two-way if the user desires it. Range is line of sight, and if the target makes a Perception roll, they realize someone is reading their mind and can break contact. Only surface thoughts are read, so reading from uncooperative individuals is difficult. Communication is at the same rate as speech, and is restricted to languages both parties know. Otherwise, only simple concepts may be communicated, like mental gestures.

Lightning Calculation - This is the ability to perform complex calculations in your head faster than most people can with a calculator. (Power+2) is the number of significant digits that an answer can be gotten to in one phase. The maximum number of digits is (Powerx2)+3, and will take one extra phase per digit. The net effect is that Power may be used as a positive modifier to any purely Intelligence based skill. This has no Power cost to use.

Empathy - This allows a character to project emotions or feelings. The effects of this are that the character may use their effect as a modifier to Bravado or any skill involving communication.

Example - An effect of 30 against a person with a Power of 6 would be 30/6=5. So, the person being targeted would make Bravado rolls at +5 or -5, depending on the intent of the person using the power.

Precognition - This is a variation of Lightning Calculation, with actions computed instead of numbers. It will allow the character to chart the best course of action (using known information) for the group for a period of hours up to the effect. This is not detailed, but only gives the most general guidelines. An example would be "Given our situation, should we hide from the authorities, or try and get off the planet?" or "Whose side is least likely to kill us if we mess up?". This is most useful when the GM needs to direct the party in a given direction, and the GM must be very careful when a player chooses to use this power.

Clairaudience - Far hearing. The ability to hear at distances greater than humanly possible. It is an inferior version of Astral Projection. The character may use the effect as Perception on any area the character knows. If the character is not familiar with the area, they must make an targeting roll with modifiers to successfully target the area.

Modifier	Amount
Area seen several times	+2
Area seen once	+0
Area seen in picture	-1
Area well described	-3
Area poorly described	-7
Area only heard of	-13

It is important to remember that the Perception is only over the area of effect, hence the importance of targeting accurately. A larger area can be targeted with a low Perception (down to 1), but only things that don't require a Perception roll will be noticed.

Clairvoyance - Like Clairaudience, but allows vision. It is identical in all other respects, but the character can actually see where they are if the targeting roll is missed, which makes it easier to get to the correct location. A very popular power for any sort of espionage, countered mainly by concealing the location of sensitive areas, or viewing sensitive data only via brain taps, hence leaving nothing to see.

Astral Projection - Astral projection allows full sensory input from somewhere you aren't. Targeting is as for Clairaudience. To do this, the character must prepare and meditate for 5d10 minutes in an atmosphere free from distractions. After this is done, the character may use the power. Each point of Power used will allow a turn of viewing a location. To change locations, another point must be spent. This is more difficult to counter than Clairvoyance or Clairaudience, but the same techniques are useful. One astral person can block another from a given location by their presence, and this method is sometimes employed in very important situations. Rumors exist that it is possible to astrally project into cyberspace, a situation that has a variety of interesting ramifications, none of which are talked about, but all of which are being examined. For instance, can a true artificial intelligence project *out* of cyberspace, or can you astrally crack ICE?

Teleportation - The ability to get an object from point A to point B without crossing intervening space. The character may teleport themselves and objects without Power within the radius of effect a distance up to 100m per point of effect. The area teleported to must be in direct view, or the attempt will fail. The character can't teleport into anything that is denser than water, and anything at the target site will be teleported back to the location the character left from.

Cellular Regeneration - A character with this ability can accelerate their own healing rate. For purposes of healing, they may multiply their Constitution by the (effect/10). Each treatment lasts a number of hours up to the effect. The character will need to eat and drink proportionately more, or no healing will occur. This discipline may be reversed, slowing down the character. Points are removed from Constitution *and* Speed. All Effect Times for drugs and diseases will be proportionately larger, and food, water, and air requirements will be less. If Speed goes to 0, the character is essentially in suspended animation and will require no food, water, or air for the duration of the effect. The character may define any effect time up to 12 hours, and may snap out of it at any time, but Speed is only regained at 1 point per turn.

Probability Modification - A person with this ability can alter random events to their favor, and change the probabilities of non-random events. The character may use Power (up to their Power Level) as a modifier to any dice roll or rolls in the area of effect, at any time before they are rolled. The event modified must be in direct sight.

Example - A person with a Power Level of 2 can modify any die roll in the area of effect (effect of at least 1) by +2 *or* -2. This could be chance to hit, damage, damage effect, NPC reactions, etc.

Psionic Abilities, Passive - Passive Psionic abilities are those which work automatically, and require no effort on the part of the user. Passive abilities cost no points to use, and usually operate in the area surrounding the character. The radius varies, but is always optimum for the character.

Danger Sense - This is a combination of subconscious analyzing of a given situation combined with unconscious empathy with any creatures in the area. The net effect is that the character gets a modifier of their effect to Perception vs. the danger, and the character can sense the danger approaching up to their effect in seconds. They also get a Perception roll vs. the danger even if they normally wouldn't. This isn't much, but it is useful.

Empathy - Passive Empathy is the ability to feel what other creatures feel. Such a person can use their Power Level as a modifier to Bravado or communication skills, as they have a better idea of what to say or do to influence the creatures dealt with. They can also pick up very strong emotions within the radius of effect, and get best results if searching for a particular emotion or feeling.

Invisibility - As a psionic ability, this does not make the character transparent, but less noticed. People/creatures just don't notice that the character is there. The base effect of the character (Willpower available x Power level) acts as a negative modifier to Perception to all creatures which could perceive the character, regardless of whether they are in the "area of effect" or not. No one else is any harder to spot. Notice that no immunity to devices (alarms, trip wires, etc.) is stated or implied. Certain requirements must be met before Invisibility may be used. It must be a stress situation, a situation where the character is under some duress. The character must also spot the creatures before they see the character, so the character knows not to be seen.

Luck - Luck is everything, a combination of all psionic abilities to make things work for the character. If the character is ever in a life threatening situation (where they would probably die without dice fudging), they should make a Power roll. If they succeed, the GM *should* alter the circumstances so that the character is not killed. Wounded, maybe. Exactly events are up to the GM. Permanently losing a point of Power is not too high a price to pay for a life-saving event.

Rightness - Rightness operates similar to Danger Sense, but doesn't warn the character of physical danger. It just gives you a funny feeling when all is not as it should be. On a Power roll, the character may notice that something is wrong with a given place, setup, idea, etc., and may make an Intelligence or appropriate skill roll to deduce the cause.

Artificial Assist of Psionics - There are devices that can be made to assist the natural Power of a character, or to give such abilities to those without them. This could change the cost of using a power, temporarily add points to the Power of a character, or allow certain specific effects for the power. This can range from "magic" items or artifacts to high-tech electronic devices (like anti-Psionic jammers). They are probably scarce, and their very existence is privileged knowledge. In the case of artifacts, even the principles of operation may be unknown, though the device *might* be duplicated by building exact copies.

Mass Psionics - Any number of psionically gifted people may link up for mass effect. This is accomplished by physical contact between the individuals to form an unbroken chain. One person is leader by consent of the others in the chain. This leader may use any of their own abilities at a level equal to the sum of the Power in the group. It is not necessary that the members of the chain have the ability being used, or even be able to use it, although the leader and all members of the chain must be at least Power Level 1 to begin with. All costs are first taken from the psionically weakest members of the group. When they reach 0, the next lowest members are used, etc. A member of the chain must be conscious to be used. If any member backs out, refuses consent, or loses consciousness, the chain breaks at that point, and no one past it may be used.

Character Improvement

Improving Your Character - As your campaign progresses, your characters will gain in experience, in Skills, Attributes, and just plain savvy. They will also probably pick up quite a number of scars, broken bones, ruptured organs and enormous medical bills as well.

Improving Skills - Only 1 attempt to improve skills is allowed per adventure. If the adventure is longer than 5 game days, you should consider allowing more than one roll. Any skill used in that period gets a chance to be improved. For each skill to be improved, roll 1d20. If the roll is *greater* than your current skill in that area *or* a 20, the skill may be improved. Do the same for any specific skill used. If the skill can be improved, roll 1d3. If the skill was used successfully, roll another 1d3. If it was used successfully in a combat situation, roll another 1d3. So, successful use in combat is 3d3 points towards skill improvement.

Add the sum of the dice rolls to the Skill Bank for that skill. If the total in the Skill Bank for that skill is equal to or greater than the difference in skill level cost modified by the Difficulty Rating *(optional)*, the skill may be improved 1 point. Any remainder is left in the Skill Bank. If sufficient points to raise the skill are not achieved, they are saved in the Skill Bank until later experience can raise the skill.

Example - A character with a RIFL skill of 9 used it successfully in combat, and rolled a 10 or better, allowing skill improvement. Rolling 3d3, the total is 7. This character had 13 points in their Skill Bank for RIFL, so the total is now 20. The cost difference between a skill of 9 and 10 is 19 points, so they can raise their skill by 1 point, to a 10, and have 1 point left over in the Skill Bank for that skill.

Practice - When using practice to improve a Skill, at least 20 hours must be spent over at least 5 days for skills that do not use material. For skills that do use material, at least 100 units of material must be used. A unit of material could be a bullet or arrow (300 bullets for automatic weapons), a given amount of welding rods, etc. For material using skills, an equal amount of time must be spent not using the material. This represents coaching or studying time (practicing weapon draws, quick reloading, field stripping, etc.). A character using practice rolls normally for improvement, and if the skill can be improved, gets 2d3 points towards improving it.

Example - Mark Merc buys a new pistol, and wants to become good with that particular weapon. So, after practicing fast-draws, basic marksmanship, speed reloading and field stripping, he rolls 2d3, getting a total of 5. Since he devoted the effort solely to one weapon, only his specific skill will increase. A skill level of 1 costs 1 point, and a skill level of 2 costs 4, for a total of 5 points. From now on, when using that pistol, he has a Specific Skill of 2 to add to his basic Pistol skill. But, it only applies to this weapon, or others of that make and model.

Note - Especially with weapon skills, if a character practices with just one weapon, they only gain a specific skill with that weapon, rather than an overall addition to skill. Variety of practice is the key to overall skill.

Bonuses and Minuses - If a character has an exceptionally good or bad governing Attribute for a skill, the modifiers shown in that section can be applied to improving the skill.

Teaching a Skill - Any character with a skill of 6 or better can teach someone with a lower skill than themselves. For each 3(u) points in the skill, 1 may be added to the 1d20 roll to see if the skill may be improved. Also, 1 may be added to the points gained per 3(u) points of skill. Textbooks used as teaching aids will be given a skill rating for the skill taught, but 1 will be added to the points per 5(u) points of skill.

Improving Attributes - A character may attempt to improve their Attributes. Normally this requires a conscious effort, but normal actions of the character may sometimes be enough. Examples of what is needed to raise the various Attributes is below.

Strength - Weightlifting, carrying at least 30% of your carrying capacity for at least 6 hours a day, heavy manual labor.

Constitution - Healing, fighting off diseases or harmful drugs.

Intelligence - Making brilliant deductions or leaps of logic, doing something to convince the GM you are smarter.

Dexterity - Making lots of Dexterity rolls, practicing several Dexterity based skills and doing well.

Willpower - Making lots of Willpower rolls.

Bravado - Pulling it out of the hole, good use of reputation, succeeding with bluffs or threats that you could never have done.

Appearance - Deliberately trying to improve your bearing, spending extra time each day to improve your appearance. Maximum improvement determined by GM.

Perception - Making lots of Perception rolls, using your wits to guide your senses, noticing things that everyone else misses.

Stamina - Making at least as many Stamina rolls per day as your current Stamina.

Power - Using Power to avert a potentially life-threatening situation.

As with skills, Attributes may only be improved once every adventure, but only if it lasts at least 5 days. If the GM determines that the Attribute may be improved, roll 1d3. If the amount saved up is equal to or greater than 1/4 the Attribute squared, the Attribute may be raised a point. Points may be saved from adventure to adventure if enough are not gained at one time.

Aging - Characters should not need to worry about aging for at least 20 years of game time. Should both your campaign and your characters last that long, they should be able to afford anti-aging treatments to keep them at or near their prime until at least age 70. If they make it that far, they deserve a final world-saving adventure, with a well-earned retirement for the survivors, and a final, heroic blaze of glory for the rest.

Character Death - Characters will eventually die if played long enough. The odds are that a normal person will die of accidental causes in less than 500 years, regardless of their state of health. Adventurers are at significantly higher risk than the average person. As might be expected, this means higher insurance premiums, if you can get insurance at all (especially after a big claim...). Don't worry too much. If the character representing you dies, you can always start over, which is more than can be said for real-life. The new character may not necessarily come from the same place or have the same skills, but you can always play the personality of your choice. It is easy to get attached to characters and mourn their loss, and especially so to a character that has taken years to develop. Just remember that it's only a game.

How to run SpaceTime - **SpaceTime** is a role-playing game whose rules can be expanded to fit any science-fiction setting, but they were designed with a particular one in mind.

The **SpaceTime** universe is not a pretty place, but its ugliness offers a lot more room for adventure than a universe of goodwill and harmony. It is a world of contrasts, many of which are driving forces for the characters. Exploit these contrasts when you describe things to the players. Make them see a gray, polluted sky, smell the food from sidewalk vendors or feel the wind creeping under their coats. Mankind has reached the stars, but primitive aborigines still fight with spears. Medicine can bring people back from the dead, and heal any injury, but cripples abound for lack of money to afford it. The very wealthy can live in luxury for centuries, but look down from skyscrapers onto shanties where people live in poverty, and may not make it past 60.

There is no welfare state, no benevolent government. So, while the world seems hostile, everyone tries to make sure they have someone to lean on. Be it family or friends, people try to make sure they have somewhere to go, someone to turn to if they need help, or to avenge them if killed. At least in this, there may be an improvement.

Technology is everywhere, and easily accessible, but does not solve many simple problems. You can have a wrist computer capable of talking to anyone on Earth, but you still can't get hot water during peak hours. Fusion provides unlimited power, but many power grids are overloaded. Anti-grav shuttles zoom to orbit, but the elevator to the 6th floor won't work. Technology is at your fingertips, but you probably don't understand the principles behind it. Huge resources are there to be exploited, but you may not know how. Everyday technology is far beyond what we of the 20th century call advanced, but your characters may take it all for granted. The cost or availability of technology will have a profound impact on your world. For example, if the cost of personal augments were drastically lowered, everyone might have it, with the social changes a highly modified society entails. Or what if clones could be used as slave labor?

On Earth, a global government exists, but only as a tool of corporations to keep any single one from usurping power. People are very jealous of what they have, and don't want to risk it. Society is highly stratified. The very rich do what they want. The middle class are almost entirely workers for a corporation. They live in corporate housing, go to corporate vacation spots, and will do just about anything to avoid having to live "on the street", although the braver ones go there for illicit thrills. The "street" has a great deal of untapped potential. A great deal of people there work for the corporation at lower levels, and can't afford "good" housing, or don't rate the benefits. There is a vast service economy here, providing specialized services that the large companies do not provide to themselves, or making a living off of the basic needs like food, clothing, shelter, etc. Crime thrives, and people will risk a lot for a little. The worse the living conditions in an area, the less life is worth in general.

The very rich do what they want, the middle class despises/loathes/fears the street, and the street gets by. For one reason or another, your characters will start on the street. They may have been in other places earlier in their lives, but they are now on the bottom. How did they get there? How do they plan to leave? They may be at the bottom, but they don't want to stay there. Desperate men do desperate things, and that is what adventuring is made of. Not only do the characters have to survive, they have to cling to whatever dreams they have. Challenge and adventure is not just a trip from one combat to the next. The characters also face the challenge of what price they will to pay to fulfill their dreams. Money, loyalty, principles and blood are all prices that can be paid, and a challenge to the spirit is just as real as one to the mind or body.

This gritty, seamy world is very big, and it is just one of many. Not all are like Earth. Most are better. Some are worse. All are different. In this difference there is challenge, adventure, danger. Space is *very* large, and neither you or your characters will ever know everything out there. All the puzzles will never be solved, not all the challenges taken. But, you get to choose the road you take, and if you are lucky, the final exit. Good luck.

Sourcebooks - The future world portrayed in **SpaceTime** is typical of the genre called "cyberpunk", or "mirrorshades" fiction. Below is a list of books that may give you ideas or insights on the way this future world might look.

Neuromancer - William Gibson
Count Zero - William Gibson
Burning Chrome - William Gibson
Hardwired - Walter Jon Williams
Voice of the Whirlwind - Walter Jon Williams
To the Stars Trilogy - Harry Harrison
Lacey and his Friends - David Drake
Shield - Poul Anderson
True Names - Vernor Vinge
The Peace War - Vernor Vinge
The Moon is a Harsh Mistress - Robert Heinlein

Movies or TV shows in this genre or with similar high-tech worlds or societies are:

Blade Runner **Robocop**
Running Man **Soylent Green**
Max Headroom **Outland**

Operation Delphi

Operation Delphi is a introductory adventure for **SpaceTime**, designed to give you a feel for this world and background in a way that simple descriptions of culture and technology cannot. If you intend to play in this, read no further. If you have already played it, or do not intend to, you should read it through to gain further insights into the workings of Earth culture, law and government in the late 23rd century.

The Hook - The characters starting the game are chronically short of cash, and their reserves dwindle day by day. They will be looking for work, probably short-term, which pays a decent amount of credit, enough to tide them over until they can find more permanent or lucrative work.

One of the more annoying side effects of a global computer net and massive information processing technology is that advertising can be specifically targeted to an audience with great effect, like sending commercials for products directly into the homes of people whose credit shows they are likely consumers. In fact, a corporation that wishes to put the effort into it can target individuals by their background, work history, psychological profile, etc. The end result of this is that one or more of the characters who has a pocket phone will get a call. If no one has one, the video phone at their lodging will call sometime when they are in. A male or female computer voice, enhanced for best psychological effect, will inform the character that *interesting* short-term employment is available, paying 2,000Cr for one day's work. If the characters know each other already, the computer may suggest that other qualified individuals are encouraged to apply as well. If the GM wants to use this job as a first encounter for characters, then each character will get a separate message, which will not mention the participation of the other characters. The voice is interactive to some extent, but will not mention specifics, except that the character will find it a "challenging and rewarding experience". If a character expresses interest, the job interview is in two hours, at a subsidiary of **Deutzwerk**, on the fringes of the corporate district.

The Line - As the characters arrive, they will check in at the security desk, where they will probably feel a bit uncomfortable, both from looking out of place, or perhaps from a deliberate low-grade subsonic irritation, designed to enhance any existing apprehension. (Characters with previous security experience will know what it is, and be able to compensate) There will be no problems, however any and all detectable (metal) weapons will be detected. These will be confiscated without comment and placed in a locker. The characters will get claim tags to pick them up later, and directed to a nearby conference room.

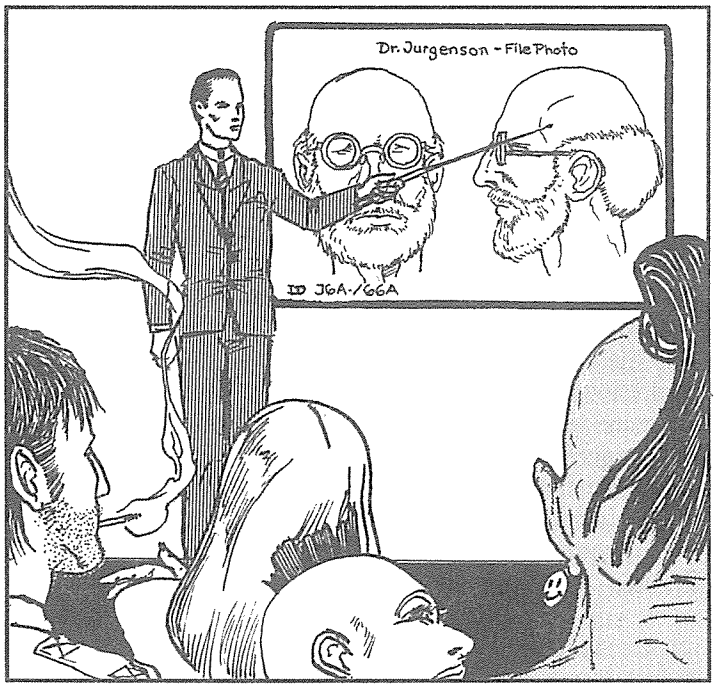
Once everyone is assembled, a clean-cut corporate type will enter and start his spiel.

"I'd like to thank you all for coming. Your attendance shows that you do match our personality profiles to some extent, and are therefore likely to be suited for this job as well. Deutzwerk is a subsidiary of AzBio, and has been asked to help in a delicate matter. Recently, a terrorist group of expansionists called the Force for Territorial Liberation managed to abduct one of AzBio's leading geneticists, a Dr. Martin Jurgenson, demanding that certain lands be released to the public in exchange for his release. Dr. Jurgenson is on the verge of some breakthroughs, and his worth has made the company temporarily change its normal "no negotiation" policy. AzBio conceded, and Deutzwerk is helping facilitate the transfer of Dr. Jurgenson from FTL back to AzBio. FTL has demanded that no corporate personnel be involved. Since we feel that Dr. Jurgenson is being held in a marginally controlled zone, it would be difficult to guarantee his safety out if force was attempted. Hence, we need non-affiliated individuals like yourselves to escort Dr. Jurgenson from wherever he is being held to here. FTL has guaranteed safe passage, and their word has generally been good. FTL has supplied us with a portacom, which they will use to contact you once you have left here. Do not tamper with it. Scans indicate non-standard components of unknown purpose." The breifing official will pause at this point and look over the group, making sure to get eye contact with everyone. "Is there anyone here who does not wish this job?" If anyone says they want out, they will be informed that they are free to leave. Once they get out of sight and hearing, however, they will be "escorted" to the security wing, where they will be kept under lock and key until the adventure is over. If the characters have no further questions, they will be allowed to see a simple dossier on Dr. Jurgenson, which really has no useful information other than his picture and PR blurbs on how his work has helped mankind. Deutzwerk claims no hard knowledge on FTL or its members, although everyone can guess this is a lie. Payment for the job is half in advance, half on delivery, with the veiled warnings of what will happen if they skip out. Actually, the amount of money involved here is small enough that Deutzwerk will just forget the whole matter if a character skips, but a little fear never hurt anyone.

The Sinker - The best lies are half-truths. FTL did abduct Dr. Jurgenson, taking heavy casualties. However, FTL is a front organization, working for Nax Chemie, a major French bio concern. FTL is mainly freelancers, but still on the Nax payroll. Dr. Jurgenson was kidnaped to coerce AzBio to sign legally binding agreements to share the technology that Jurgenson is developing. Obviously AzBio knows what FTL is, but since they do the same thing themselves, they aren't spreading it around. Any character making a roll on "Area Knowledge-Terrorist or resistance groups" could get leads allowing them to figure this out. FTL is smart in keeping direct corporate influence out of the transfer, as it improves their chances of staying alive. As far as safe passage goes, there is none. FTL is banking on the entire matter going unnoticed by those in the area where they are. So, technically, things should go pretty much as described, only the motives being different.

The Problem - Dr. Jurgenson is in hot water. The breakthrough he is working on isn't, but it has been consuming lots of resources, some of which he has siphoned

off in preparation for leaving AzBio and seeking employment elsewhere. When he was abducted, he realized that AzBio would go through all his records, and would spot the embezzlement that would have otherwise gone unnoticed. So, he is unlikely to get a warm welcome when deposited back at Deutzwerk. He is right. AzBio would dearly like to get their hands on him, if only to find a way to recover the several MCr he has managed to hide in dozens of electronic accounts. That is the only reason they want him back. Nax became aware of the scandal when the transfer of information took place between AzBio and Nax, and they would like to get Jurgenson as well, as he has cost them several good operatives, some amount of professional reputation, and quite a few credits. Unfortunately for Nax, FTL has wisely buried itself from everyone's sight to prevent any form of corporate retribution, and no one knows where they are at the moment.



The Way it Goes - Once the characters are ready, whomever the GM feels would be best should receive the modified pocketcom. The characters will pick up their weapons and leave. Any and all weapons will have been altered during the briefing, and now contain micro-transmitters (transmitting power of 1), which are designed to stay passive until hearing a voice matching the pattern of Dr. Jurgenson. At this point, they will not transmit, but wait until exposed to the spectrum produced by outside streetlights. Then they transmit a 1 second homing pulse before the miniscule battery dies. This modification will be undetectable unless a character specifically goes over a weapon looking for it, and actually *disassembles* (not field-strips) the weapon. (If a player mentions checking over their weapons, ask them to what extent, rather than asking if they disassemble the weapon.) Disconnecting the device will destroy it unless Electronics and Security Systems skill rolls are made. The characters will not have time to analyze any discovered devices until after the adventure.

Once outside, the characters should just wander around and make plans, or perhaps make a last-minute purchase or two. The first beep of the pocketcom should be at an inconvenient moment, like just as a meal is being served, or while in the middle of changing clothes, etc.

The male (probably) voice on the other end will be clipped, with obvious electronic modification to prevent identification by voiceprint. The characters will be instructed to take a certain shuttle train to a certain destination, and wait for further instructions. They are also informed that the pocketcom is the equivalent of a grenade, and if they try anything stupid, it will blow up. (Deutzwerk was aware of this all along, and is wisely *not* tailing the characters). This shuttling about will continue for several hours (50Cr per person), until the characters are quite fed up with it. Their path has been slowly taking them into the older districts, whose pre-War buildings teem with vice and illicit activity. The characters will be instructed to enter a certain derelict building. Once inside, a metal panel slams over the opening, plunging the room into absolute darkness. This will last for about five tension-filled seconds, after which lights will slowly come on. The walls are sheathed in some kind of metal film, and any character with electronics knolwedge will realize this room will not let any radio waves out, and would be a good way to find any *active* bugging devices. A hidden speaker grille will tell the characters to "Put your hands on your heads, keeping hands away from all weapons", and mentions that "Any attempt to use radios or other communication devices will result in instant death". The characters are then directed to a door. This opens into a hallway, which contains two masked figures with modern assault rifles in a ready position. The characters are motioned to lead the way down a dimly lit corridor to a set of hastily constructed steel doors which open into a large darkened room. Seated in the center under an old light fixture is the man identified as Dr. Jurgenson, with a worried look on his face, rather than the relief he would be expected to show the bearers of his ticket out. The dusty room is otherwise empty, but has several closed doors, which one would suspect lead elsewhere. The two FTL people behind the characters will take flanking positions on the group, and will not speak for any reason. A speaker on the wall will tell the characters that "You will take Dr. Jurgenson, and you will leave, now". The two guards will remain in position, covering the characters as all times. The characters don't really have too much choice at this point. They can take Dr. Jurgenson and leave, or they can be cut down like autumn wheat, options which will be made clear if they waste any time leaving. Dr. Jurgenson will encourage the characters to get him out of here (activating part 1 of the homing transmitter). As the characters leave, one guard will shut the steel door, and the sound of heavy bolts being slammed can be heard from the other side. As the characters step out into the twilight of late afternoon, part two of the homing transmitter will activate. Multiple direction finders across the city will instantly pinpoint this location. Within two minutes, a programmed missile with a 50kg HE warhead will strike the derelict building, penetrating the roof and second story before detonating at ground level. Most of the

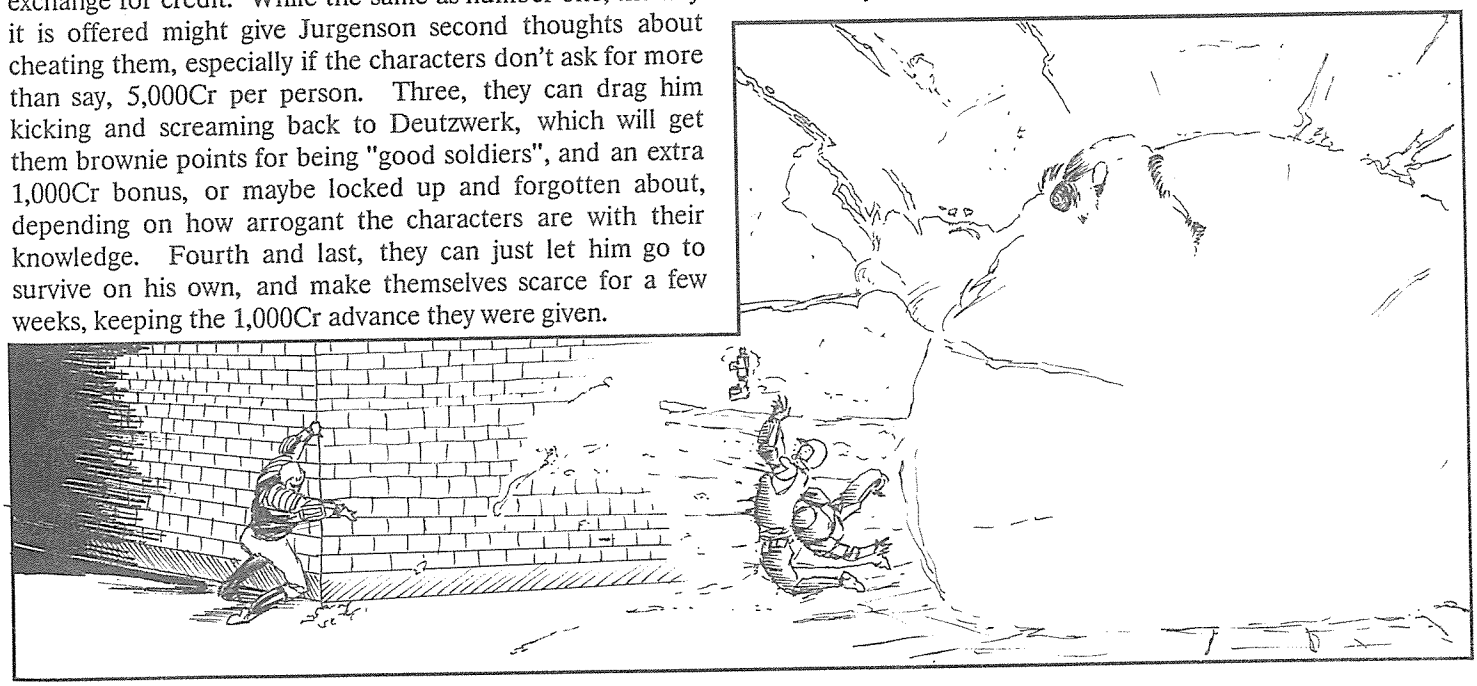
building is flattened, and debris will be scattered about 50 meters in all directions. If FTL was careless enough to still be there, too bad. If they left pronto, it will serve as a "friendly" warning not to mess with AzBio in the future. Obviously, the characters should not be there when this happens, although they definitely will hear it, they might see it, and may be close enough to catch a rock or two as debris (on a 1d20 roll of 1 for each character, DV of 10III).

Obviously, Dr. Jurgenson is not going to be very thrilled with the prospect of returning to Deutzwerk, a fact which he could not tell FTL, and probably won't tell the characters. However, he will try to make a break for it at first opportunity. This blast is a good diversion, and the characters may not realize his motives, mistaking them for another kind of panic. Unfortunately for him, he stands out in the local crowd, and is not in the best of health. It is highly unlikely that he can escape the characters, and can probably be caught with little more than a few bruises. If he makes a Bravado roll by half, he can convince the characters he was just panicky after his captivity. If he fails, the characters will probably realize there is something about his story that doesn't ring true.

With a low Bravado, Dr. Jurgenson can be easily intimidated should the characters try to coerce him into telling what he knows, but he can still be a smooth liar if he needs to (after all, look how long he had been embezzling his employers...). If the truth (or enough of it) is made known to the characters, they have a few options. One, they can threaten to turn him over to Deutzwerk unless he gives them a lot of money (if they know he has it). Jurgenson would have to go to some effort to get at the credit, as most of it is overseas in electronic vaults (out of reach of local corps and most computer pirates). This would entail a lot of risk, as two major corps are out to get him (and anyone who helps him), and the characters still run the risk of him escaping them at a later time (which he would gladly and easily do, once in his environment). Two, they can offer to help him, in exchange for credit. While the same as number one, the way it is offered might give Jurgenson second thoughts about cheating them, especially if the characters don't ask for more than say, 5,000Cr per person. Three, they can drag him kicking and screaming back to Deutzwerk, which will get them brownie points for being "good soldiers", and an extra 1,000Cr bonus, or maybe locked up and forgotten about, depending on how arrogant the characters are with their knowledge. Fourth and last, they can just let him go to survive on his own, and make themselves scarce for a few weeks, keeping the 1,000Cr advance they were given.

Violent Options - No scenario is complete without some bloodshed. The level of violence the GM wishes to dump on the characters should depend on the skill and equipment of the characters. If the characters all bought (or already had) sidearms or longarms, the level will be different than if they only had bladed weapons or stunners. In the "nicer" areas of town, *openly* carrying a pistol is likely to attract the attention of the security forces, who will perhaps crack a few heads and send the characters packing. In the rougher areas, it may draw taunts from children ("What's the big man scared of, nyahh!"), or the character may run afoul of local custom ("Check your weapons at the door!"). Possible or likely encounters could range from the characters being accosted by a local gang or crime group for carrying weapons on "their" turf, to simple robbery, or incursions by AzBio or Nax (or both) trying to get Dr. Jurgenson back. In the latter case, they probably want him alive, but have no such qualms regarding the characters, a fact the characters will quickly pick up should any combat occur. If both AzBio and Nax show up, some quick decisions are in order. Shooting one side is likely to make some enemies in the long run, but gain some temporary goodwill from the other. Shooting at both sides will make everyone mad. Trying to run will make both sides truce until they catch you, and staying put will simply get Dr. Jurgenson captured by the victors. No easy choices.

Aftermath & Experience - While not a full-blown adventure, the characters should be allowed rolls for skill improvement, but only get half(u) the points. No attribute improvement is allowed. If still on the good side of a corporation at the end, that corp will pay for first aid expenses for anyone that needs them, patching any eventually fatal wounds, but little more. Further medical expenses come out of the character's pockets. Unused homing transmitters will wear out their batteries in a day or so and be useless, but could cause some concern when the characters eventually find them.



Glossary

AI	Artificial Intelligence. A computer capable of independent creative thought. AI's exist, but have no rights as individuals. Rumors exist of fugitive AI's, using their knowledge of the net to hide in empty computer space.
black ice	Computer security measures designed to kill or incapacitate jacked in intruders. See ice.
brain tap	An implanted device that allows the transmission of information directly from the brain to a computer, and vice versa.
clone	A genetically identical duplicate of any life-form. Clones of humans are commonly used for replacement parts on the very rich. Human clones are required to have all brain function surgically destroyed before the nervous system is fully developed. Rumors are that this is not always the case.
clavie	Any person who lives in an enclave.
cowboy	A "hacker", usually with a brain tap, who specializes in some aspect of using the net, usually infiltration.
cyberspace	The "landscape" visualized by a hardwired computer user, in which various abstract workings of the computer take concrete form, and operations on them have physical effects.
deck	A portable computer allowing interface of a brain tap to the more complex computational environment of cyberspace.
download	To transmit material from someone else's computer to yours, usually from a larger computer to a smaller one. See upload.
enclave	Corporate subsidized housing complex. Passes are required to enter, and non-residents must carry locator tags, if allowed in at all.
flatline	A simulated personality on a memory chip or module, usually of a real person, embodying any specific talents that individual had. Usually used as an addition to a particular skill, or as a form of NPC.
flatlined	Braindead, as in a flat EEG scan, possibly as a result of black ice.
hardware	The physical workings of a computer or other device. Circuit boards, monitors and disk drives are current examples of computer hardware.
hardwired	Any individual with a brain tap capable of directly accessing a computer or the net.
ice	Intrusion Countermeasure Electronics. Computer security measures, usually referring to any method of denying electonic access to a computer.
jacked in	Plugged into cyberspace via a brain tap.
meat puppet	A person who rents their body out for various types of "work", their consciousness either suppressed or in cyberspace, the body controlled by another person or computer.
mnemonic	A general term describing anyone who uses a brain implant as a secure electronic vault. The advantages are mobility, and immunity to outside pilfering, possibly enforced with a failsafe that kills the person if electronically tampered with.
moddie	Anyone who has been biologically, electronically or mechanically altered or enhanced.
module	An optical memory chip specially designed to be accessed via brain tap.
muscle boy/girl	A person with extreme biological enhancement of strength. Muscles are grown to enormous size, and extra muscles may be implanted in areas where normal muscles cannot provide the strength needed. Muscle boys are popular in fields that require an imposing figure, like bouncers, enforcers and bodyguards.
razor boy/girl	A person with bladed weapons of various types implanted into their body. Usually associated with very fast reflexes, and extreme degree of skill, usually with special attention to wounding potential.
software	A computer program, usually stored on some form of hardware, like a computer disk or memory chip. Once loaded into a computer, it controls certain aspects of its operation, and may be transferred by electronic or optical means to any computer hooked up to the global net.
squid	Superconducting QUantum Interference Device. A sophisticated atomic probe capable of reading supposedly "erased" memory from any electronic or optical device. Exceedingly complex, they require enormous amounts of computing power to interpret the data collected, and are seldom used except in extreme cases. Most individuals are not aware of their existence.
tagged	Equipped with an electronic tracing device.
tanked	Placed into cryogenic storage.
the net	The global computer net. Any outpost of civilization on Earth can probably gain access to the net.
upload	To transmit material from your computer to someone else's, usually from a smaller computer to a larger one. See download.
vat job	A person so highly modified that the process was not possible with conventional surgical methods. Rather, the person was disassembled and reassembled biologically, usually in a nutrient bath. Very few facilities can perform this sort of work, so a person may be known by the place in which the work was done, i.e. "He's a Zurich vat job."
wetware	Any enhacement (usually mental) that is purely biological in nature.

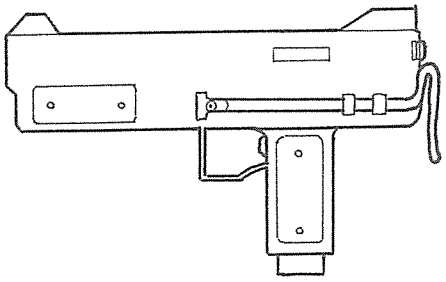
Appendix

Basic Equipment - While a great deal of technical information is included in the format of any given piece of equipment, it does not give you a "feel" for the item. What follows is a short description of some of the more common and useful items characters may acquire, along with illustrations, so you can better visualize the look and feel of things in general.

Mitushi MI-5 (3mm flechette SMG) - Early Chinese gauss pistol. Also known as a "needler", or flechette gun. It fires narrow, finned darts at supersonic velocity. It does not have a great deal of damage potential, but is effective because the narrow projectiles count as puncturing attacks vs. ballistic fabrics, and the flechettes count as bullets vs. flesh.

The weapon was originally designed to be a simple pistol, but the design was overly optimistic of the technology available at the time. It quickly ballooned up to SMG size, without any real increase in performance. It was produced in quantity anyway, and did gain a fair degree of acceptance before overshadowed by more efficient TL14 designs. Although the internal workings are weak, the weapon is fairly durable, and is moderately easy to find on the black market.

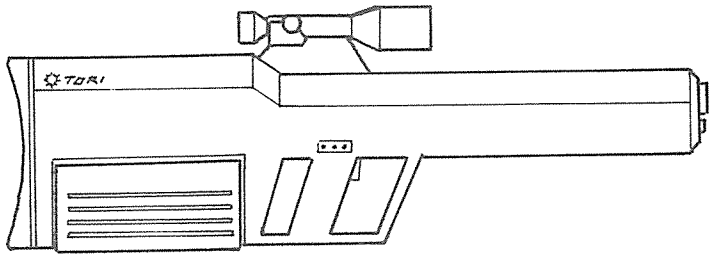
While a clip holds 60 rounds, the magnetic accelerator of the Mitushi was over-engineered, and it can safely discharge two storage banks into one flechette shot, increasing the DV from 24 to 29, but giving only 30 shots in that mode. Dumping more than two storage banks invariably buckles the flechette from the launching stress, totally ruining the weapon. If the DV is adjusted down to 14, the flechettes become subsonic, making it very quiet, another endearing trait for certain types of mission.



Mitushi MI-5

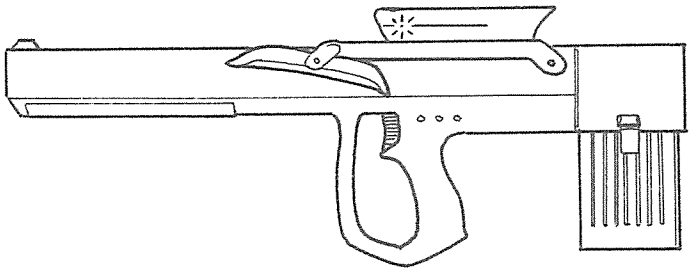
PolSci Stinger - Another security-type weapon, this fires very high velocity (1,700m/sec) 2mm steel pellets. They have slightly better penetration than the 20th century .22 rimfire, but decelerate much faster, and cause less secondary damage from richochets. The weapon also holds an incredible amount of ammo, and can be used like a fire hose for long periods. Combined with the intimidating abilities of a laser sight, it is to be respected by anyone without body armor. Ammunition supplies are very strictly controlled.

Tori MLA (5mm Laser Rifle) - This represents the still bulky epitome of TL14 laser technology (TL15 weapons are just being introduced, and are probably still being combat tested...somewhere). The weapon can function in a variety of modes. Its base DV of 71I is fully adjustable. An advantage is that mutliple storage loops (4) are used for each shot, so a clip holds 200 loops. This allows conservation of shot energy for lower power shots, the DV's for 1,2 and 3 loops being 35I, 50I, and 61I, respectively. By using two loops from its clip, it can act as a stunner (RC=4/1) with a DV of up to 27V. Hooked up to a 6.0kg battery pack (4kg at TL15), it can either recharge the clip, act as a continuous beam laser with a DV of 8I (100 sec) or 6I (200 sec), or act as a continuous beam stunner (RC=4/1) with a DV of 3I and 10V (100 sec). It has a built-in laser sight and thermal imaging scope with a 1-5x zoom, and can accept input from virtually any power source for recharging purposes. All MLA's have a built-in safety interlock requiring a ring or implant chip for operation. Being modern military technology *and* costing 4,500Cr, they are not common, and are strictly illegal for civilians to own.



Tori MLA

Mandragora 3.5mm (dual-feed gauss SMG) - Bulky but very effective sidearm, with laser sight and light intensifier. Has two separate 40-round magazines, usually with exploding or drugged rounds in one side, and depleted uranium AP rounds in the other. Each type of ammo can be adjusted from 0 to full DV by a slide switch on either side of the weapon, allowing less lethal effects if desired.



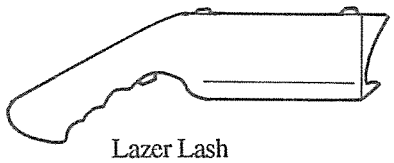
Mandragora 3.5mm

Taxxon Industries "Lazer Lash" - A "low-lethality" crowd control and security weapon. The combination of small laser (17I), mild stunner (12V) and large clip capacity makes it an effective tool in the managment of lightly armed or armored crowds. Repeated hits with the main laser can prove fatal, as can head shots, giving the weapon a reputation for being more lethal in some hands than in others. A belt-mounted battery pack (.75kg) triples clip capacity, but only recharges the internal clip at the rate of 2 shots per second.

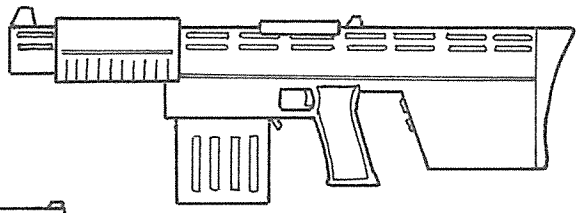
Stunners use a low-powered (DV 2I) pulsed laser to ionize a path of air from the weapon to the target. A high-frequency, high-voltage pulse is sent down this path to the target. The stun intensity can be varied from full, down to virtually none. Lower DV's do not provide more shots, as the excess energy from a storage loop is bled off into a heat sink. Anyone wearing a grounded conductive armor is virtually immune to a stunner. Police and military armor is constructed in this manner, although civilian armors are not. A marksman can aim for exposed areas of the body, or areas without conductive armor. A successful called shot will negate some or all the armor, depending on armor worn.

Tori SunFire (5mm laser rifle) - Early battlefield laser, still in use due to large quantities produced for an Uman military contract which fell through. The rugged weapon incorporates open sights, fixed frequnecy beam and a laser sight, but can mount variety of other enhancements from other manufacturers. One major failing of the SunFire is that the internal power arrnagments are incompatible with most modern (TL14+) Earth or Uman energy weapons, meaning that clips from other weapons cannot be drained to charge this one, and vice versa. The cost to fix this is nearly half the new cost of the weapon. Almost all other energy weapons can interchange clips by transfering the power via a universal port on the side of the weapon into the clip currently in the weapon.

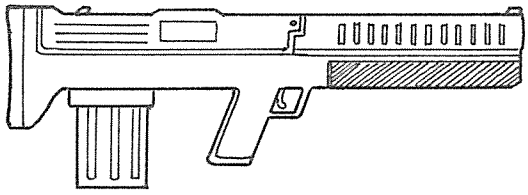
Another failing is the fixed frequency beam. Laser weapons are strongly affected by dust, water vapor (fog), chaff and smoke. Most military lasers can be adjusted to compensate for any given condition by adjusting the laser frequency, but still suffer up to a -2 on their RC for damage purposes, i.e. RC4 to RC2, etc. Fixed frequency lasers may suffer up to a -3, never going below RC1.



Lazer Lash

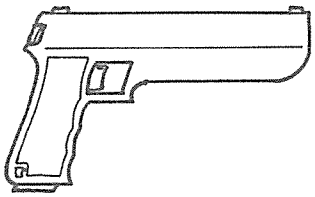


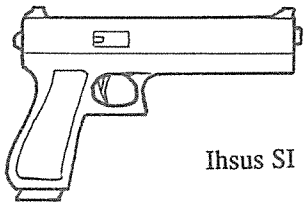
Hunter CAW



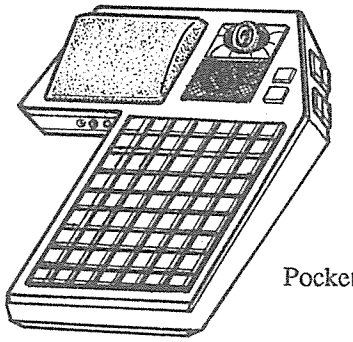
Tori SunFire

PolSci Stinger





Ihsus SI

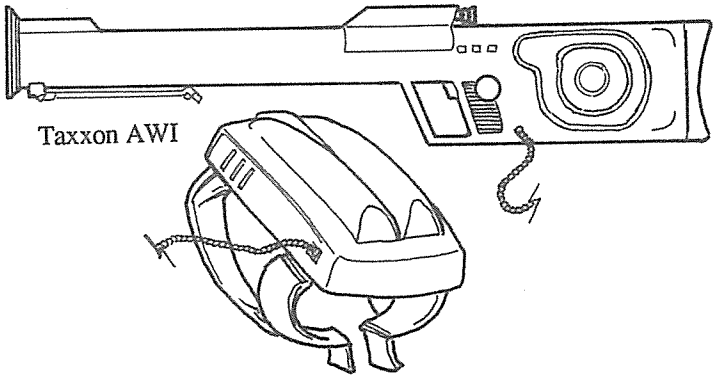


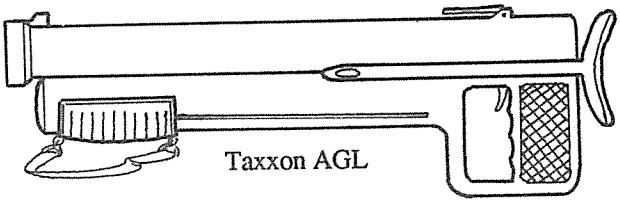
PocketCom

Ihsus SI - A really poor quality weapon, in use only because the plans for it can be offloaded from virtually any network. A Mexican remake of Brazilian plans bought from the Italians before the War, the plans include how to make it from a wide variety of available materials, and includes detailed technical notes on the manufacture of ammunition. Ammunition for the weapon from outside a given area is more likely to malfunction (15+ on second d20), and parts are less likely to interchange due to local variations. The weapon is generally found in the most repressive areas, where nothing better is avaialable.

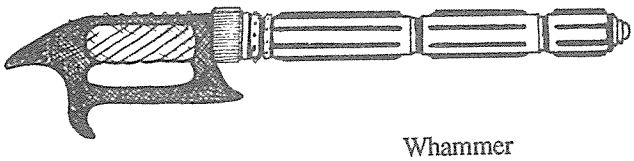
PocketCom - The basic accessory no well-dressed adventurer is without. A Pow 1 radio/video transceiver, it can be used to connect to local repeater stations, allowing the owner to talk to anyone in the world or orbit...for a fee. One can also access any voice-capable computer net, although the rate of information transfer is limited by speech. "Secure" models (2-4x cost) have basic encryption to prevent casual eavesdropping, although they are not secure against high-powered deciphering (not much is). Anyone viewing a scene via the low-quality camera and screen gets a -10 to Perception rolls.

E-book - An electronic library. About the size of this game and twice as thick, it unfolds to present a flat or holographic screen and basic searching keys. Advanced models are voice programmable. An E-book holds ten book chips on the average. Book chips are common, and range from disposable news and fiction chips which self-destruct upon removal, to more durable textbook chips, complete with graphics and animation. Most also have a speech synthesizer, and can read text aloud if a person needs to keep their eyes on something else, like driving a vehicle.

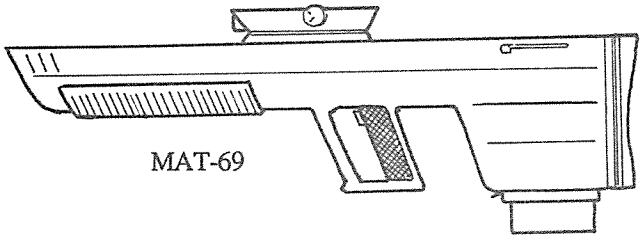




Whammer - A high-tech billy club. It electrically telescopes to double its length in less than a tenth of a second, packing a DV of 8. The damage type is normally Type III, but can be modified to any type by changing the tip. One charge will normally be good for 50 extensions. They may also have a contact stunner built-in, with a DV of up to 40V, each stun requiring the power of one extension, and the two may be used at the same time. A belt or backpack power supply can be attached, to provide hundreds of uses in riot-control situations.



Whammer



PolSci EnviroMonitor (scanner) - This is a general purpose mini-computer designed to accept a wide variety of real-world input. It can hold up to four profession-specific modules, each performing a specific function, usually giving a +10 to use of an Intelligence-based skill. Examples:

A wilderness survival module, which analyzes organic material for its edibility, and knows the best places to find shelter and water in any given terrain, providing a bonus to Survival skill rolls.

A perimeter security module, which does 360° thermal or sonic scans of local terrain, looking for intruders, acting as a +10 to Perception or Stealth vs. the intruders (based on whoever calibrated it).

A geology module, which pulverizes mineral samples and returns their elemental and mineralogical composition.

A translator module, which gives a +10 to the skill of *both* speakers (you get +10 in their language, and vice versa) when using a foreign language.

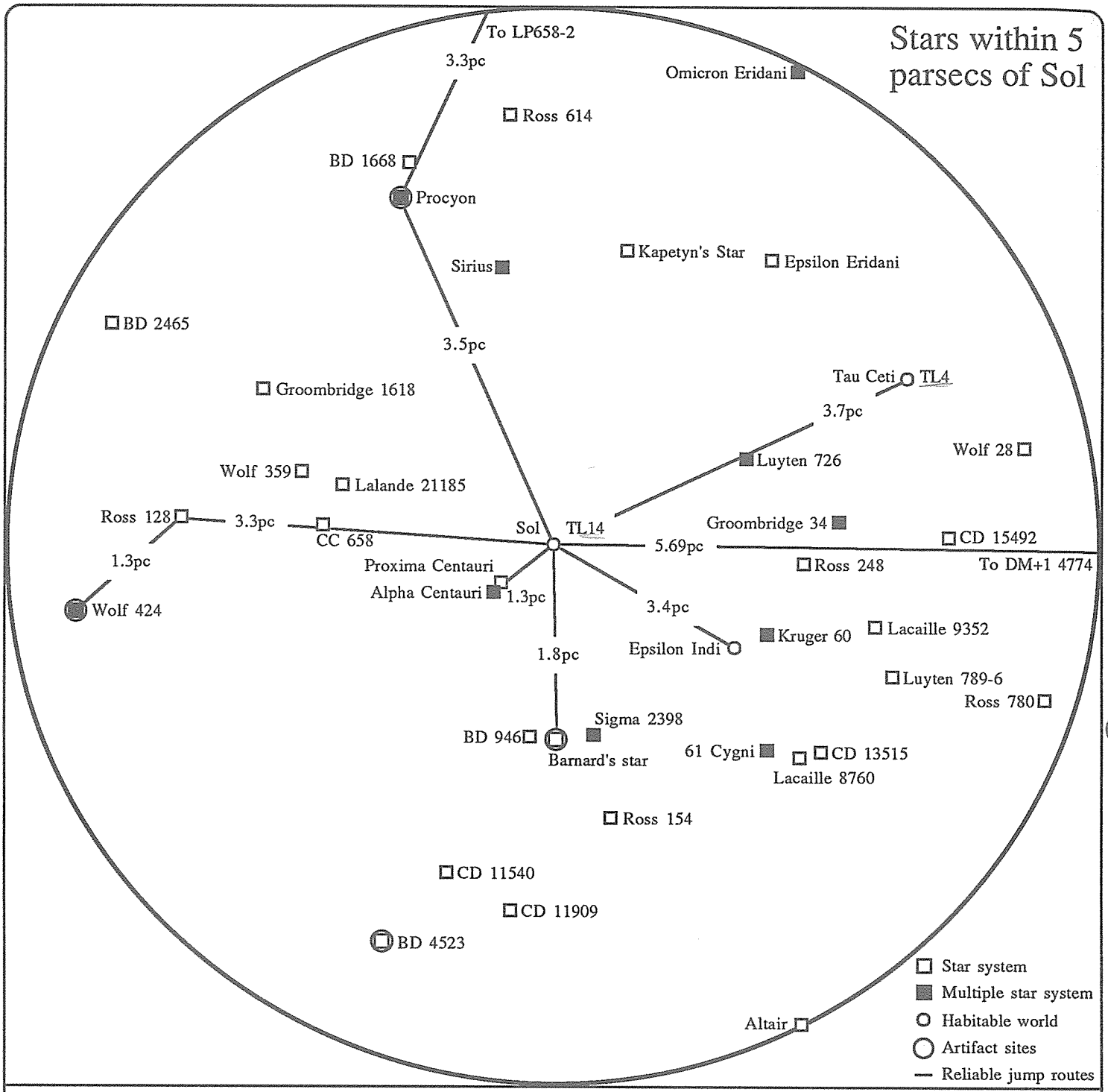
ThermoCham - A chameleon suit with the added effect that it masks the thermal signature of the wearer, placing them at very low contrast with any thermal background. A penalty of this is that body heat rapidly builds up inside the insulated suit. This heat is shunted into an insulated container on the hip, which must be replaced every few hours, or cooled by shunting the heat through the suit, which places the user at very high contrast with the background.

First Aid Kit - This is a multipurpose kit, designed mainly for light industrial use, to keep someone alive until trained help arrives. It is designed for use by total idiots, with a little picture book inside the lid. Most of the kit is various size synthetic flesh patches and topcially applied drugs. These physically hold a wound shut, supply antibiotics, anesthetics, local coagulants, and promote healing. Other items include instant splints, burn spray, disposable biomonitors (pulse, temperature, blood pressure), and maybe tools to cut clothing away from an injury site.

Macronocs - All-purpose binoculars. Provides 1-10x magnification in ultraviolet, visible and infrared wavelengths, with laser rangefinder and 8-hour video recorder with removable optical memory and computer interface. Can also measure velocity of any item in center of view, and has gyrostabilized optics to reduce vibration effects if used from a vehicle. Standard item with any serious outdoor adventurer. Is not usable as a weapon sight.

TI-999/4 Cyberspace Deck - The absolute minimum machine required to connect an individual with a brain tap into the global realm of cyberspace. It works off a small keyboard and mental commands, and provides no bonuses to any skills, although it has a memory module slot to accomodate any memory chips displaced by plugging it in to a computer/brain interface socket. This allows a person to stay jacked in and use a memory chip at the same time.

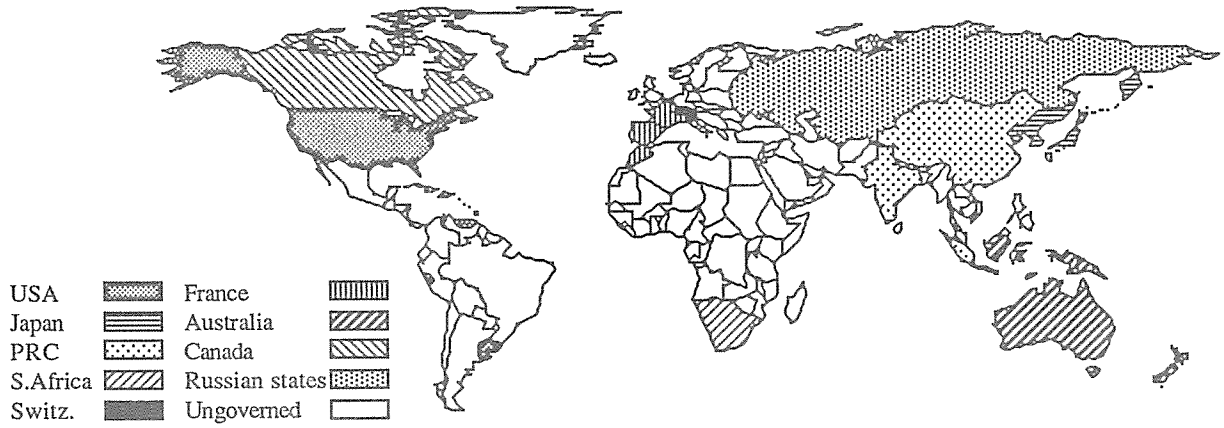
Stars within 5 parsecs of Sol



Notes:

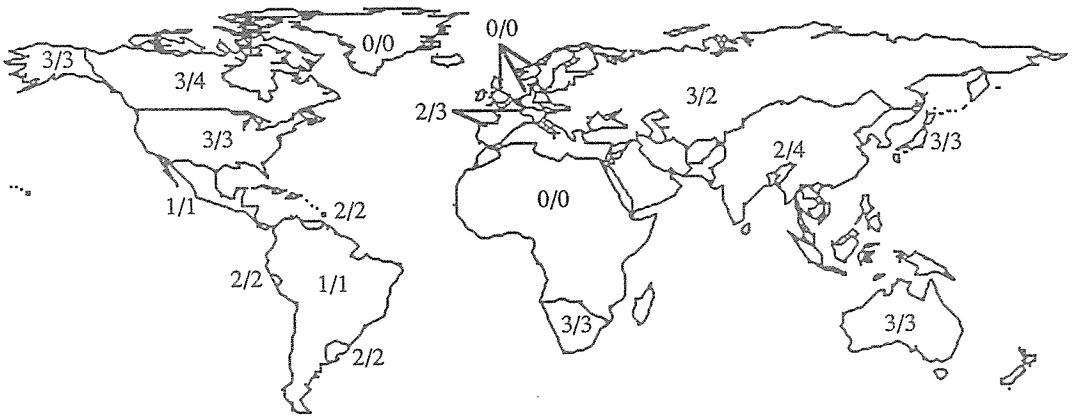
Political geography, AD2000

Political geography, AD2300



Terms represent combined corporate influence rather than national boundaries

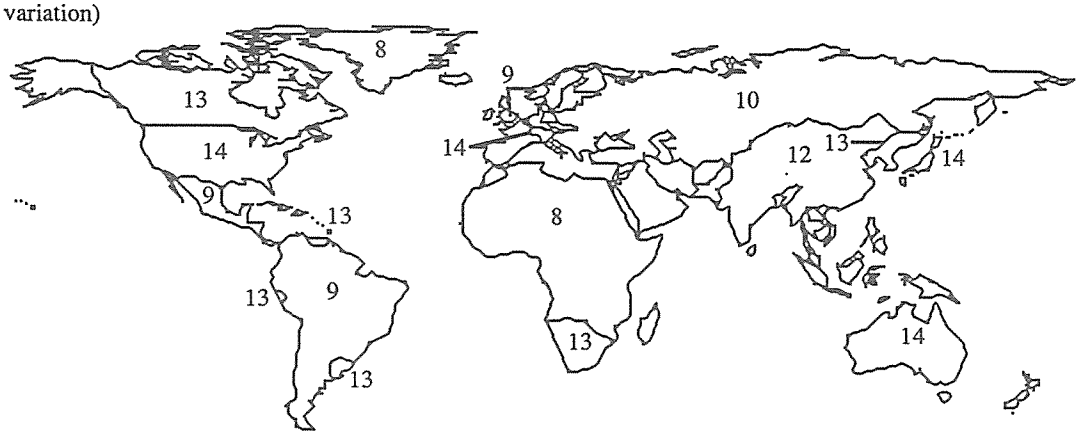
Law levels



Notes:

Major Spaceports

General Tech Levels
(usually +1/-1 variation)



Notes: _____

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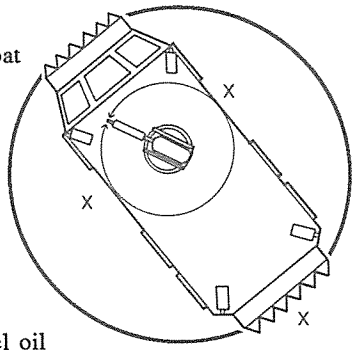
Armored



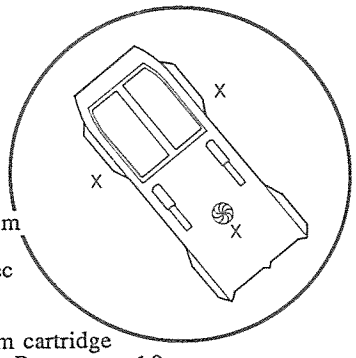
Name - PolSci Brickbat
Seating - 8
Mass - 15,000kg
Carr Cap. - 3,000kg
Length - 6.0m
Width - 2.5m
Height - 2.5m
Max speed - 144kph/40m
Acc/Dec - 5m/10m/sec
Climb/Dive - n/a
Turn mode - 5
Range - 500km
Fuel capacity - 200 liters fuel oil

Armor				
	Front	50	Rear	50
	R.Side	50	Top	40
	L.Side	50	Bottom	40
	Engine	30(20BP)	Tires	15(10BP)

Armament - 4 continuous beam stunner turrets (40V)
- Dual light machine gun turret, 2000 rounds

Sighting mechanism - n/a, use regular "to hit" modifiers
Turret traverse - 2 hexes/phase
Notes - Heavy-duty anti-riot vehicle designed for breaking up large crowds of potentially armed people. All turrets are remotely operated from internal weapon stations, and have a 120 degree arc of visibility. Vehicle is completely sealed against outside conditions. Options include electrifcation of body (DV40V), replacing one or more stunners with tear gas loaded water cannon, and upgrading stunners to DV40I lasers, either with or without the low-power stunner option.

Unarmored

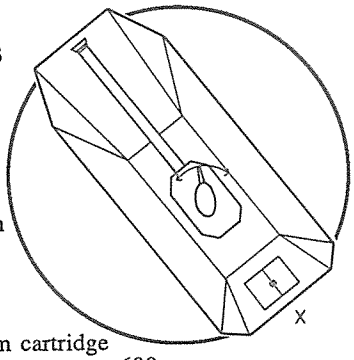


Name - Peugeot 909
Seating - 4
Mass - 4,000kg
Carr Cap. - 700kg
Length - 4.5m
Width - 2.0m
Height - 1.7m
Max speed - 1200kph/333m
Acc/Dec - 20m/20m/sec
Climb/Dive - 10m/100m/sec
Turn mode - 20
Range - 10,000km
Fuel capacity - 100l deuterium cartridge

Armor				
	Front	20	Rear	10
	R.Side	15	Top	10
	L.Side	15	Bottom	20
	Reactor	15(20BP)	Grav	20(30BP)

Notes - Luxury TL14 grav car, costing 100,000Cr. Probably the smallest practical orbital vehicle. Even with a fusion plant that takes up a third of the vehicle, it still is less efficient at high altitudes, taking a -1 to performance figures for each 10km of altitude, up to a maximum of -10. The max speed is based on atmospheric flight. This is increased by +1 for each altitude modifier on Stamina (p.88). Also, while it is streamlined, it is designed purely for grav-moderated re-entry, and would burn up if forced to re-enter the atmosphere without grav assist. The basic equipment package includes: Life support, Pow 1000 radio (scrambled), 1 man airlock, emergency parachute, autopilot, global navigation computer, brain-tap control interface, radar, night vision enhancement, and two concealed hardpoints for light weapons (for the security-conscious customer)

Armored



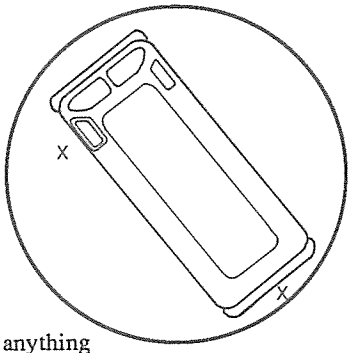
Name - Hyundatsu L-3
Seating - 3
Mass - 25,000kg
Carr Cap. - 2,000kg
Length - 6.0m
Width - 2.5m
Height - 1.5m
Max speed - 360kph/100m
Acc/Dec - 10m/10m/sec
Climb/Dive - 1m/100m/sec
Turn mode - 10
Range - 5000km
Fuel capacity - 100l deuterium cartridge

Armor				
	Front	1000	Rear	600
	R.Side	800	Top	500
	L.Side	800	Bottom	500
	Reactor	70(40BP)	Grav	100(80BP)

Armament - Tori 2200 Particle beam (DV2200I)
- Megat point defense gatling laser (DV200I), MS=20

Sighting mechanism - +10
Turret traverse - 1 hex/phase(Tori), 4 hexes/phase(Megat)
Notes - Light grav tank, in service with most SE Asian forces. Popular due to its ability to cross any terrain, a real advantage in the many island chains. Like most heavy grav vehicles, it takes advantage of grav "surface effect" to keep power plant weight to a minimum. This restricts any "flying" to within 100m of the local surface, and even so it becomes a sitting duck for more competent craft. The Hyundatsu, like most high-tech combat vehicles, is designed for brain-tap use, allowing use of Mental Speed for all combat decisions. The Megat defense laser can be set to virtually any parameters in "auto-track" mode, or can be manually tracked. While it has full environmental sealing, it cannot operate underwater, and must rely on emergency floatation bags in the event of power plant failure.

Unarmored



Name - Braun 300
Seating - 2
Mass - 3000kg
Carr Cap. - 1500kg
Length - 5.0m
Width - 2.0m
Height - 2.5m
Max speed - 100kph/28m
Acc/Dec - 4m/8m/sec
Climb/Dive - n/a
Turn mode - 5
Range - 500km
Fuel capacity - 100 liters of anything

Armor				
	Front	5	Rear	5
	R.Side	5	Top	3
	L.Side	5	Bottom	7
	Engine	15(10BP)	Tires	12(4BP)

Notes - Ubiquitous delivery van, usually available everywhere in one form or another. Popular because its ceramic diesel will burn anything from nail polish to corn oil without complaint, and parts are readily available. Its poor handling characteristics give a permanent addition of 2 to any rolls on the accident table, and Brauns are always the first vehicles tipped over in riots.

Name: Feral dog

Strength	: 6	Bravado	: 14	Length/Height:	1.5m
Dexterity	: 12	Perception	: 16	Mass:	30kg
Constitution	: 10	Appearance	: 8	Max velocity:	20m/sec
Intelligence	: 12A	Stamina	: 20	Preferred habitat:	T/*/N
Willpower	: 14	Spec. Attacks	: Bite, 12II		

Body Points	: 18	Bruise Points	: 18	Armor Material:	Thin
Speed	: 9	Armor Value	: 2	Leather,	10
Size Var.:	1.5,.5	Food Value	: 8		

Notes: Large mean mongrel dog, more common in rural areas. They generally band together in packs of 4d6, with a leader of larger than normal size. Experienced packs are smart enough to recognize firearms, and will generally leave people alone unless the dogs are very hungry or the people are obviously helpless. Skill with bite is 12.

Name: Mutant rat

Strength	: 3	Bravado	: 14	Length/Height:	.5m
Dexterity	: 13	Perception	: 15	Mass:	10kg
Constitution	: 25	Appearance	: 4	Max velocity:	6m/sec
Intelligence	: 12A	Stamina	: 10	Preferred habitat:	T/*/*
Willpower	: 20	Spec. Attacks	: Bite, 2I		

Body Points	: 10	Bruise Points	: 10	Armor Material:	Thin
Speed	: 8	Armor Value	: 2	Leather,	1
Size Var.:	2,.5	Food Value	: none		

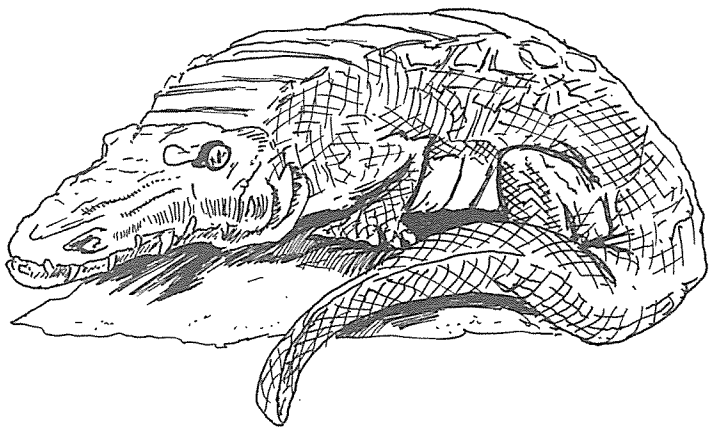
Notes: A product of the War and the environment, these rats live in and under most of the urban areas. Having survived radiation, germ warfare, toxic waste and a variety of other problems, they are immune to just about everything, and this background also makes them poisonous to eat. Completely omnivorous, they will eat anything, and show little if any fear to anything. Generally found in groups of 1d100. Skill with bite is 12.

Name: Megacroc

Strength	: 30	Bravado	: 10	Length/Height:	7.0m
Dexterity	: 8	Perception	: 8	Mass:	1000kg
Constitution	: 16	Appearance	: 8	Max velocity:	10m/sec
Intelligence	: 6A	Stamina	: 20	Preferred habitat:	E/P/W
Willpower	: 18	Spec. Attacks	: Bite, 6II, Tail, 30IV, Thrash, 20II		

Body Points	:104	Bruise Points	:104	Armor Material:	Thick
Speed	: 19	Armor Value	: 6	Leather,	100
Size Var.:	1.5,.5	Food Value	: 200		

Notes: Crocodile variant found in the Tau Ceti system. Agressive, and will pursue prey both on land and in the water. Main attack is to bite, followed by rapidly twisting in the water, with enough force to wrench limbs from sockets. Only armor with its own skeleton will apply vs. this thrashing. Movement rate given is for water, and is halved on land. Skill with all attacks is 10.

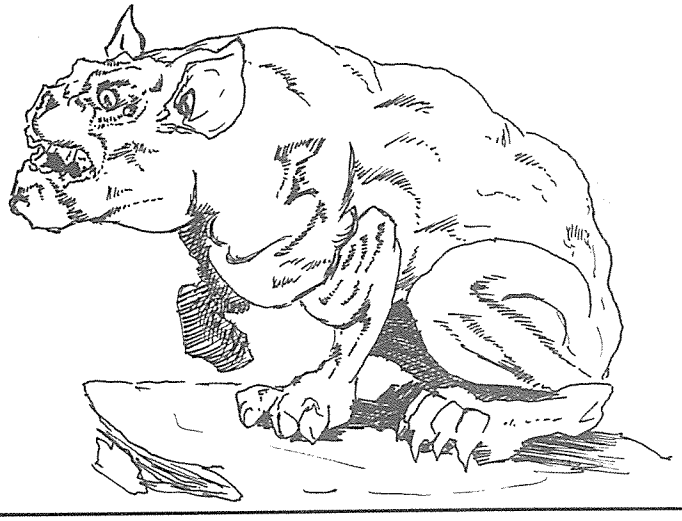


Name: Froon

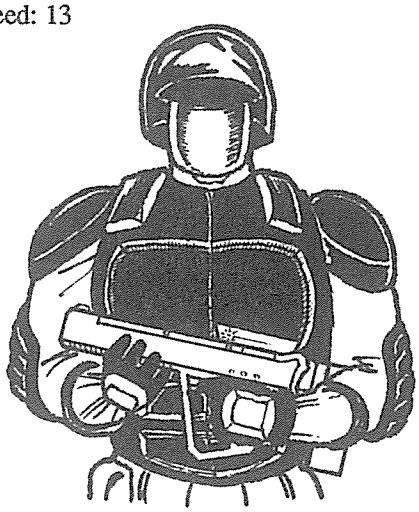
Strength	: 16	Bravado	: 8	Length/Height:	2m
Dexterity	: 8	Perception	: 17	Mass:	70kg
Constitution	: 12	Appearance	: 7	Max velocity:	6m/sec
Intelligence	: 8A	Stamina	: 8	Preferred habitat:	T/*/N
Willpower	: 20	Spec. Attacks	: Bite, 12I, Claws, 6I		

Body Points	: 28	Bruise Points	: 28	Armor Material:	Thin
Speed	: 12	Armor Value	: 3	Leather,	16
Size Var.:	1.5,.5	Food Value	: 20		

Notes: A native animal of the Uman homeworld. A waiting predator, it leaps from cover on passing prey, clamping down with the sharp, bony ridges it uses for teeth, and proceeds to disembowel it with the claws on its hind feet. The head area is a mixture of tough skin and shock-absorbing bony cavities, giving the head/neck area an AV of 6. Skill with bite/leap is 14, and an 8 with each hind claw.



Corporate infantry
Age: 28 Height: 185cm Weight: 82kg
BP: 30 BR: 30 Speed: 13



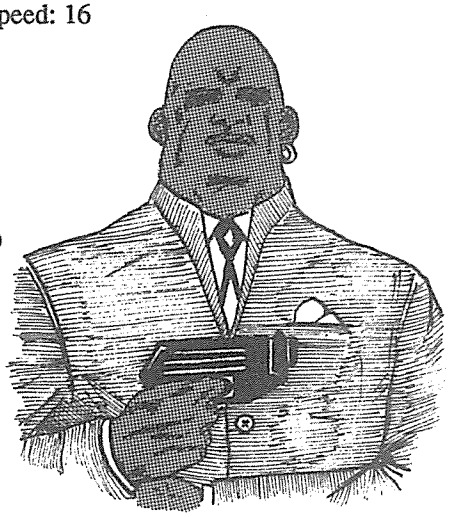
Strength : 12
Constitution : 14
Intelligence : 15
Dexterity : 14
Willpower : 13
Bravado : 12
Appearance : 10
Perception : 12
Stamina : 14

Skills:
AUTW : 6
PIST : 10
RIFL : 10
BRWL : 8
AUTO : 6
HMG : 6
MLSC : 6

Equipment:
Mandragora 3.5mm gauss SMG with safety interlock
TL13 fragmentation grenades (2)
20/10 torso and head armor (reduces Physical Speed by 2)
10/5 arm, leg and foot armor
Thermal vision faceplate with anti-blinding option
Pow 1 video/audio transmitter

Typical corporate/police shock troop, used for short-range or urban actions. All units receive orders from a leader or remote command post, which coordinates the real-time images sent by helmet cameras and/or remote drones.

Bodyguard/enforcer
Age: 26 Height: 200cm Weight: 147kg
BP: 40 BR: 40 Speed: 16



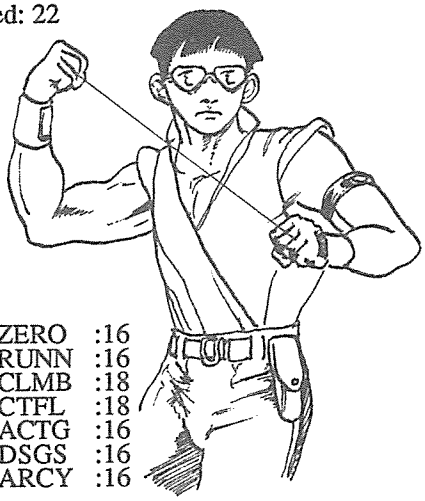
Strength : 20
Constitution : 16
Intelligence : 13
Dexterity : 12
Willpower : 20
Bravado : 16
Appearance : 8
Perception : 13(2)
Stamina : 14

Skills:
WRST : 12
PIST : 12
KNFE : 8
MRTS : 14
WOUN : 6
IMHW : 10
AUTO : 8

Equipment:
Implanted 4/0 armor in torso, neck, head
Implanted bio-monitor and Pow 2 homing transmitter
+2 Perception, with night vision Perception of 2
Vibrodagger
Lazer lash or small pistol

Medium level muscle boy, with about 300KCr of various enhancements. Typical for a person chauferring or escorting a minor VIP in areas where overt shows of weapons would be out of place. Main job is to protect VIP, regardless of cost.

Ninja
Age: 30 Height: 180cm Weight: 85kg
BP: 30 BR: 30 Speed: 22



Strength : 16
Constitution : 20
Intelligence : 18
Dexterity : 28
Willpower : 25
Bravado : 20
Appearance : 13
Perception : 20
Stamina :20

Skills:
MRTS : 20
Specific :+10
WOUN : 16
IMHW : 20
RELC : 16
SCSM : 20
STLH : 20
ZERO :16
RUNN :16
CLMB :18
CTFL :18
ACTG :16
DSGS :16
ARCY :16

Equipment:
Two-port brain implant, with mission-specific chips
Implanted night and thermal vision
Implanted communicator w/complete access to anything their employer can get from their mainframe
Implanted armor of 6/0
TL15 security system tools
Implanted blade weapons, chemical projectors
Implanted short-term life support

The type of person that gets sent after you if you have severely offended a multibillionaire, and are hiding someplace "safe". Such a person is worth a forture in spare parts, as they have virtually every enhancement possible.

Street punk
Age: 17 Height: 178cm Weight: 79kg
BP:29 BR: 29 Speed: 12

Strength : 13
Constitution : 14
Intelligence : 12
Dexterity : 11
Willpower : 10
Bravado : 12
Appearance : 8
Perception : 10
Stamina : 10

Skills:
KNFE : 10
CMAN : 8
SURU : 8
PIST : 6
ARKN : 8
BRWL : 10
STRT : 12

Equipment:
Knife or vibroblade
Streetsuit, AV of 6/2 over all but head, hands, feet
Cheap pistol
Assorted drugs

Stereotyped street punk, possibly belonging to gang for personal protection. Makes a living on small-time assault, robbery, extortion, drugs and an occasional leg-breaking or two. Belligerence increases with quantity encountered.

Drug

Name	- Nudain
Infiltration Method	- C,N
Normal Dose	- 1g
Effect Threshold	- 1 minute
Effect Time	- 10 seconds
Max. Effect Time	- 2 hours
Effects	- (Anesthetic)6
Treatment	- Stimulants
Notes	- Impairment effects are recalculated based on new Willpower. This drug is addictive. Characters using it may develop tremors upon withdrawl.

Disease

Name	- Common cold
Contagion factor	- 10
Infiltration method	- R
Incubation time	- 7 days
Effect time	- 1 day
Max. effect time	- 7 days
Effects	- Weakness
Treatment	- None
Notes	- The disease that wouldn't go away.

Drug

Name	- Deflexol
Infiltration Method	- R,C
Normal Dose	- 5g
Effect Threshold	- 1 minute
Effect Time	- 10 seconds
Max. Effect Time	- 1 hour
Effects	- (Paralysis)10
Treatment	- Convulsants (negates paralysis only)
Notes	- Strictly controlled substance. Very low lethality, sometimes used for crowd control. Odorless, but has distinctive taste.

Disease

Name	- Anthrax
Contagion factor	- 12
Infiltration method	- R,N
Incubation time	- 24 hours
Effect time	- 3 hours
Max. effect time	- 3 days
Effects	- (Naus,Pain)3-(Naus,Pain,Anox)20
Treatment	- Antibiotic 6+
Notes	- Not a common disease, it may occur in rural areas, or in ruined areas that had large animal kills. The disease spores survive best in darkened areas.

Drug

Name	- Macromicin
Infiltration Method	- N
Normal Dose	- 50g
Effect Threshold	- 1 hour
Effect Time	- 1 hour
Max. Effect Time	- 24 hours
Effects	- (Antibiotic-10)
Treatment	- None
Notes	- Broad spectrum antibiotic with anti-viral properties, mixed with regenerative compounds. A standard hospital item, and popular on black market.

Disease

Name	- Brain rot
Contagion factor	- 2
Infiltration method	- R
Incubation time	- 7 days
Effect time	- 1 day
Max. effect time	- 2 weeks
Effects	- (Stupor)2-(Paralysis)2-Coma
Treatment	- None
Notes	- Leftover disease from WWIII. Low contagion is due to weakening with time. Characters recovering from coma lose 1d2 off INT, PER.

Drug

Name	- Blue angel
Infiltration Method	- R
Normal Dose	- 1g
Effect Threshold	- 10 seconds
Effect Time	- 2 minutes
Max. Effect Time	- 30 minutes
Effects	- (Stimulant,Anesthetic)3-(Hallucin)3
Treatment	- Depressants
Notes	- Street derivative of controlled combat drug. Subtract 3 from all hallucino-rolls. Long-term use causes permanent loss of Constitution.

Disease

Name	- Montezuma's revenge
Contagion factor	- 5
Infiltration method	- I
Incubation time	- 1 day
Effect time	- 6 hours
Max. effect time	- 3 days
Effects	- (Diarrhea)2
Treatment	- Over the counter treatments
Notes	- Common when traveling to less developed (2 TL's lower) areas.

Drug

Name	- Corcodone
Infiltration Method	- N
Normal Dose	- 2g
Effect Threshold	- 1 minute
Effect Time	- 10 minutes
Max. Effect Time	- 2 hours
Effects	- (Stupor,Stimulant,Hallucinogen)3
Treatment	- Unconsciousness
Notes	- Street name: "Monster maker", as 10 is added to all halluc. rolls. Absorbed into fatty tissue, and causes flashback (1 effect) if Stamina goes to -10 mod.

Disease

Name	- Firedance
Contagion factor	- 1
Infiltration method	- I
Incubation time	- 4 days
Effect time	- 1 day
Max. effect time	- 1 week
Effects	- (Convulsions,Hallucinations)3
Treatment	- Relaxants with -6 total mods
Notes	- Another leftover from The War. Affected characters feel like they are on fire.

Damage Values, Pre-War weapons

Caliber	TL	DV	Average damage
.22 Rimfire	11	12	7
.45 ACP	10	20	11
9mm Para	11	21	12
.357 Magnum	11	25	14
.44 Magnum	11	29	16
5mm Caseless	12	43	24
5.5mm Cased	11	41	23
7.6mm Cased	10	54	30
12.5mm Cased	11	94	52

Pre-War shotguns

Caliber	TL	DV	Average damage	Pellets #00 Buck	Pellets #2 Buckshot
.410 Slug	10	17	9	-	-
20ga Slug	10	25	14	9	18
16ga Slug	10	29	16	12	24
12ga Slug	10	34	19	15	32
#00 Buckshot	10	17	9	-	-
#2 Buckshot	10	13	7	-	-

Damage Values, Post-War weapons

Caliber	TL	DV	Average damage
2mm Stinger	14	15	8
5mm Caseless pistol	13	30	17
5mm Caseless rifle	13	49	27
7mm Casless rifle	14	67	37
15mm HMG	12	130	72

Post-War shotguns

Caliber	TL	DV	Average damage	Pellets 8mm	Pellets 5mm	Pellets 3mm flech.
15mm Slug	13	43	24	-	50	16
25mm Slug	13	50	28	40	240	75
8mm pellets	13	14	8	-	-	-
5mm pellets	13	11	6	-	-	-
3mm flechettes	13	24	13	-	-	-

#	Name	Cal	RC	DV	IA	Init	Skill	Nat.	Mass	SZ	TL	Cost	NS	ACT	MS	H	R	CLM	AV	BP	Notes
1M	FN-FAL	7.6mm	4/4	+0	+2	-1	RIFL	Belg.	4.25	S/6	10	890	20	AT/C	11	2	O	.60	11	18	1
2M	M-16A2	5.5mm	3/3	+0	+2	+0	RIFL	USA	3.40	S/5	11	650	30	AB/C	10	2	O	.45	9	10	1
3M	H&K G-11	5mm	3/3	+2	+2	+0	RIFL	Aust.	3.60	S/5	12	760	50	AB/C	10	2	O	.35	8	10	1,1x scope
4M	Beretta 92-F	9mm	2/3	-2	+1	+2	PIST	Italy	.92	S/2	11	375	15	SA/C	2	2	O	.22	8	4	1
5M	Sawed off	12ga	6/6	-2	+1	+2	SHOT	Any	1.50	S/2	10	165	2	SS/2	2	1	O	-	10	6	1
1F	Ihsus SI	9mm	2/3	-2	+0	+2	PIST	Any	.70	S/2	12	190	20	SA/C	2	1		.30	6	4	1
2F	PolSci Stinger	2mm	2/1	+0	+1	+2	PIST	USA	.25	S/2	14	675	500	AT/C	20	1	M	.10	4	4	1,9
3F	MAT-67	7mm	4/4	+2	+2	-1	RIFL	Fran.	4.10	S/4	14	2300	100	AB/C	10	2	M	1.30	7	8	1,9,10
4F	Hunter CAW	25mm	5/5	+0	+2	+0	SHOT	S.Afr.	3.40	S/3	14	2100	10	AB/C	5	2	M	1.70	8	4	1,9
5F	Mandragora 35	3.5mm	3/4	38	+2	+1	PIST	Japan	2.00	S/2	14	2000	40	AT/C	20	1	M	.50	5	2	2,9,11,2 clip
6F	Mitushi MI-5	3mm	3/4	24	+1	+1	PIST	China	1.75	S/2	13	700	60	AT/C	10	1	M	.40	6	2	2
7F	Lazer lash	5mm	2/1	17	+1	+3	PIST	USA	.70	S	15	800	100	AB/I	10	1	M	-	2	2	3,9
8F	Tori SunFire	5mm	4/4	61	+2	-1	RIFL	Korea	2.30	S/4	13	1850	50	AB/C	10	2	M	3.70	5	4	3,9
9F	Tori MLA	5mm	4/4	71	+2	+0	RIFL	Korea	2.80	S/3	14	4400	50	AB/C	10	2	M	2.50	4	3	3,6,7,8,9,10
10F	Laser welder	9.5mm	1/1	120	+1	+1	PIST	Any	5.80	S/2	14	5100	∞	AT/E	10	2		-	5	2	Ext.power
11F	Taxxon AWI	5mm	4/4	112	+2	-2	RIFL	USA	9.80	S/4	15	8500	20	AT/I	10	2	M	-	5	4	4,9,10
12F	Taxxon AGL	60mm	3/3	-	+1	+1	GLCH	USA	4.75	S/2	14	1100	6	LA/I	1	2	M	-	7	2	1
13F																					
14F																					
15F																					

#	Name	DV	IA	Init	Skill	Mass	SZ	Length	TL	Cost	H	AV	BP	Notes
1	Dagger	6I	1	+0	KNFE	.40	VS/2	.25	10	40	1	6	3	C,P
2	Vibroblade	6I	1	+0	KNFE	.50	VS/2	.25	13	150	1	7	2	C,P, acts as armor-piercing
3	Lg.crowbar	18III	1	-5	IMHW	2.60	VS/4	.60	4	20	2	8	8	B
4	Scrap lumber	14III	1	-3	CLUB	1.50	VS/6	.90	3	0	2	6	4	B
5	Hand stunner	40V	1	+0	-	.50	S	-	13	50	1	2	2	50 uses on a Powercell II
6	Spiked chain	10II	1	-6	WHIP	2.40	S/4	1.00	4	50	2	8	2	B
7	Whammer	8I-III	2	+0	CLUB	1.20	VS/3	.40-1.00	13	200	1	8	3	B or P, 50 uses, 40V contact stun
8	Spiked knucks	+2III	0	-1	-	.30	VS	-	12	20	1	5	3	B, makes punch Type III
9														
10														

Notes:

C - Cutting attack
B - Blunt attack
P - Puncturing attack

1. Conventional weapon
2. Railgun
3. Laser
4. Particle beam
5. Continuous beam
6. Adjustable beam
7. Adjustable frequency
8. Stunner capable
9. Laser sight
10. 1-5x thermal scope
11. 1-5x light intensifier
12. Gyrostabilized

Equipment

#	Name	Range	Operating life	Capacity	AV	BP	Mass	Size	TL	Cost	Notes
1	Powercell I	-	-	3D.25	1	1	.02	VS	14	2	TL15 cap=1.5x, TL13 cap=.6x
2	Powercell II	-	-	3D2	1	2	.10	VS	14	10	TL15 cap=1.5x, TL13 cap=.6x
3	Powercell III	-	-	3D10	1	3	.50	S	14	25	TL15 cap=1.5x, TL13 cap=.6x
4	Pocketcom	Pow 1	100 hours	P-cell I	2	2	.30	S	13	500	Encrypted models are 2-4x cost
5	Portacomp I	-	100 hours	P-cell II	2	2	.50	S	13	200	+2 to use of INT skills
6	Portacomp II	-	100 hours	P-cell II	2	2	.60	S	14	500	+3 to use of INT skills
7	TI-999/4	1 module	20 hours	P-cell II	2	3	1.00	M	14	10K	Allows access to cyberspace
8	Memory module	1 skill	-	-	1	1	.10	VS	14	5000	+10 to a skill (usually INT)
9	E-Book	10 books	100 hours	P-cell I	2	2	.50	S	13	100	2x cost for holgraphic display
10	Book chip	1 book	-	-	0	1	.05	VS	13	1-50	Available from vend. machines
11	EnviroMonitor	4 module	50 hours	P-cell II	3	4	2.00	M	14	5000	+3 to use of INT skills
12	Specialty module	varies	-	-	2	2	.50	S	14	1000	+10 to an INT or PER Skill
13	Credit card	-	∞	-	1	1	.10	VS	13	0	Requires personal code to use
14	Light amp. sunglasses	-	∞	-	3	1	.20	VS	14	500	Immune to blinding effects
15	Binoculars	8x	-	-	3	3	.40	S	12	100	Blinding effects are x1d10
16	Macronocs	1-10x	100 hours	P-cell II	3	3	.60	S	13	1000	Immune to blinding effects
17	First aid kit	-	5 uses	+6/+2	2	3	.50	S	14	100	No illegal drugs
18	Medkit	-	2 uses	+2/+4	2	5	1.00	M	14	500	Medical permit or black market
19	Medium backpack	-	-	M/4	2	5	1.00	M/4	13	50	Converts to suitcase
20	Respirator	-	10 hours	1 cartridge	1	3	.50	S	12	100	Filters air, does not provide O_2
21	Self-heat meal kit	-	1 meal	-	1	2	.50	S	12	5	Keeps indefinitely
22	Linethrower	200m	1 use	1000kg	5	6	3.00	S/3	12	300	Improvised weapon DV=18I
23	Flashlight	10/30/90	20 hours	P-cell II	3	3	.20	S	13	25	30 degree beam
24	Grenade	thrown	1 use	-	3	2	.30	S	13	25	Military or black market item
25											

Clothing and armor

#	Name	Locations covered	AV	BP per loc.	Mass	TL	Cost	Notes
1	Normal clothes	Torso,arms,legs,feet	1/0	2	2.00	11+	100	Shirt, shoes, slacks
2	Heavy gloves	Hands	3/1	2	.30	11+	20	-5 to fine work
3	Combat boots	Feet, shins	5/3	4	1.50	11+	100	Soles are AV 8/8
4	BP Vest I	2x torso locations	15/4	6	.90	11	200	5, Concealable under heavy shirt
5	BP Vest II	Torso, shoulders	24/8	8	1.80	13	400	5, Concealable under jacket (without shoulder pads)
6	Streetsuit	Torso, arms, legs	6/2	3	2.40	13	300	5, 25% chance of armor miss (ventilation flaps)
7	Riot helmet	Face, head, neck	20/10	8	1.00	13	100	-2 to hearing and sight Perception
8	Riot suit I	Torso, arms, legs	20/10	8	7.50	13	600	Concealable under heavy winter clothes
9	Riot suit II	Torso, arms, legs	30/15	12	11.00	14	1000	Not concealable
10	Riot shield	Hand, forearm, elbow	10/10	4	.50	13	200	Opaque, but has firing port
11	Improvised sheild	Hand, forearm, elbow	6/6	4	1.00	4+	0	
12	Chameleon suit	All	2/1	2	5.00	14	2000	4, automatic camoflage
13	ThermoCham	All	3/1	3	7.00	14	5000	4, automatic camoflage plus thermal blending
14	Light vacc suit	All	6/4	4	10.00	12	50K	4hr life support, Pow 2 radio
15	Light vacc suit	All	4/2	3	6.00	13	20K	24hr life support, Pow 5 video, 1m/sec air jets
16	Heavy vacc suit	All	10/10	5	20.00	13	50K	4, as #15, may add on composite plates up to 40/40
17	Lasernix	All	20/20	2	3.00	14	5000	AV vs. lasers, stunners only, is +5 to spot
18	Devastator	All	50/50	20	150.0	15	500K	2,3,6,7,8, Strength 40, counts as #13,#15
19	Mongo II	All	40/40	16	100.0	13	200K	2,3,6, Strength 30, counts as #12,#15
20	Cargomat	10% of all	20/20	10	400.0	14	50K	7, Strength 50, open framework, no fine work
21								
22								
23								
24								
25								

Notes

1. Armor is hardened, AP acts as normal ammo
2. Count power source as a Stamina of 40
3. Internally mount any 2 weapons with 4x ammo
4. Immune to blinding, deafening
5. Ballistic fabric, 1/4AV vs puncturing
6. Includes full night vision, thermal, radar
7. May use brain tap
8. Mounts DV20 point-defense laser
9.

SpaceTime™ Aid Sheet

Universal Modifier Chart

Number to be modified

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3
3	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4
4	0	0	0	0	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	6
5	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
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7	0	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7	7	8	8	8	9	9	9	10	10
8	0	0	1	1	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7	8	8	8	9	9	10	10	10	11	11	12
9	0	0	1	1	2	2	3	3	4	4	4	5	5	6	6	7	7	8	8	9	9	9	10	10	11	11	12	12	13	13
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14	1	1	2	2	3	4	4	5	6	7	7	8	9	9	10	11	11	12	13	14	14	15	16	16	17	18	18	19	20	21
15	1	1	2	3	3	4	5	6	6	7	8	9	9	10	11	12	12	13	14	15	15	16	17	18	18	19	20	21	21	22
16	1	1	2	3	4	4	5	6	7	8	8	9	10	11	12	12	13	14	15	16	16	17	18	19	20	20	21	22	23	24
17	1	1	2	3	4	5	5	6	7	8	9	10	11	11	12	13	14	15	16	17	17	18	19	20	21	22	22	23	24	25
18	1	1	2	3	4	5	6	7	8	9	9	10	11	12	13	14	15	16	17	18	18	19	20	21	22	23	24	25	26	27
19	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24	25	26	27	28
20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Sequencing

Speed

Phase	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20
1				●	●	●	●	●	●	●
2			●				●	●	●	●
3		●			●	●	●	●	●	●
4				●					●	●
5	●		●		●	●	●	●	●	●
6										●
7		●		●	●	●	●	●	●	●
8			●					●	●	●
9						●	●	●	●	●
10				●	●	●	●	●	●	●

Initiative

Skill

Speed	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18
1-2	3	4	5	6	7	8	9	10
3-4	4	5	6	7	8	9	10	11
5-6	5	6	7	8	9	10	11	12
7-8	6	7	8	9	10	11	12	13
9-10	7	8	9	10	11	12	13	14
11-12	8	9	10	11	12	13	14	15
13-14	9	10	11	12	13	14	15	16
15-16	10	11	12	13	14	15	16	17
17-18	11	12	13	14	15	16	17	18
19-20	12	13	14	15	16	17	18	19

Projectile Weapon Hit Modifiers

Range in meters

Range Class	0	1	2	3	4	5	6	7-8	9-10	11-13	14-20	21-30	31-40	41-50	51-60	71-100	101-150	151-250	251-400	401-700	701-1000
RC1	+120	+30	+14	+7	+4	+2	+1	+0	-1	-2	-5	-12	-24	-40	-70	-	-	-	-	-	-
RC2	+100	+40	+20	+12	+9	+7	+5	+3	+2	+1	+0	-1	-3	-6	-9	-16	-30	-60	-	-	-
RC3	+80	+35	+20	+14	+10	+8	+7	+5	+4	+2	+1	+0	-1	-2	-3	-6	-10	-20	-35	-	-
RC4	+60	+30	+20	+14	+11	+9	+8	+6	+5	+4	+2	+1	+0	-1	-2	-3	-5	-9	-13	-28	-40
RC5	+80	+40	+20	+15	+12	+10	+9	+8	+6	+6	+4	+0	-4	-8	-12	-17	-25	-35	-50	-	-
RC6	+80	+40	+20	+16	+13	+12	+11	+8	+5	+2	+0	-2	-8	-15	-25	-40	-	-	-	-	-
RC7	+0	+0	+1	+1	+2	+2	+3	+3	+4	+4	+5	+5	+6	+6	+5	+5	+4	+4	+3	+3	+2

Visual Cover -1d3,-2d3,-3d3

	Firer Movement	Target Movement
Walking	-6	-2
Running	-12	-8
Dodging	-6	-6

Hip firing -15

Target Location

Sector II,IV	-2
Sector III,V	-4
Sector IV	-8

Called shot -10

Steadying +8

Bracing +12

Scope +1, divide range by power

Laser sight +6, negates hip fire

Gyrostabilized movement mods halved

Camoflage -4

Firing 2 weapons -6

Firing one-handed -6

Consecutive shots -(DV/Str)

Multiple shots -2 per half hexside

Spray fire -12

Autofire hits average,±1 per (20/shots)

Duds 20, then 19

Jam or Critical 20, then 20

Reload revolver min. 4 actions

Reload clip-fed min. 3 actions

Reload single shot min. 3 actions

Hand to Hand Hit Modifiers

	Attacker Facing	Target Facing
Sector I	+0	-0
Sector II,IV	+4	-6
Sector III,V	+8	-12
Sector IV	+14	-18

Per far hex -3

For same hex -4

Off-hand attack -8

Height advantage +6

Attacker prone -14

Defender prone +20

Target defenseless +40

Retreating -5 attack, +6 block

Advancing +3 attack, -4 block

Blocking -6 after the first

Parrying +3 on next attack

Dodging -Speed to other's attack

Feints vs. hth +amt opponent fails by

or - to opponent's block

Feints vs. proj. +amt opponent fails by

or - to opponent's attack

Moving attacks -2x Bashing mod

Restrictions -2 for Sectors I,II,VI

-1 for Sectors III,IV,V

Damage modifiers +10 for 2 hands

-6 for 1 hand

Condensed Damage Tables

Head/Neck Damage — Damage Level

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	20+
N	1	1	1	2	2	2	3	3	4	4	5	5	6	6	7	B7	B8	B8	B9	B9
		S	S	S	S	S	S	S	S	D	D	U	U	O	O	O	O	O	O	O
											E8	E8	E7	E7	E6	E6	E5	E4	E3	E2

Torso Damage

N	N	1	2	3	4	5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19
				S	S	S	S	S	D	D	D	D	D	U	U	U	U	U	O	O
									E13	E13	E12	E12	E11	E10	E9	E8	E7	E6	E5	E3

Arm Damage

1	2	3	4	5	6	8	B10	B12	B14	B16	B18	B20	B20	B20	B20	B20	B20	B20	B20	B20
						S	S	S	S	D	D	D	D	U	U	U	U	U	O	O
										E8	E8	E7	E7	E7	E6	E6	E6	E5	E5	E5

Leg Damage

N	1	3	4	5	6	7	8	9	B10	B12	B14	B16	B18	B20	B20	B20	B20	B20	B20	B20
									S	S	D	D	U	U	U	O	O	O	O	O
										E8	E8	E7	E7	E6	E6	E5	E5	E4	E4	E3

Eventually Fatal Damage

5t	10t	20t	40t	10m	20m	40m	80m	3h	5h	10h	20h	40h	80h	5d	10d	20d	---- Not fatal ----

Healing and Recovery

Con	Impairment 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	3	3	4	5	6	7	8	9	10	12	14	16	18	21	24	27	31	35	40	45
2	3	3	3	4	5	6	7	8	9	10	12	14	16	18	21	24	28	32	36	41
3	3	3	3	3	4	5	6	7	8	9	10	12	14	16	18	21	24	28	32	37
4	3	3	3	3	3	4	5	6	7	8	9	10	12	14	16	18	22	26	30	34
5	2	2	2	3	3	4	5	6	7	8	9	10	12	14	16	18	21	24	27	31
6	2	2	2	2	3	3	4	5	6	7	8	9	10	12	14	16	18	21	25	29
7	2	2	2	2	2	3	4	5	6	7	8	9	10	12	14	16	18	21	24	27
8	1	2	2	2	2	3	3	4	5	6	7	8	9	10	12	14	16	18	21	25
9	1	1	2	2	2	2	3	4	5	6	7	8	9	10	12	14	16	18	20	23
10	1	1	1	2	2	2	3	3	4	5	6	7	8	9	10	12	14	16	18	21
11	1	1	1	2	2	2	3	3	4	5	6	7	8	9	10	11	12	14	16	18
12	1	1	1	2	2	2	3	3	3	4	5	6	7	8	9	10	11	12	14	16
13	1	1	1	2	2	2	3	3	3	4	4	5	6	7	8	9	10	11	12	14
14	1	1	1	2	2	2	3	3	3	4	4	5	5	6	7	8	9	10	11	12
15	1	1	1	2	2	2	2	3	3	3	4	4	5	5	6	7	8	9	10	11
16	1	1	1	1	2	2	2	2	3	3	3	4	4	5	5	6	7	8	8	9
17	1	1	1	1	2	2	2	2	3	3	3	4	4	5	5	6	6	7	8	9
18	1	1	1	1	2	2	2	2	2	3	3	3	4	4	4	5	5	6	6	7
19	1	1	1	1	1	2	2	2	2	2	3	3	3	4	4	4	5	5	6	6
20	1	1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4	5	5	5
21	1	1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4	5	5	5
22	1	1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4	5	5	5
23	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	4	4	4	5	5
24	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	4	4	4	5	5
25	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	4	4	4	5

Armor Materials

Material	AV	BP	Mass	Material	AV	BP	Mass
Light cloth	0/0	1	.02	Light wood, 15mm	1	1	.17
Heavy cloth	1/0	2	.04	Heavy wood, 15mm	2	2	.27
Thin leather	2/0	2	.06	Plexiglass, 10mm	2	2	.27
Thick leather	3/0	3	11	Earth, 25mm	3	1	1.25
Ballistic cloth (TL10)	5/1	2	.06	Granite, 10mm	3	1	.60
Ballistic cloth (TL13)	7/1	2	05	Ice, 25mm	4	1	.51
Ballistic cloth (TL15)	9/1	2	05	Cement, 10mm	3	2	.29
0g Composites (TL13)	10/5	4	.15	Glass, 5mm	1	1	.90
Ceramalloy (TL15)	14/7	4	.10	Water, 40mm	1	-	.75
Aluminum alloy mail	6/1	5	.36	Bronze, 4mm	6	4	.70
Aluminum alloy plate	8/4	7	.48	Aluminum alloy, 4mm	8	7	.24
Steel mail (TL10)	15/4	6	1.00	Steel, 4mm (TL5)	11	7	.70
Steel plate (TL5)	11/5	7	1.40	Steel, 4mm (TL10)	17	7	.70
Hardened steel (TL10)	17/8	8	1.40	BP Glass,4mm (TL13)	9	3	.25
Crystal steel (TL13)	20/10	8	1.40	Cinder block	13	3	3.00
Supercrysteel (TL15)	24/12	8	1.40	Street sign	4	3	.20

Hit Locations

Sector Loc #	I Eront	II,III RF,RR	IV Rear	V,VI LR,LF	Name
1	01-02	01-03	01-05	01-03	Skull
2	03-05	04-06	06-06	04-06	Face
3	06-06	07-08	07-08	07-08	Neck
4	07-10	09-13	09-12	09-10	U.R.Arm
5	11-13	14-14	13-14	11-11	R.Should.
6	14-16	15-16	15-16	12-13	U.Chest
7	17-19	17-17	17-18	14-14	L.Should.
8	20-23	18-19	19-22	15-19	U.L.Arm
9	24-25	20-21	23-24	20-21	R.Elbow
10	26-28	22-26	25-27	22-22	R.Chest
11	29-31	27-29	28-30	23-25	Chest
12	32-34	30-30	31-33	26-30	L.Chest
13	35-36	31-32	34-35	31-32	L.Elbow
14	37-39	33-35	36-38	33-35	R.Arm
15	40-41	36-38	39-40	36-36	R.Abd.
16	42-44	39-41	41-43	37-39	Abdomen
17	45-46	42-42	44-45	40-42	L.Abd.
18	47-49	43-45	46-48	43-45	L.Arm
19	50-51	46-47	49-50	46-47	R.Hand
20	52-56	48-52	51-56	48-50	R.Hip
21	57-57	53-53		51-51	Groin
22	58-62	54-56	57-62	52-56	L.Hip
23	63-64	57-58	63-64	57-58	L.Hand
24	65-70	59-66	65-70	59-66	R.Thigh
25	71-76	67-74	71-76	67-74	L.Thigh
26	77-79	75-77	77-79	75-77	R.Knee
27	80-82	78-80	80-82	78-80	L.Knee
28	83-89	81-87	83-89	81-87	R.Shin
29	90-96	88-94	90-96	88-94	L.Shin
30	97-98	95-97	97-98	95-97	R.Foot
31	99-00	98-00	99-00	98-00	L.Foot

Damage Values

Weapon	DV	Aver.	Weapon	DV	Aver.
.22 Rimfire	12I	7	Crossbow 15	22I	12
2mm Stinger	15I	8	Small razor	3I	2
9mm cased	21I	12	Dagger	6I	3
5mm pistol	30I	17	Large dagger	8I	4
5mm rifle	49I	27	Billy club	8III	4
7mm rifle	67I	37	Whammer	8I-III	4
3mm gauss	24I	13	Spiked chain	10III	4
3.5mm gauss	38I	21	Lg. crowbar	18III	10
Lazer lash	17I	9	Spiked knucks	+2III	+1
5mm SunFire	61I	34	Rifle butt	16IV	9
15mm HMG	130I	72	Pistol butt	6IV	3

SpaceTime™
As close to the future as you can get

Name: _____ Age:_____ Height:_____cm Weight:_____kg

Background: _____ Eyes:_____ Hair:_____ Beard:_____

_____ Physical Speed:____ Body Points :____

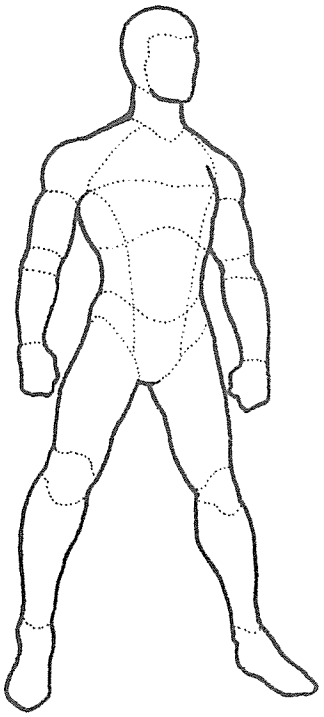
_____ Mental Speed :____ Bruise Points:____

Primary Attributes

	Base	Adj	AB	Apt
Strength				
Dexterity				
Constitution				
Intelligence				
Willpower				
Bravado				
Perception				
Appearance				
Stamina				
Power				

Actions

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	



Skills

Name	Level	Skill bank
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		

Impairments

	INT	DEX	STR	STA	RUN	SKILL
HEAD						
R.ARM						
L.ARM						
TORSO						
R.LEG						
L.LEG						
ALL						
Total						

Equipment

	Name	Capacity	Range	Life	AV	BP	Mass	Size	Location
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

Ranged Weapons

	Name	Range Class	DV	IA	Init	Mass	Size	NS	MS	AV	BP
1.											
2.											
3.											
4.											
5.											

HTH Weapons

	Name	DV	w/Str	IA	Init	Mass	Size	Length	Hands	AV	BP
1.											
2.											
3.											
4.											
5.											

Armor

	Name	AV	BP	Mass	Locations
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Personal Enhancements

	Type	Cost
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Adventure Record Sheet

Character name	Phases 1	2	3	4	5	6	7	8	9	10	Off-phase?	Speed	Dexterity	Skill 1	Skill 2	Skill 3
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						

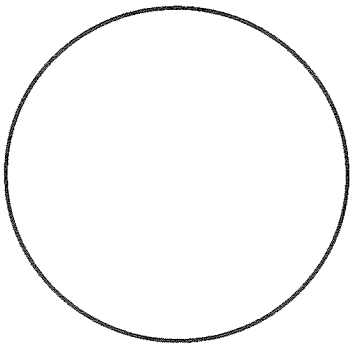
NPC name	Phases 1	2	3	4	5	6	7	8	9	10	Off-phase?	Speed	Dexterity	Skill	Impair?	Out
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐						☐

Timetable

Day	Time	Conditions	Place	Events	Results

Armored

Name -
Seating -
Mass -
Carr Cap. -
Length -
Width -
Height -
Max speed -
Acc/Dec -
Climb/Dive -
Turn mode -
Range -
Fuel capacity -



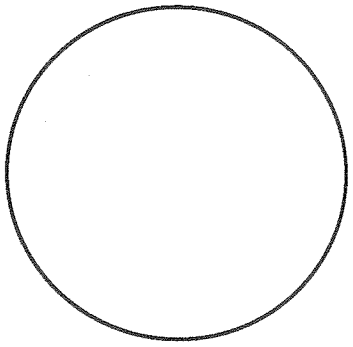
Armor Front Rear
R.Side Top
L.Side Bottom
Engine Trk/Tire

Armament -

Sighting mechanism -
Turret traverse -
Notes -

Unarmored

Name -
Seating -
Mass -
Carr Cap. -
Length -
Width -
Height -
Max speed -
Acc/Dec -
Climb/Dive -
Turn mode -
Range -
Fuel capacity -

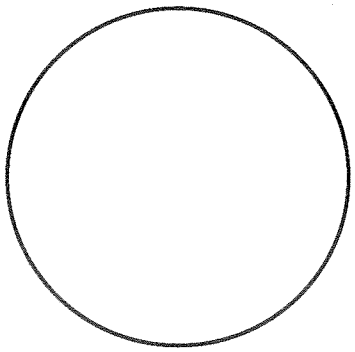


Armor Front Rear
R.Side Top
L.Side Bottom
Engine Trk/Tire

Notes -

Armored

Name -
Seating -
Mass -
Carr Cap. -
Length -
Width -
Height -
Max speed -
Acc/Dec -
Climb/Dive -
Turn mode -
Range -
Fuel capacity -



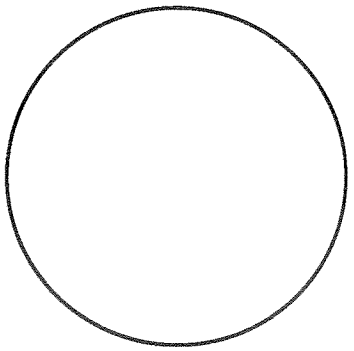
Armor Front Rear
R.Side Top
L.Side Bottom
Engine Trk/Tire

Armament -

Sighting mechanism -
Turret traverse -
Notes -

Unarmored

Name -
Seating -
Mass -
Carr Cap. -
Length -
Width -
Height -
Max speed -
Acc/Dec -
Climb/Dive -
Turn mode -
Range -
Fuel capacity -



Armor Front Rear
R.Side Top
L.Side Bottom
Engine Trk/Tire

Notes -

Name:
Strength : Bravado : Length/Height:
Dexterity : Perception : Mass:
Constitution : Appearance : Max velocity:
Intelligence : Stamina : Preferred habitat:
Willpower : Spec. Attacks :

Body Points : Bruise Points : Armor Material:
Speed : Armor Value :
Size Var.: Food Value :
Notes:

Name:
Strength : Bravado : Length/Height:
Dexterity : Perception : Mass:
Constitution : Appearance : Max velocity:
Intelligence : Stamina : Preferred habitat:
Willpower : Spec. Attacks :

Body Points : Bruise Points : Armor Material:
Speed : Armor Value :
Size Var.: Food Value :
Notes:

Name:
Strength : Bravado : Length/Height:
Dexterity : Perception : Mass:
Constitution : Appearance : Max velocity:
Intelligence : Stamina : Preferred habitat:
Willpower : Spec. Attacks :

Body Points : Bruise Points : Armor Material:
Speed : Armor Value :
Size Var.: Food Value :
Notes:

Name:
Strength : Bravado : Length/Height:
Dexterity : Perception : Mass:
Constitution : Appearance : Max velocity:
Intelligence : Stamina : Preferred habitat:
Willpower : Spec. Attacks :

Body Points : Bruise Points : Armor Material:
Speed : Armor Value :
Size Var.: Food Value :
Notes:

Name:
Age: Height: Weight:
BP: BR: Speed:

Strength :
Constitution :
Intelligence :
Dexterity :
Willpower :
Bravado :
Appearance :
Perception :
Stamina :
Power :

Skills:

_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___

Equipment:

Notes:

Name:
Age: Height: Weight:
BP: BR: Speed:

Strength :
Constitution :
Intelligence :
Dexterity :
Willpower :
Bravado :
Appearance :
Perception :
Stamina :
Power :

Skills:

_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___

Equipment:

Notes:

Name:
Age: Height: Weight:
BP: BR: Speed:

Strength :
Constitution :
Intelligence :
Dexterity :
Willpower :
Bravado :
Appearance :
Perception :
Stamina :
Power :

Skills:

_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___

Equipment:

Notes:

Name:
Age: Height: Weight:
BP: BR: Speed:

Strength :
Constitution :
Intelligence :
Dexterity :
Willpower :
Bravado :
Appearance :
Perception :
Stamina :
Power :

Skills:

_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___
_____ : ___

Equipment:

Notes:

Drug

Name -
Infiltration Method -
Normal Dose -
Effect Threshold -
Effect Time -
Max. Effect Time -
Effects -
Treatment -
Notes -

Disease

Name -
Contagion factor -
Infiltration method -
Incubation time -
Effect time -
Max. effect time -
Effects -
Treatment -
Notes -

Drug

Name -
Infiltration Method -
Normal Dose -
Effect Threshold -
Effect Time -
Max. Effect Time -
Effects -
Treatment -
Notes -

Disease

Name -
Contagion factor -
Infiltration method -
Incubation time -
Effect time -
Max. effect time -
Effects -
Treatment -
Notes -

Drug

Name -
Infiltration Method -
Normal Dose -
Effect Threshold -
Effect Time -
Max. Effect Time -
Effects -
Treatment -
Notes -

Disease

Name -
Contagion factor -
Infiltration method -
Incubation time -
Effect time -
Max. effect time -
Effects -
Treatment -
Notes -

Drug

Name -
Infiltration Method -
Normal Dose -
Effect Threshold -
Effect Time -
Max. Effect Time -
Effects -
Treatment -
Notes -

Disease

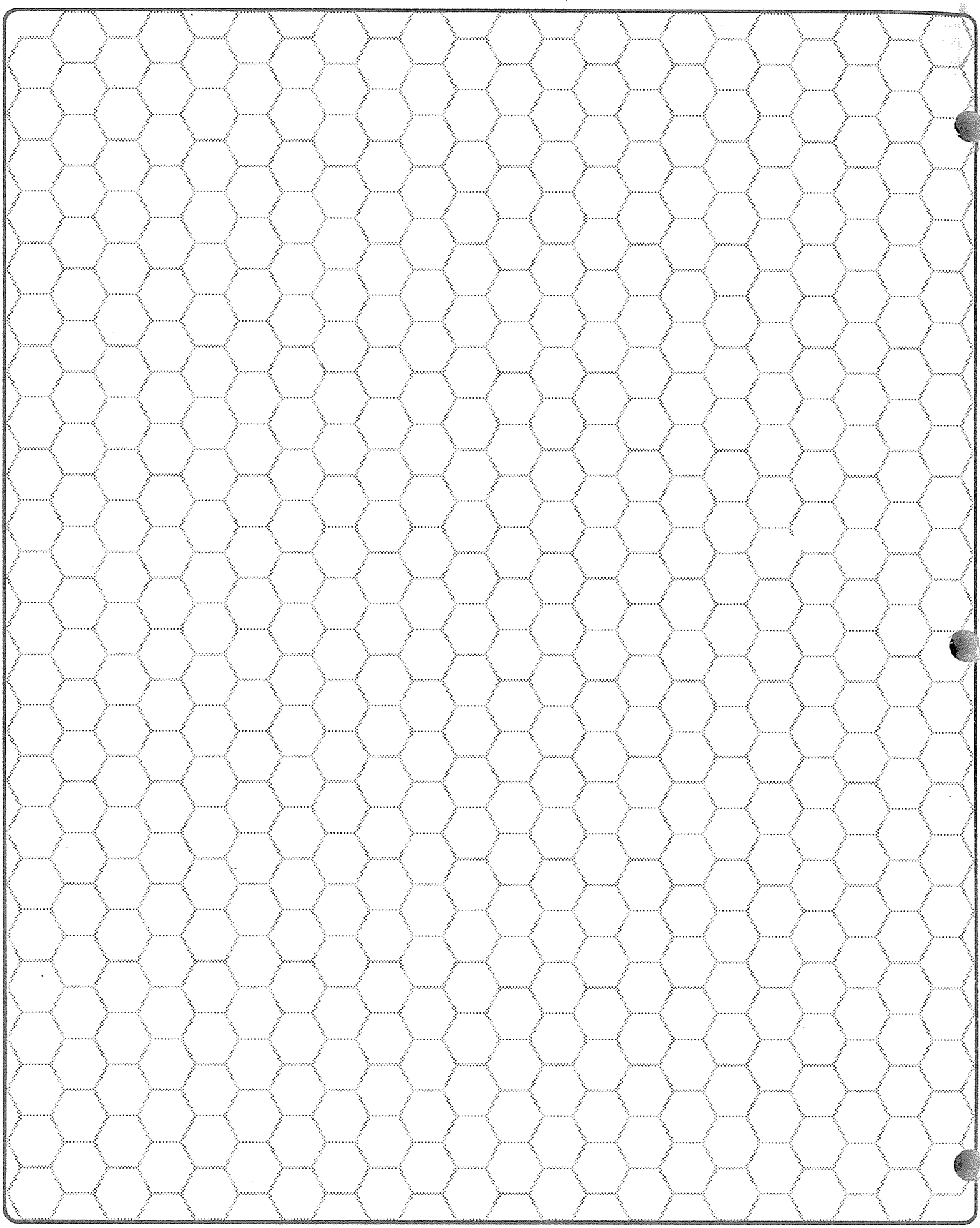
Name -
Contagion factor -
Infiltration method -
Incubation time -
Effect time -
Max. effect time -
Effects -
Treatment -
Notes -

Drug

Name -
Infiltration Method -
Normal Dose -
Effect Threshold -
Effect Time -
Max. Effect Time -
Effects -
Treatment -
Notes -

Disease

Name -
Contagion factor -
Infiltration method -
Incubation time -
Effect time -
Max. effect time -
Effects -
Treatment -
Notes -



Place: _____ Scale: _____ Important features: _____

Bad news...

The contact was waiting for Taj in the alley. She was no taller than his meager 180cm, but he had no illusions about beating her in a fair fight. Her face was blank, as unreadable as the mirrored surface of her glasses. She idly flicked wood chips from the decayed moulding with a stainless steel fingernail, which snicked in and out of her fingertip with the sound of precision machinery...which it undoubtedly was.

Taj laid the optocircuits on an overflowing refuse container and stepped back. She set down the small satchel she was carrying and pulled out a microcomp. Plugging the chips in one by one, she made tsk'ing sounds and slowly shook her head.

"Taj, Taj, these aren't what you promised. People are going to be *very* unhappy."

Taj knew that. He whipped out the archaic scattergun concealed under his jacket and fired twice. The recoil was more than he expected, staggering him. Two ragged holes in the wall marked the spot where his contact had been. She was serenely standing one step to the side. Not good. She shook her head again and waved a finger at him.

"Taj, you've been a bad boy. I'm going to have to make an example of you." With the sound of a dozen switchblades, slivers of steel appeared on all her fingertips. A light seemed to glow in her cold metal eyes as she warily advanced.

Maybe ripping off the Yakuza wasn't such a bright idea after all...

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