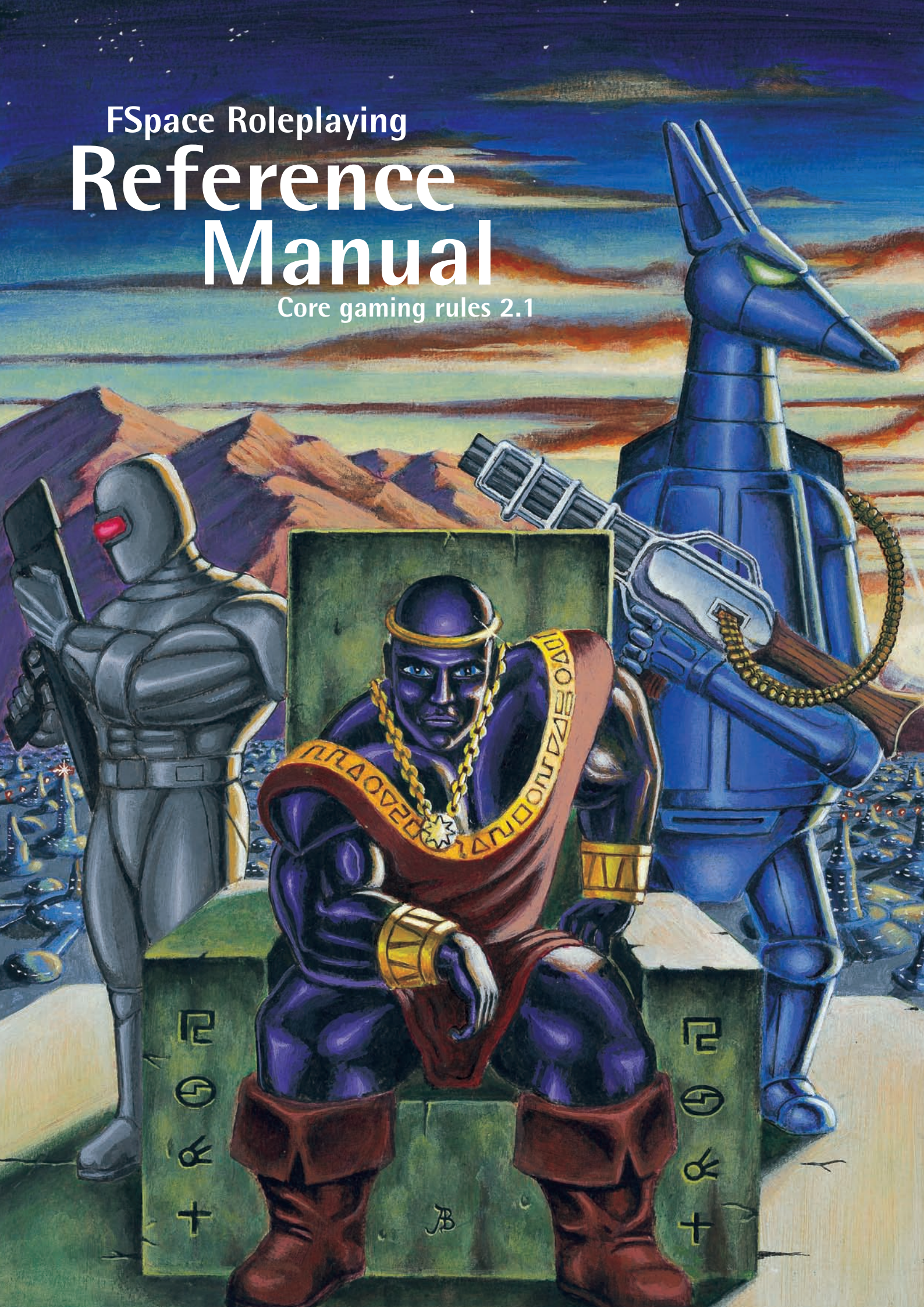
FSpace Roleplaying

Reference Manual

Core gaming rules 2.1



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Stephen Pritchard

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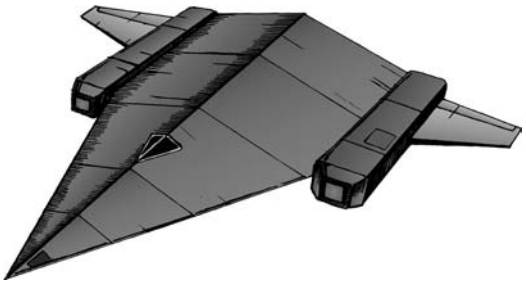


Introduction

Welcome to the second edition of FSpaceRPG Reference Manual, a book for the first commercial role-playing game published in New Zealand.

FSpaceRPG is a science fiction roleplaying game in the classic mould. This particular book is a condensed version of our fourth edition rulebook. It is designed for general player use, and as a tome for gaming use by GMs who need a quick reference book to run the core elements of the game. This book best suit experienced gamers, although new players to gaming can be guided through the book by an experienced GM.

FSpaceRPG has its origins as the Federation Role-playing Game which was first conceived in early 1991 and which led to the publication of an initial book of rules. FED RPG as it was known has evolved since then into a collection of house rules for various settings. FSpaceRPG is the fifth science fiction setting used with the FED rules system. It combines the features of these previous campaign universes that have been played and developed over the intervening years.

Information on previous material is available either on our CDROMs, or our website at www.fspacerpg.com

I hope this game is as enjoyable to play as the fun we had making it.

Martin Rait

Dice Usage

The rules for this system require at times a random element. For this the FSpace rules use 10-sided dice commonly available at shops which specialise in role-playing games. In the text of this rule book, and in the various other books, you will find notational references to the appropriate die or dice to use.

Dice nomenclature is in two parts separated by a capital D. The number to the left of the D represents the number of dice to be rolled of the type indicated by the number on the right of the D.

Example 6D10

May also be noted as 6d10, where d is used instead of D.

In this example, a 10-sided dice needs to be rolled six times and the rolls totalled.

Ten-sided dice can be used in two ways. Individually, to determine a random number between 1 and 10 (note in this case a 0 on the die represents a 10) or with just two rolls of 10-sided dice, a number between 1 and 100. This is known as percentile dice. One or two dice can be used for this. The first roll or dice gives the tens digit of the percentile, while the second roll or dice gives the ones digit of the percentile.

The notation for a single roll of a percentile dice is therefore

Example 1D100

The results are interpreted as shown

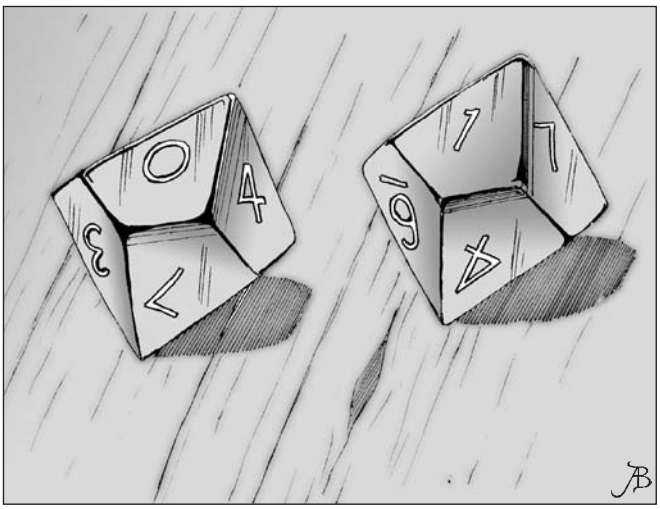
Example	1st die	2nd die	Result
	2	3	23
	1	0	10
	0	1	1
	0	0	100

Dice are often modified with bonuses or penalties to the dice roll in achieve a certain value for a test of some kind. The notation if a modifier is included in the roll is

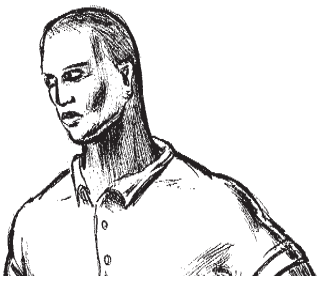
Example 1D100+40

And is interpreted as shown

Example	1st die	2nd die	Dice result	Modifier	Final result
	4	2	42	+40	82



Character Generation



The generation of characters is one of the most important details of preparing to play a role-playing game. The attributes of a character do limit what a player can do with that particular character and so careful decision making during the time of character generation is important. Through experience and training a character becomes much more than their attributes, and early difficulties will seem only a refreshing trial of life.

When generating a character, a race must be selected before continuing. The information on the race sheet for areas such as statistics and skills should be used in reference to the following sections in this character generation system. The selection of a homeworld is of vital importance in determining the gravity and atmospheric conditions the character is used to. Starting finance for most starting characters is normally 10,000ec unless they come from a backwater world.

Prior to beginning the character generation the GM may have restrictions on what races are appropriate to choose from and what careers might be better suited to the game. Check with your GM before proceeding to ensure that in principal a viable character for the game is generated. For instance if the game starts with the premise that a human shuttlecraft has crashed on an alien world it might be inappropriate to play any character race other than human.

The following sections describe how to generate each aspect of a character, but they are not listed in order. They are listed largely in terms of importance to the mechanics of the game. The sequence for generating a character would be as follows, with the character's background being considered at every point.

1. Race and Background
2. Gender and Background
3. Age and Background
4. Statistics and Background
5. Psionic Potential and Background
6. Career and Background
7. Skills/Psionics and Background
8. Equipment and Background

Bear in mind that your GM may have certain requirements for character generation which may differ from those presented here. Consult your GM for further details of how character generation is going to be handled.

Statistics

These represent the physical and mental attributes of a particular character. These statistics or STATs are the most vital characteristics of the particular character. Statistics form the fundamental base of skills (see Skills). A particular skill has a STAT base. These STAT bases are determined by dividing the applicable STAT by 5. As statistics improve through experience, the STAT base also increases.

Statistics are determined by rolling 1d100 for human beings (see Character Race Templates for other races.). This is done for each STAT. However, 10d10 can be substituted to give a better average and eliminate the higher chance of lower numbers using 1d100, although 10d10 tends not to give high STATs either. This should be a matter for the GM and the player to discuss.

Strength – STR

This represents the physical strength and build of the character. Strength is helpful for lifting and throwing objects.

Dexterity – DEX

This represents the co-ordination and reaction ability of the character in respect to the so called 'eye, hand co-ordination'. Dexterity is helpful for evading things.

Constitution – CON

This represents the stamina time for long-term tasks that involve physical effort, such as running. Constitution is also the measure of the damage or hit capacity of the character.

Intelligence – INT

This represents the intellectual and perception capability of the character. Often used to estimate or judge things.

Attributes

A number of attributes are directly related to the STATs generated for the character. These mainly pertain to combat performance or the stamina of the character while exerting themselves.

Carrying Capacity – CC

The carrying capacity of a character is the measure of how much weight a character can carry around with them without getting exhausted. The amount of weight a person is carrying can effect their level of endurance (END) if it is beyond this carrying capacity.

CC = 1/8 STR

Endurance – END

Endurance represents how much exertion a character can undertake before becoming tired. This is calculated from the current Constitution of the character, including such things a gravity modifiers.

END = current CON

LIFE

Life is based on the character's original Constitution. Life represents the amount of damage a character can sustain before dying. The first number represents relatively safe damage levels, while damage that goes into the second number indicate that a biological being has suffer so much damage that without treatment a combination of blood loss, trauma and injury will eventually lead to death.

LIFE =		**CON**	**/**	**2xCON**
		Minor	/	Critical
Ex.	50 CON =	50	/	100

Stun Endurance – Stun END

Stun endurance is equal to the original CON of the character without environmental effects. This is used when a stunning blow or intense pain affects a character.

Stun END = original CON

Background

The origins of the character are very important in a gaming context. Within the rules it has a direct bearing on the environmental conditions that the character is used to. It also indicates the language in which the character is initially fluent. In many ways the background details of a character are tied in with the career details experienced during their lifetime.

Furthermore, the word 'character' implies more than just a token in a game; a role-playing game demands that you know every detail about your representative persona in this imaginary universe. The more detail a player defines about their character, the more three-dimensional and realistic the character becomes. It would be a poor universe indeed if the players simply chose characters from a little bag, and the greatest character depth was whether your representative persona was a token made of bright green or bright red plastic.

Race and Gender

The starting point for any decision about a character rests with the race of the character. Human or alien, and if alien then which of the myriad kinds presented for use in the FSpace universe. This decision must be made first as it may alter all other components of character generation.

Gender may have a social component associated with the differences between the sexes, and it may be a serious anatomical difference. Remember, it is a bad idea to play a male black widow spider. See the Character Racial Templates section for further information.

Homeworld

Selecting a homeworld for a character is particularly important if your character is not born on the world of origin of a particular race. The environmental effects of a colony can have a lasting impact on the character's physical performance on other worlds, depending on the conditions where they have grown up and developed.

If your character comes from a world with marked cultural, linguistic or political boundaries (such as Earth), then it is important to note such details, as some of these will affect career options, languages, religious and political differences and possibly status.

Consult the Terran Alliance and the Empires section for further details on homeworlds.

Languages

All characters know how to speak their native language fluently. However, depending on education standards inherent to their homeworlds, particular races may be able to speak further languages. Consult the race templates and the Languages section for further details.

Age

A human character normally begins play at the age of 21. Starting ages for aliens vary according to the race in question (see appropriate race profile). This gives sufficient time to be trained in the job, and have had a few years working at it as well. Older characters may also be played. Details relating to skills and finance with respect to age can be found under the appropriate sections.

When a character approaches the average lifespan for their particular race they begin to feel the effects of ageing. This is reflected in an annual reduction in statistic scores.

Ageing STAT Reduction Effects (per annum)

Lifespan used	Str	Dex	Con	Int
50%	-1	-1	-1	-0
70%	-2	-1	-2	-1
90%	-2	-2	-2	-2
100%	-3	-3	-3	-3
110%	-5	-5	-5	-5
115%	-10	-10	-10	-10
125%	-20	-20	-20	-20
130%	-30	-30	-30	-30

The only way to counter these effects is to work on physical and mental conditioning, which is reflected in the investment of experience points (see the section on Experience).

If at any point a physical statistic reaches zero then the character is generally immobile, and if intelligence reaches zero then senility has set in. When all four statistics have reached zero, the character dies of old age.

Ageing can be offset by medical implants, nanosurgery and anagathic regimens. However, these only prolong lifespan according to their descriptions.

Choosing a character of the racial start age, or the age at which it is reasonable for the character to be perceived by all as adult, is probably more appropriate to the GM's scenarios, so if you have in mind a character of a radically differing age feel free to discuss the merits and considerations with the GM. Unless the age is inappropriate for the conditions of the campaign, most GMs should welcome the variation.

Psionics

Telepathy, ESP, and telekinesis – powers of the mind which are luck of the draw for some races, and commonplace in others. Whether a character possesses such abilities and to what degree they are powerful is important in shaping how a character might have grown up. In many cases the powers are immaterial, but equally they may close certain doors of opportunity at the same time as opening others.

See the Psionics section for further information.

Finance

Characters at the age of 21 normally start with 10,000ec. However, older characters tend to accumulate larger sums of money. On average an older character will accumulate an additional 5000ec per year beyond the age of 21. Most normal people use this to finance such things as houses, cars, or holidays.

If a character younger than the start age for that character race is being played, initial finances are altered according to the following table.

Character Finances

Age (relative to normal start age)	Finances (ec)
-5 years	500
-4 years	1,000
-3 years	1,500
-2 years	3,000
-1 year	5,000
Start Age	10,000
+1 year	15,000
+2 years	20,000
	+5,000 per year thereafter

On more primitive worlds, finances and the costs of goods are quite different. This is very apparent with the Treerats and is quite common with respect to Daryne and Orcoks. However, most players should have had some contact with interstellar employers and have gained some remuneration that gives them finances equitable with other start players. The GM should treat each character from primitive worlds on a case-by-case basis. Game balance or flavour may actually dictate impoverished players compared with their starfaring counterparts.

Refer to the Economics section for more details on monetary systems and other finance options available to characters at the GM's discretion.

Occupation

Even a vagrant has an occupation. For each character to build themselves, they must choose a career. The player will no doubt have an idea for the type of occupation they see their character following, and they should select from the list of careers the one that best suits their character. This occupation or career is one of the player's devising, and can be as simple or complex as the player or the GM requires. The career speaks volumes about what kind of person the character is and what role they may fill in the group of characters.

See the Careers section for further information, but by no means restrict yourself to the finite career options listed in that section.

Skills

Once the player has selected an occupation for their character they must choose the level of each skill offered by the occupation from a pool of typically 300 points. These points are merely a method of apportioning skills to starting-level characters. Each point represents 1 percent level in a skill.

In apportioning levels to skills, the character must have at least one skill with a level of 70% (i.e. at least 70 points are allocated to that skill, leaving 230 points remaining). That skill should be directly relevant to the character's occupation. Note that skills may exceed 100%.

On average a character at starting age should have around ten skills and an appropriate number of languages. This is a broad range of skills, given the wide scope of skill divisions allowed in the game. Over time a character would be expected to learn a new skill and develop it into something proficient every 5 years if they were going through slow shifts into other occupations.

To be highly competent in any particular skill, a character may have to push it into a range of several hundred points. Keeping skills low but broad can be an advantage, but will tend to disadvantage a character when they are challenged by more difficult problems.

See the Skills List section for further information.

Skill Points and Age

If a character is not of the race's starting age, then the pool of points from which they may build a host of skills differs from the normal 300. The following table indicates how age affects initial skill points.

Character Skill Points

Age (relative to normal start age)	Skill Points
-5 years	50
-4 years	100
-3 years	150
-2 years	200
-1 year	250
Start Age	300
+1 year	350
+2 years	400
	+50 per year thereafter

Equipment

There are two aspects to rounding off a character, the first is their possessions. The equipment a person carries often defines what things they can do, and does so much more strictly than any skills limitation. You may have a skill in weapons acquired from your service in the army, but in many countries it is illegal to possess such weapons in civilian life. Likewise, few can afford their own starship, regardless of skill.

Typically, most players simply spend some of their starting finances on particular equipment they wish to have, and can reasonably have acquired before the start of the game. Look through the equipment lists in the various sections describing equipment and spend! spend! spend! spend! spend!

Aesthetics

Do not ignore these little details. Some are defined for you by your race and gender and by virtue of your physical STATs but the little details make all the difference. For humans it is important to know: eye colour; hair colour, style and length; complexion; height, weight and build; left or right handedness (or ambidexterity, if you can sneak it past your GM); facial hair; distinguishing marks; perhaps a sketch of your character. Aall these details help both the player and the GM to visualise the fictitious persona as they move from situation to situation. These little details mostly make no difference, but it is a game thing that you should flesh out your character in this way.

Character Racial Templates

This section deals with the various alien races that are available to play as characters within the FSpace setting as at AD 2176. These races are either members of the Terran Alliance or races that have common contact with the Alliance from neighbouring states, whether by commerce or by war.

The character generation system tends towards using the Human race template as a benchmark for creating a character. This section presents the various modifications for each needed to generate a character for a particular alien race in the form of a race template which lists the basic details of statistics and other character-generation details upon which a character may be determined.

Some other races commonly encountered in known space are not shown here as they are generally inappropriate for players to use as characters. The details of the races presented as Character Templates and also other races not suited for character use are all found in the Aliens section of the Concise Rulebook.

The races presented in this section are merely brief guides to the character generation details for race-specific characters. More extensive details on each of the races are presented both in the Aliens section of this rulebook and also in the various alien Handbooks. The intent of this section is to present an overview of the aliens for simple comparative purposes and as a summary of insights into the cultures which make up the interstellar community.

The Use of Character Templates

Each template lists:

- The details of the race's homeworld insofar as it gives indication of the common environmental skills a race might possess.
- The race's maturing and ageing data.
- The statistical maximums for the race.
- The locomotion and sensory descriptions.
- Any natural weapons, e.g. Claws, Teeth.
- The psionic levels for the race.
- The language skills of the race.
- Any instinctive or naturally acquired skills.
- A racial description.

Homeworld Notes

Homeworld environment statistics such as gravity and atmosphere may not apply to the character a player generates if the character comes from a world which is not the homeworld of the race. Refer to the conditions of the colony in question.

Statistics Notes

The statistics shown for each race are in d10 units. Each d10 units represents the number of d10s needed to generate that particular statistics. If, however, a statistic has a multiple or multiples of 10, then those components of the overall roll may be made using a d100 percentile role. Any remainder d10 units not rolled as percentiles are additional d10 rolls needed.

For Example

An Ilkanian rolling their intelligence statistic listed as 13, could either roll 13d10 or one percentile roll of 1d100 with 3d10 added to the percentile.

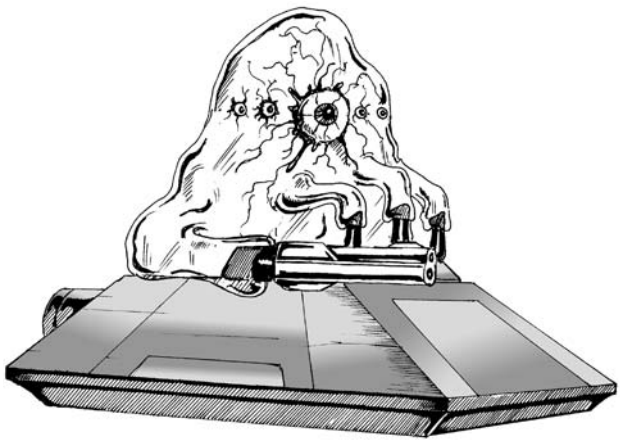
Such differences in rolling statistics are purely choice, although the GM may impose one system over another if they so require.

NPC Alien Races

Some of the Alien races found in known space are not suited for use as player races for a variety of reasons. However, they most certainly can appear as common NPCs, depending upon the situation, and play and important part in the political dynamics of known space.

Chlorans

The Chlorans are hostile slavers with no real concept that other aliens are actually intelligent. Their general arrogance has tended to mean that do not co-operate with other races.



Chloran using personal hover sled and armed with typical personal laser

Forerunners

The Forerunners are quite isolationist and tend to keep their exact abilities a mystery. As such they are unsuitable for player use. Read the description of the Forerunners in the Concise Rulebook for further details.

Gildorph

Given the Gildorph is a galaxy-sized intellect, it would be highly inappropriate for a player to play the Gildorph as a player, as it would give them access to vast stores of information and resources way beyond the scope of what an empire within known space could field. Read the description of the Gildorph in the Empires section for further details.

Mechs

The Mechs are extremely hostile to other intelligent races. Most sentient systems of the Mechs tend to be of starship or large vehicle proportions, making them unsuitable for use in a normal human-scale roleplaying environment.

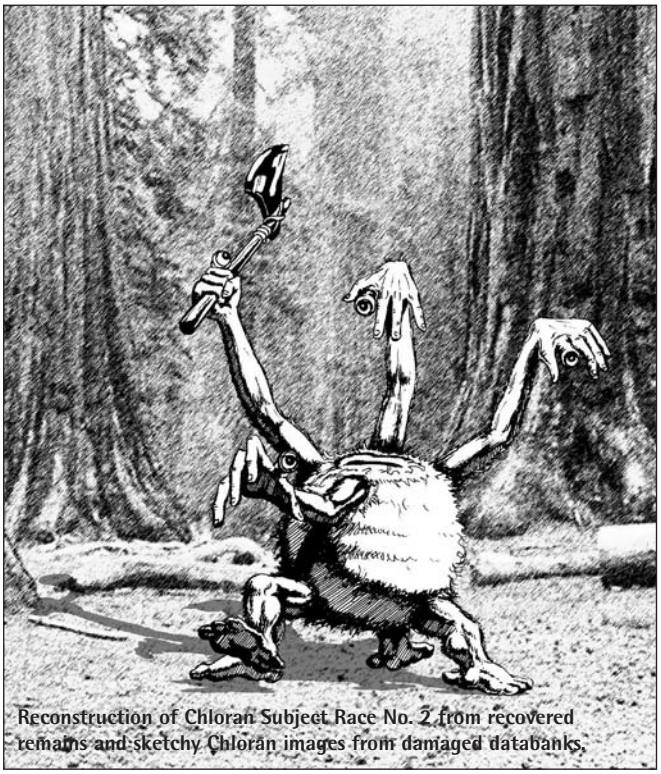
Refer to page 221 of the Concise Rulebook for further details.

Other Alien Races

Other races in known space could well be suited for use as player races, but their presence in Terran space and its periphery are severely limited because of the preferences, transportation limitations or political constraints by the interstellar state that they are a subject to.

Chloran Subject Race No.2

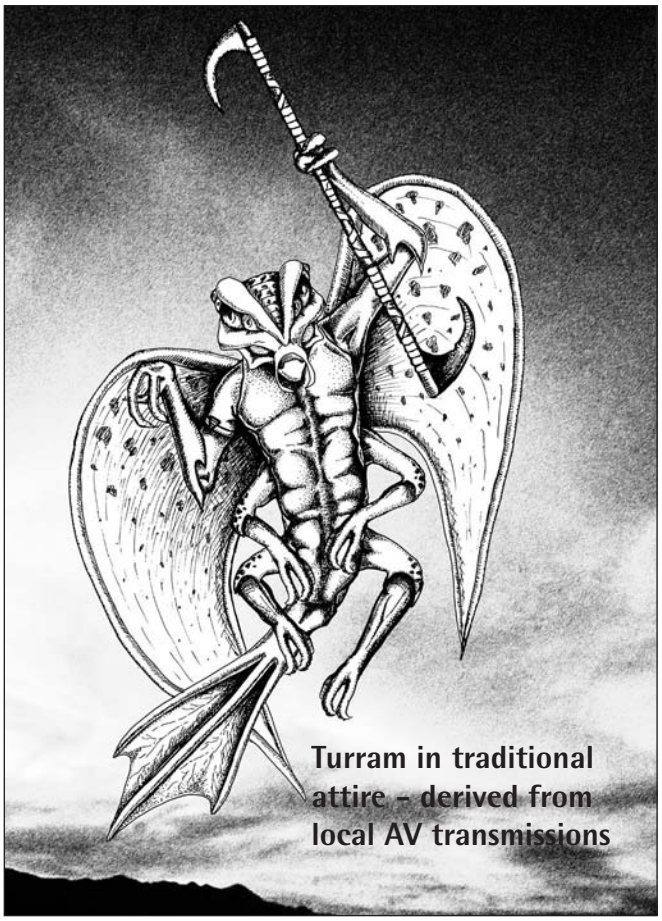
During recent actions in the Serpenti War with Chloran cruisers, dead bodies were discovered in Chloran wreckage of an as-yet-unidentified alien race that must be within Chloran space. Little is known about them, but it appears they are used as technicians, maybe with a higher duty status than the Calamanders, given their obvious natural advantages in eye-hand co-ordination.



Reconstruction of Chloran Subject Race No. 2 from recovered remains and sketchy Chloran images from damaged databanks.

Turram

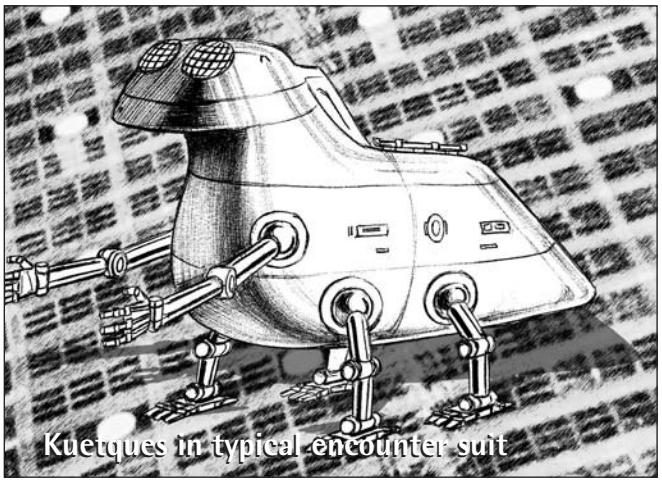
These aliens are found within Terran space, but as of yet they have not developed interstellar capabilities, and Terran diplomatic contact operations have been lengthy given the advanced nature of their technology and their alien nature. In a few years it likely that Turram will be found venturing throughout known space once diplomatic relations are properly established. Read the description of the Turram in the Concise Rulebook for further details.



Turram in traditional attire – derived from local AV transmissions

Kuetques

This race has been part of the Stotatl Empire for the last few decades and appear to reside within the Dark Nebula, part of the Natatl District of the Empire. Information about the Kuetques is highly speculative given their avoidance of the Serpenti War. Thus Terran sources know little about this race beyond the fact that they reside in zero-gravity space habitats, live in machine encounter suits and are good at plasma gas extraction mining.



Kuetques in typical encounter suit

Andorians – Black

Homeworld	Andor
Gravity	Normal
Atmosphere	Dense Oxygen
Biology	Omnivorous Reptile

Start Age	12
Lifespan	195

STR	20
DEX	20
CON	20
INT	20

Locomotion	Ground	Upright bipedal (10 m)
	Air	Twin Wings (15 m)

Sight	IR night vision & wide angle
Smell	Excellent
Touch	Standard
Hearing	Excellent
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
Teeth	0	Mod	2	4	III
Talons	2	Hard	3	6	IV
AR	1				

Psionics

Major	All
Telepathic/Empathic Commo	100
Detect Andorians	100 (as detect life)

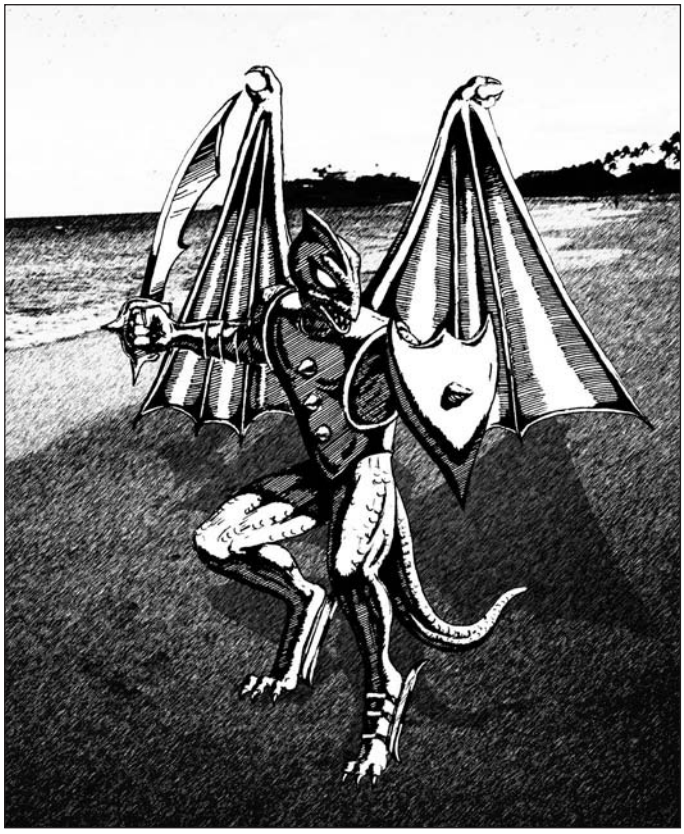
Language

Fluent	Andorian
Draconian	70
One other language	50

Typical Terran Space Careers

Warrior

Skills 300 points +100 in Combat - Unarmed/Armed



Black Andorians are not complacent like their Gray cousins. They are by nature isolationists, but over the course of time exhibit a sense of exploration, not for curiosity, but to determine potential threats. Their society is an inflexible hierarchy of knowledgeable Leaders who ultimately answer to their race leader, Keldar. Occupational roles are defined by a caste system involving Leader, Warrior, Worker, Builder and Parent roles. They are fairly philosophical, and exhibit marked religious tendencies which revolve around their extensive psionic abilities. Compared with Grays, they are viewed as Warrior mystics, and all Black Andorians have instinctive fighting reflexes. They are largely found in Terran space ,escorting important Coalition or Andorian envoys. Beyond that, a few Black Regiment vessels are seen along the periphery of known space.

Andorians – Gray

Homeworld	Andor
Gravity	Normal
Atmosphere	Dense Oxygen
Biology	Omnivorous Reptile

Start Age	18
Lifespan	95

STR	10
DEX	10
CON	10
INT	10

Locomotion	Ground	Upright bipedal (10m)
	Air	Twin Wings (12m)

Sight	IR night vision & wide angle
Smell	Standard
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
Teeth	0	Mod	2	2	II
Talons	2	Hard	3	4	IV
AR	0				

Psionics

Minor	01-60
Major	61-00
Empathic Commo	50
Detect Andorians	50 (as detect life)

Language

Andorian	Fluent
Draconian	70
One other language	50

Typical Terran Space Careers

Merchant, Starship Pilot, Starship Engineer, Scientist

Skills

Standard 300 points

Combat - Unarmed/Armed

Dimensional Science

Gray Andorians are a complacent race who are quite satisfied with a comfortable standard of living. They live in extended family groups which humans would interpret as towns. Their society is a flexible hierarchy of knowledgeable Leaders. Occupational roles are defined by a caste system involving Leader, Warrior, Worker, Builder and Parent roles. They are fairly philosophical and exhibit only a mild, cautious curiosity. Weapons and warfare have only been developed as a means of survival. They are largely found in Terran space conducting trade in order to enhance the industrial capacity of their worlds. They are also closely monitoring Terran scientific developments, since the Terran Alliance is the Coalition's nearest neighbour.

Aronhi

Homeworld	Ranargh
Gravity	Normal
Atmosphere	Standard Oxygen
Biology	Carnivorous Mammal

Start Age	17
Lifespan	100

STR	30
DEX	20
CON	30
INT	10

Locomotion	Ground	Upright bipedal (10m)

Sight	Exceptional & IR
Smell	Exceptional
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
Teeth	0	Mod	4	3	III
Claws	1	Mod	3	4	III
AR	0				

Psionics

None	01-89
Latent	90-96
Minor	97-99
Major	00

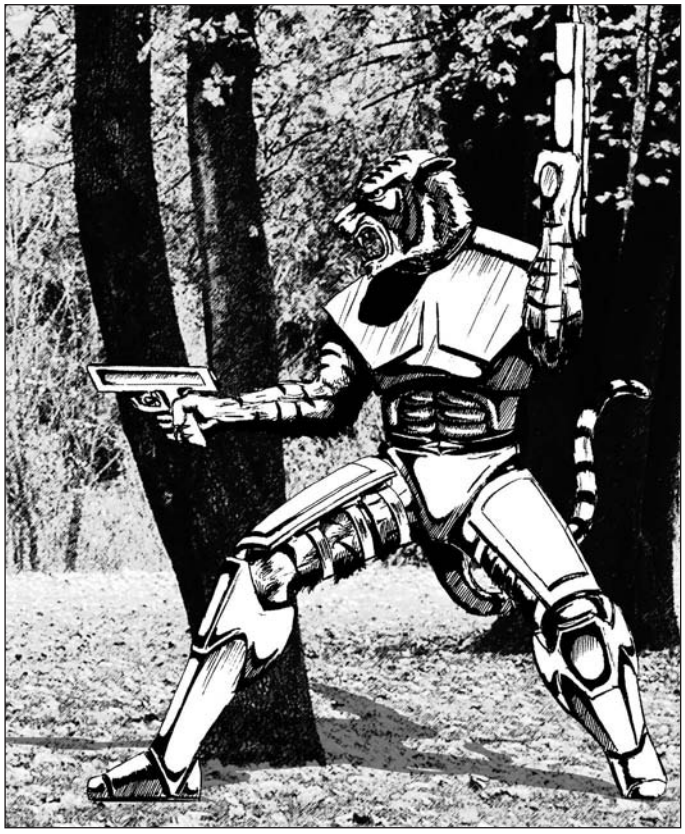
Language

Aronhi	Fluent

Skills

300 points

Combat-Unarmed/Armed



This aggressive feline species is inherently violent; internal disputes are almost always settled by armed conflicts. The hierarchical society is structured according to the survival of the fittest for combat. Their modern society only slowly formed a respect for the non-combat professions that ultimately contribute to the race's military capability. The Aronhi are very sex-discriminatory from a Terran viewpoint; males control the power and wealth of their society, whilst females support labour and details of economic infrastructure. Males are most likely to be found in military occupations, and females generally fulfil civilian occupations. Males who are too physically or mentally disabled are found in civilian roles and are considered very low on the social scale. Sometimes females become warriors, but this is not typically common, and is rather restrictive given the social link of male warrior dominance patterns and sexual reproduction. However, with the recent conflict with the Stotatl Empire, less social stigma is attached to a military-minded female warrior, since the normal dominance patterns don't apply.

Aronhi warriors, technicians and merchants are found throughout Terran space, trading heavily for military hardware or basic necessities to supply their resistance efforts against the Stotatl invasion of their empire.

Calamander

Homeworld	Calox
Gravity	Normal
Atmosphere	Standard Oxygen
Biology	Omnivorous Amphibian
Start Age	11
Lifespan	80
STR	10
DEX	10
CON	16
INT	9
Locomotion	Ground Bipedal (6 m)
	Swimming (10 m)
Sight	Standard
Smell	Exceptional
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
None	-	-	-	-	-

AR 0

Psionics

None	01-89
Latent	90-00
Minor	-
Major	-

Language

Tribal tongue	Fluent
Calamanderese	50

Skills

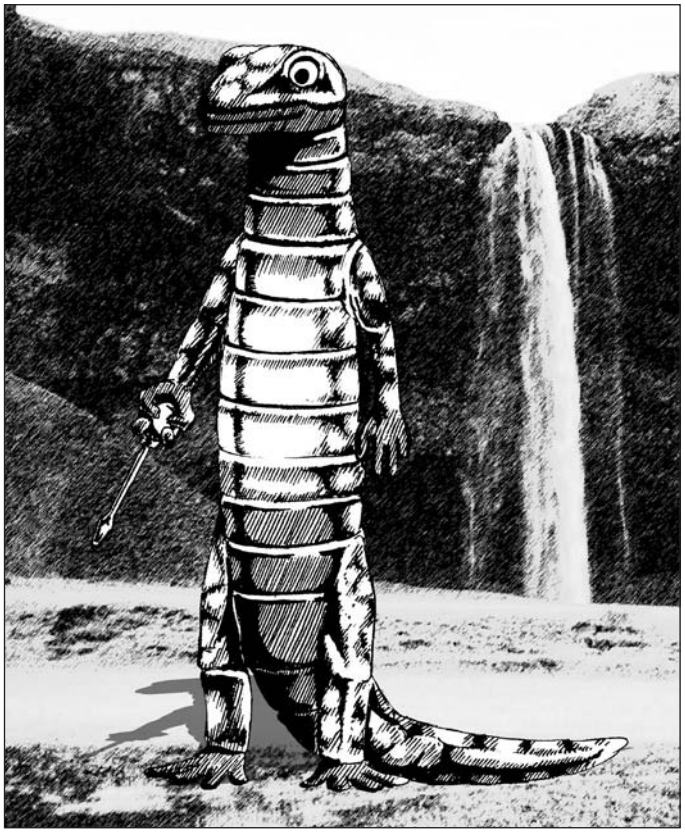
300 points

No technological skills unless military

Theology – tribal religious practices

+5% tracking (smell)

No Marine Environment needed



The Calamanders originate from a primitive tribal civilisation found within the Chloran sphere of influence. Under Chloran rule many have been shipped to other habitable worlds to serve as labourers and low-level technicians for Chloran mining operations and manufacturing facilities. During the Serpenti War many were serving onboard Chloran cruisers as technicians.

During encounters with Terran and Stotatl warships or assaults on Chloran outposts, some Calamanders managed to be liberated. Given the armistice between the Stotatl and the Chlorans recently, most of those Calamanders liberated by the Stotatl have fled to Terran space with the aid of Aronhi resistance forces.

In Terran space, many of these Calamanders are receiving training as resistance fighters with the aim of liberating their homeworld some time in the future with the military backing of the Terrans. However, the pressures faced by the Terrans and the Aronhi by the Stotatl have rendered their plans a low priority.

Draconians

Homeworld	Dracos
Gravity	Low
Atmosphere	Standard Oxygen
Biology	Omnivorous Reptile

Start Age	14
Lifespan	90

STR	7
DEX	20
CON	8
INT	10

Locomotion	Ground	Quadripedal (5m)
	Air	Twin wing (20m)

Sight	Exceptional & UV
Smell	Standard
Touch	Standard
Hearing	Exceptional
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
Teeth	0	Mod	4	3	III
Claws	1	Mod	3	4	III
Tail	1	Mod	6	-	XII
AR	0				

Psionics

None	01-79
Latent	80-96
Minor	97-99
Major	00

Language

Draconian	Fluent
Andorian	70

Typical Terran Space Careers

Merchant, Starship Pilot, Starship Engineer

Skills

300 points

Combat-Unarmed/Armed

Any Stealth skill is at DM+100 due to Chameleon

The Draconians have a clan-based society, with each clan contributing a particular speciality within the society as a whole. Upon reaching maturity a new adult chooses the clan he or she wishes to join. Clan membership is predominantly for life. Occasional non-specialist rogue individuals exist, often wandering the galaxy as drifters.

Draconians when not in any danger exhibit a highly developed curiosity, often asking questions persistently of those around themselves. They also have a great sense of humour, in which they ruthlessly ridicule their target. If threatened with violence they will use their chameleon powers and flight to remove themselves. If cornered they prefer the use of their tail as a lash to keep adversaries at bay, but if pushed hard they will turn to lethal means of defence quite readily.

In Terran space Draconians are predominantly found conducting trade. Individuals are usually from the crews of such trading ships, or are just individual drifters. An occasional diplomat or security detail is encountered when trade negotiations are sensitive.

Human – Aratani

Homeworld	Mars (current population) Original homeworld was Earth/Terra
Gravity	Low
Atmosphere	Standard Oxygen
Biology	Omnivorous Mammal
Start Age	21
Lifespan	140
Average Height	7 feet
STR	10
DEX	10
CON	10
INT	10
Locomotion	Upright bipedal (10 m)
Sight	Standard
Smell	Standard
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons
None
AR 0

Psionics

None	01-50
Latent	51-90
Minor	91-99
Major	00

Standard

Language

Ariac	Fluent	
English	Fluent	
One other language	50	either Terran or Alien

Typical Terran Space Careers
Any

Skills
Standard
300 points

Aratani humans are fairly similar to their Terran counterparts. Although visually they have some different hair and eye pigments, they can both interbreed, and mixed-blood individuals populate most of Mars.

Most Aratani follow career and skill development paths similar to their Terran counterparts. Note, however, that some Aratani are born and live in habitats with different conditions, such as normal or zero-gravity orbital habitats.

In the forbidden cities of Elysium and Cydonia, most of the Aratani work for the large hierarchical corporations. Many of these corporates are also found operating offworld, often throughout known space and dealing with all manner of alien races.

Humans – Daryne

Homeworld	Daryn
Gravity	Normal
Atmosphere	Standard Oxygen
Biology	Omnivorous Mammal
Start Age	31
Lifespan	400
STR	10
DEX	15
CON	10
INT	11
Locomotion	Upright bipedal (10m)
Sight	Excellent
Smell	Standard
Touch	Standard
Hearing	Excellent
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
None	-	-	-	-	-
AR	0				

Psionics

None	01-30
Latent	11-86
Minor	87-95
Major	96-00

Language

Daryne	Fluent
One other language	50

Skills

Standard

300 points (at age 31)

This race of elfin neo-humans is the result of genetic reconstruction by the Andorians based on a DNA helix statuette found at a Forerunner site. The Daryne fought as warriors for the Andorians during Andor's final war with the Mechs. With the collapse, this race fell into a civilisation similar to an enlightened medieval era. An enemy war machine and its Mech complement was also stranded on Daryn. The history of this race has been one of constant conflict, until recent times. Their society has remained relatively unchanged from their historic, village-based, agrarian, system. Their government system is fairly loose, revolving around a monarch and village elders. Many Daryne serve in the Coalition Army Corp. or with the Forerunners. Many of these individuals, and those working in Terran areas, are returning to their homeworld to develop a technological civilisation in the eastern areas of their continent. Given their average 400-year life span it is not uncommon for individuals to spend a 100-year term of service with either Coalition or Forerunner services. Terms of employment in Terran space are typically short and predominantly of a corporate nature.

However, Daryne of all professions can be found in Terrain Space as Terran employees, military or technical personnel of the Daryne progressionist faction, or merchants and diplomats of the Daryne government.

Humans – Terran

Homeworld	Earth/Terra
Gravity	Normal
Atmosphere	Standard Oxygen
Biology	Omnivorous Mammal
Start Age	21
Lifespan	100
STR	10
DEX	10
CON	10
INT	10
Locomotion	Upright bipedal (10m)
Sight	Standard
Smell	Standard
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
None	-	-	-	-	-
AR	0				

Psionics

None	01-50
Latent	51-90
Minor	91-99
Major	00

Language

Native tongue	Fluent	
One other language	50	either Terran or alien

Skills

Standard

300 points (age 21)

As a race, Humans are flexible, adaptable and resourceful, which often compensates for their lack of natural weaponry and specialised body functions. They are a curious race, and often exhibit a tendency to satisfy their curiosity in the face of dangerous situations. They are well versed at warfare and are acutely aware of other races' natural advantages. Humans are constantly developing better ways of achieving their goals.

Terran space is dominated by Terran humans, although the ancient Aratani humans from Mars do play a significant role in interstellar affairs. In most regards Terrans of the 22nd century are still very much like their 20th century counterparts.

Ilkanians

Homeworld	Eden
Gravity	Normal
Atmosphere	Standard Oxygen
Biology	Carnivorous Metaloid

Start Age	10
Lifespan	220

STR	15
DEX	15
CON	20
INT	13

Locomotion	Ground	Upright bipedal (10 m) Quadripedal (20 m)

Sight	Standard & UV
Smell	Standard
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
Teeth	0	Mod	4	3	III
Claws	1	Mod	3	4	III
Shock	1	Mod	6	-	XII
AR	8	half damage from energy			

Psionics

None

Special Notes

AR 20 versus Neural devices

+4 Task Modifier difficulty levels when psionics are directed at Ilkanians

Language

Ilkanian Fluent

Typical Terran Space Careers

Diplomat, Merchant, Starship Pilot, Starship Engineer

Skills

Standard

300 points

Combat – Unarmed/Armed

Biodigital Engineering

Ilkanians are predominantly pacifists and generally have combat skills only for killing live prey during their hunting periods. They are more likely to employ interpersonal skills to ward off violent confrontations. Diplomacy is almost an art form to them. They have an unusual form of electrical engineering which is based on native biomechanics of the mental processes of higher lifeforms on Eden, such as themselves.

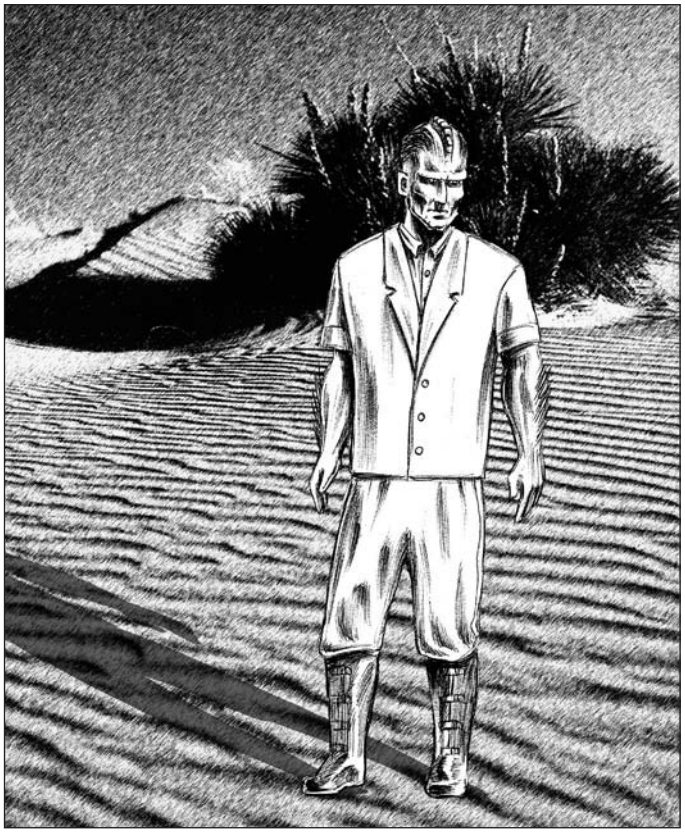
Ilkanians require raw electricity as an energy source and are often seen to feed with their claws jammed into household power sockets.

Their form of communications involves the use of radio signals and body language between themselves. Communications with other races requires very specialised radio-transceiver translators.

Ilkanians are rather weary of Terran space and the generally violent nature of Terran society. Most Ilkanians in the region tend to be associated with Coalition envoys carrying out diplomatic functions or conducting trade. However, it is not uncommon to see a private venture by small groups of Ilkanians within Terran space, mainly around the industrial regions of Mars or Luna.

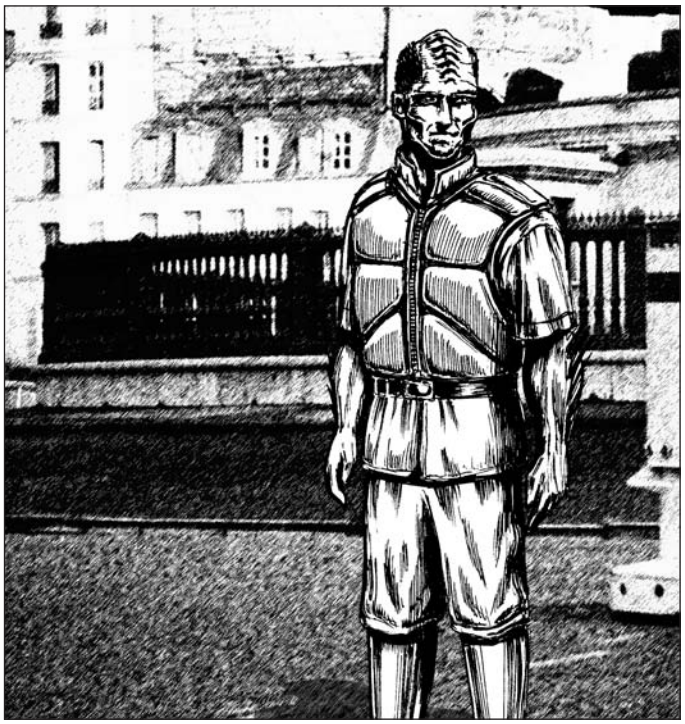
Nandina

Homeworld	Geindina
Gravity	Normal
Atmosphere	Tainted Standard Oxygen
Biology	Omnivorous Mammal
Start Age	19
Lifespan	90
STR	10
DEX	20
CON	15
INT	12
Locomotion	Ground Bipedal (10 m)
Sight	Good
Smell	Good
Touch	Standard
Hearing	Standard
Taste	Standard
Natural Weapons	
None	
AR	1
Psionics	
None	-
Latent	01-20
Minor	21-89
Major	90-00
Standard	
Language	
Nandrika	Fluent
Skills	
300 points	



The Nandina are a recent inclusion in the Stotatl Empire and have only been brought to the attention of Terran forces as they were deployed in the annexation of most of the Aronhi Empire. Given that the Nandina originate from the other side of the Stotatl Empire, only military forces have been deployed in the Terran region.

In Terran space, Nandina can be found operating as part of military actions by the Empire. Most Nandina in the region are found in Aronhi space quelling resistance as part of Stotatlizi operations. Some Nandina warships are still being used as interim vessels for Nandina naval crews and are deployed in the Empire as a temporary measure against the Aronhi. Thus some naval ship crew personnel may be found on the Terran periphery.



Orcoks

Homeworld	Daryn
Gravity	Normal
Atmosphere	Standard Oxygen
Biology	Omnivorous Mammal
Start Age	8
Lifespan	45
STR	40
DEX	8
CON	30
INT	5
Locomotion	Upright bipedal (12m)
Sight	Standard
Smell	Standard
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
None	-	-	-	-	-
AR	0				

Psionics

None	01-90
Latent	11-96
Minor	97-00

Language

Orsonarak	Fluent

Skills

Standard

300 points (age 8)

Gravity Environment (High-Gravities only)	+50

These large nine-foot-tall humanoid brutes were used by Mech forces as disposable ground troops in their war with the Coalition. Their most notable use, however, was in the long-term fighting with the Daryne on Daryn after the war machine Arsarot was stranded on planet. Following the demise of Arsarot in 2161, a few Orcoks managed to survive and sue for peace. They have remained as an Iron Age civilisation centred around the last remaining concentric-tiered stone city-fortresses built by their race.

A number of individuals are found offworld working in various low-paid manual occupations. Some rare individuals are seen in security positions with some corporations, while others find occupations as hunters and safari guides on fledgling Terran colonies, where their primitive technology skills are a great asset.

Stavira – Semi-autonomous Warrior Caste

Homeworld	Stavira
Gravity	Normal
Atmosphere	Normal Oxygen
Biology	Omnivorous Reptile
Start Age	4
Lifespan	84
STR	30
DEX	15
CON	30
INT	7
Locomotion	Ground Upright bipedal (10 m)
Sight	IR night vision & wide angle
Smell	Excellent
Touch	Standard
Hearing	Excellent
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
Teeth	0	Mod	2	4	III
Claws	2	Hard	3	6	IV
AR	5				

Psionics

Minor	All

Language

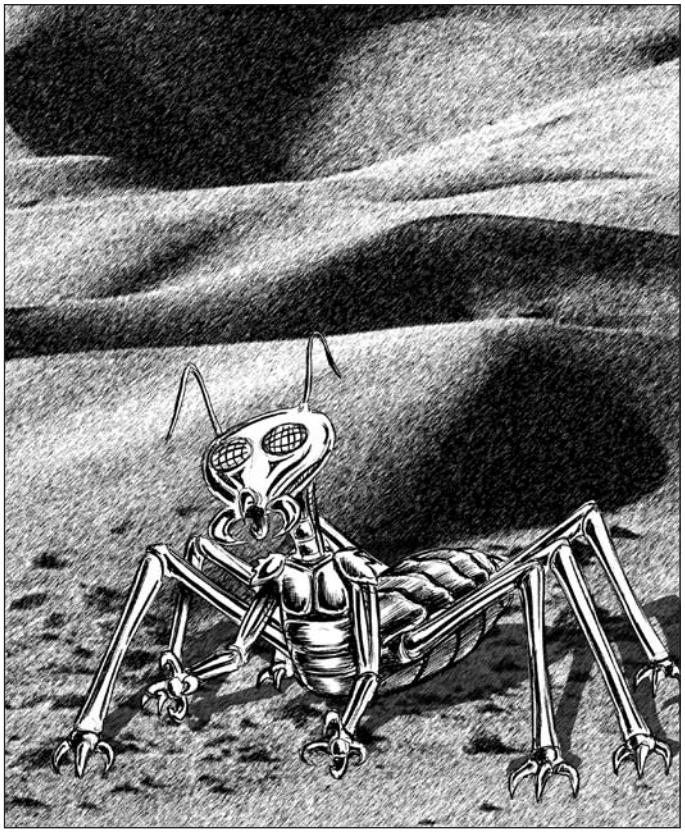
Staviran	Fluent
Stotatl	Fluent

Typical Terran Space Careers

Warrior

Skills

300 points +100 in Combat - Unarmed/Armed



These warriors are one of the distinct genetic castes of the Staviran race. These warriors serve as the versatile components of the Stotatlizi military or as naval crews onboard Battlejumpers. They have sufficient intelligence and autonomy of the Staviran hive to act as independent individuals within the infrastructure of the Empire's military.

Given that they are raised from birth for their dictated occupation, they have little life experience and instead rely on other Stavira castes (or other Empire races) to function in other roles.

This is not to say they do not learn over time. Many such warrior have survived long enough to learn suitable leadership and technical skills to rise to significant ranks, although they are outclassed by their higher caste warrior brethren.

In Terran space Stavira can be found operating as part of military actions by the Empire.

Stotatl

Homeworld	Stotatl
Gravity	High
Atmosphere	Standard Oxygen
Biology	Carnivorous Mammal
Start Age	18
Lifespan	98
STR	20
DEX	10
CON	20
INT	10
Locomotion	Ground Upright bipedal (10m)
Sight	Standard & IR/UV night vision
Smell	Exceptional
Touch	Standard
Hearing	Standard
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
None	-	-	-	-	-
AR	0				

Psionics

None	01
Latent	02-90
Minor	91-99
Major	00

Language

Stotatl	Fluent
One other language	50

Skills

Standard

300 points

The Stotatl develop their fighting skills from the earliest age possible. These skills are imparted to them by their mothers, who are the educators of the young. Stotatl take their martial prowess seriously, since all members of their society are considered part of the Empire's military machine. For a carnivorous race they are fairly restrained, resorting to tests of prowess to settle disputes rather than a combative conflict.

Every individual has a defined place or level in society according to the hierarchy. However, they can advance or change occupation as their merits warrant. They see the universe in an ordered and structured manner. They abhor chaos like that of the Yzzin. They can comprehend races such as the Andorians, Aronhi and Chlorans. Humans, however, remain a complete mystery to them, as they are both chaotic and ordered. Stotatl have spent a lot of time attempting to understand humans and why they seem to be so adaptive and survival-oriented.

During the early contact period with the Empire, many Stotatl merchants were to be found in Terran space until the Serpenti War expanded to bring the Stotatl and Terran nations into conflict over territorial claims. Stotatl encountered now in Terran space are mostly diplomatic envoys and their staff. The only other Stotatl that may be encountered are military personnel on operations against humans and their allies.

Treerats

Homeworld	Proxima Centauri 3
Gravity	Normal
Atmosphere	Tainted Thin Oxygen
Biology	Omnivorous Mammal
Start Age	4
Lifespan	25
STR	5
DEX	20
CON	7
INT	3
Locomotion	Ground Bipedal (10 m)
Sight	Standard
Smell	Good
Touch	Standard
Hearing	Good
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
Teeth	0	Mod	2	1	II
Claws	1	Mod	1	2	II
AR	0				

Psionics

Unknown

Language

'Treerat' Fluent

Skills

300 points

The Treerats of Proxima Centauri are still a primitive society and their concepts of technology are still roughly at the Bronze Age. However, some Treerats are found offworld. Most of those on Earth are part of delegations for trade purposes sponsored by the American or Russian governments. Most of their members are artisans looking around Earth and its cultural history for potential art products that could be developed for the Terran market.

Other Treerats are found offworld in proper paid employment, mainly of Daryne progressionist merchant vessels. The small stature and dexterity of this race has enabled them to be technical hands on Daryne vessels with the right amount of technical training. This initiative was sparked by a joint Australian and Aratani proposal to the Daryne progressionists to help the development of a fellow primitive race which didn't have the advantages that the Daryne have had with their long association with the Coalition and the Forerunners.

Neither the Treerats nor Terran researchers know whether Treerats have the potential for psionics.

Yzzin

Homeworld	Yzz
Gravity	Extreme
Atmosphere	Dense Oxygen
Biology	Omnivorous Mammal
Start Age	12
Lifespan	75
STR	30
DEX	10
CON	30
INT	5
Locomotion	Ground Bipedal (10m)
Sight	Standard
Smell	Exceptional
Touch	Standard
Hearing	Excellent
Taste	Standard

Natural Weapons

Type	Reach	Diff	AM	DP	Stun
none	-	-	-	-	-

AR 5

Psionics

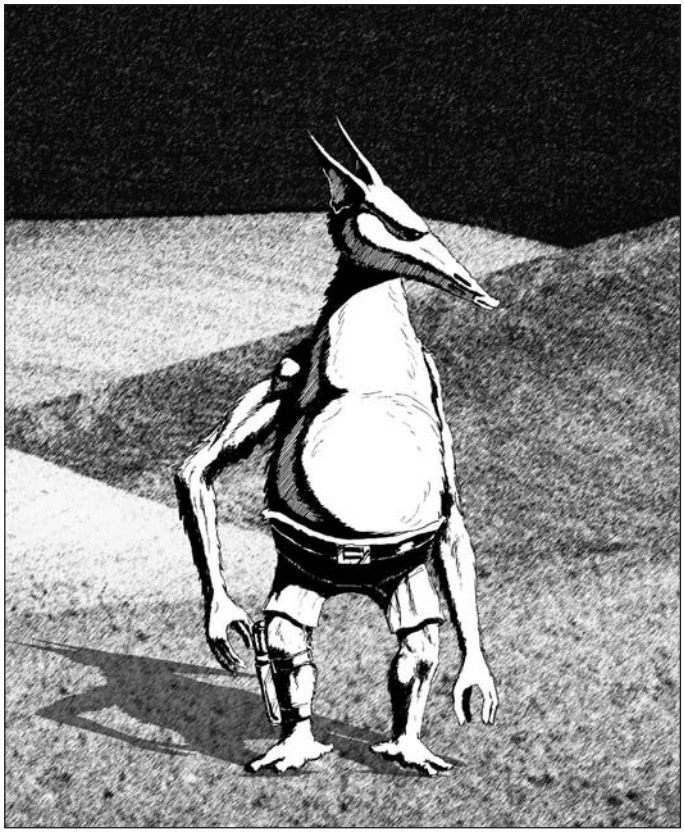
None	01-79
Latent	80-00
Special Notes	No limit on number of talents

Language

Yzzin	Fluent
Stotatl	70

Skills

300 points



Though of statistically low intelligence, the Yzzin are not thick. They simply lack imagination and are not adept at intellectual pursuits. Their technology is respectable, as they achieved atomic weaponry during their initial conflicts with the Stotatl.

They have an almost anarchist approach to organisation, being unable to maintain any social construction for more than a few months at best. However, outside influences on small groups keep them stable for long periods.

Yzzin seek employment throughout the Stotatl Empire mainly as military personnel, security personnel, miners or heavy labourers. Within Stotatlizi (Empire planetary military) they have found their niche as Heavy Infantry. Their superior strength and use of high-calibre automatic weaponry has secured them in a vital tactical role within the Empire's military strategy.

In Terran space Yzzin can either be found operating as part of military actions by the Empire, or as the few rogue separatists who have sought refuge in Terran space from the Stotatl regime.

Careers

The players should select an occupation that they desire for their characters. This occupation is one of the player's devising, and can be as simply or complexly detailed as the player or the GM requires. There is no set list of occupations to be used as guidelines, but this section has several examples listed with their common skills.

Throughout a character's life it is most likely that they will change career multiple times, and learn a multitude of new skills as they become proficient at their new career. This is particularly important in generating a character. Even a starg character may be in an occupation that they didn't originally train for.

The careers in this section are structured around those found in advanced civilisations and their colonies. They do not reflect the nature of occupations in primitive societies were occupations are more specialised, knowledge is less readily available and labouring is common practice given the limitations of not having automated machinery. The GM should think creatively when aiding a player to construct a character from a primitive world. Consultation of historical books will aid in constructing the career history of such characters.

Basic Careers

In real life career structures and skill mixes are very complex, and standard career rules reflect this. However, a number of career templates are provided to allow you to quickly choose a career and skills appropriate to your tastes.

A career typically targets 4 skills, the main skills that the player has in mind for their character and their talents. It is a requirement from the pool of 300 points which a player may allocate to a starting character, that a skill of at least level 70 be chosen. This main skill is the primary skill of a career. The remaining 3 or more skills are known as careers secondary skills and would typically be taken at levels of at least 50 each, leaving possibly 80 points to assign to hobbies and ancillary skills. These suggested skill levels are entirely arbitrary and may be radically altered as appropriate. A specialist might want the skills to be few and highly scored whilst a jack-of-all-trades grudgingly assigns 70 points to one skill, a low 30 points to another 3 and then spreads the remaining 140 points thinly across a wide spectrum of other possibilities.

Nevertheless, careers listed here contain 1 primary skill which must be taken at a level of 70 or higher and an additional 3 or more secondary skills which ought to be taken at a level of not less than 50. It is not mandatory that the secondary skills are taken at a level of 50, but they must be taken, and if other skills outshine them, then perhaps the career choice is wrong.

There are rare examples where a career requires more than one skill at a high level, and therefore more than one primary skill to be listed. In this case, both must be taken at a level of 70.

NPC Careers

The GM should treat non-player characters like any other player, and should give them the depth and diversity equal to any other player. However, generating multitudes of NPCs presents a difficult task during a game session. For quick generation the GM can use the career templates to create the required NPCs careers and skills.

For NPCs who are older than the basic starting age, add between 10% and 20% per year to each primary skill, and between 5% and 10% per year to each secondary skill.

Career Template Examples

The following listing is a set of examples of possible careers. The list is by no means exhaustive and is presented merely to give suggestions and options.

Bureaucrat

Primary Admin

Secondary: Computer, Law, Liaison

Bureaucrats are the people who run government departments. The nature of government departments creates complex systems where red tape and political correctness cripple the efficient running of business. Bureaucrats are familiar with these systems and can get things done quickly (quickly is relative concept for bureaucrats). Any suggestion that the bureaucrats themselves create much of the red tape is vehemently denied. Once familiar with one system of bureaucracy, understanding similar systems becomes easier.

Criminal – Enforcer

Primary: Gun

Secondary: Streetwise, Surveillance, Unarmed

There may be honour among thieves, but within organised criminal groups the order is kept with the help of enforcers. The enforcer is a well trusted member of the organisation. Enforcers may be required to carry out hits on organisation members who have broken the rules but often they just express the displeasure of higher ranks to offending individuals. They normally leave other targets to professional assassins.

Criminal – Confidence Artist (Con Artist)

Primary: Forgery

Secondary: Liaison, Streetwise, Trader

A con artist makes a living by convincing someone that something which is false is actually true. They sell items that they do not own, and disappear with the payment. They also purchase items they have no intention of paying for. Or they may commission copies of art and sell them off as originals. In any case it is the scheme which they are the masters of.

Gambler

Primary: Gambling

Secondary: Maths, Psychology, Streetwise

Many people enjoy gambling, while others try to make a living from it. Professional gamblers tend to avoid games of chance such as the 'pokies'. They prefer games involving cards, dice, or wagering on outcomes. A good gambler might know some tricks of the trade which allow them to increase the chances of success.

Intelligence Agent – Field Operative

Primary: Intelligence

Secondary: Bribery, Disguise, Intrusion, Investigate

A field operative's main purpose is to act as an intelligence gatherer. Their job is to break the security of installations and remove military and/or industrial research information. Sometimes they find someone who works at the target site and attempt to persuade them with financial or other benefits to remove material from work. More often blackmail is involved. Other times they break in and copy or remove the information they require. Some operatives act in a freelance capacity, selling to the highest bidder, while others are to some extent government sanctioned and used in matters of state interest.

Intelligence Agent – Intelligence Attaché

Primary: Intelligence

Secondary: Admin, Liaison, Military skills

This is the type of person who holds the position of security advisor or cultural attaché at an embassy. Their job is to be the public face of the intelligence network. They sift through satellite data and field reports, and write summaries for people higher up the chain of command. They use their Liaison skills to communicate between the different agencies, both national and international. They are also the liaison for Field Operatives.

When dealing with aliens this type of intelligence operative is the primary type used by many races, since field operatives are impractical.

Martial Artist

Primary: Armed, Unarmed

Secondary: Acrobatics, Stealth

A martial artist career is an extremely wide one, ranging from a professional fighter/instructor to something a bit more lethal such as a warrior or assassin. Such combative individuals would regard Armed and Stealth skills with as much importance as their unarmed training. Additionally, a martial artist could be a stunt person/actor, and thereby would have need of Unarmed and Acrobatics as major skills.

Police – Forensic Support

Primary: Investigate

Secondary: Chemistry, Cleaning, Medical

After the street detectives have documented the crime scene, the forensic teams move in. They dust for fingerprints, take DNA samples and trace weapons found to the crime. Forensic teams are part of the support structure for the street forces, and are relied on to solve crimes and convict criminals.

Political Aide

Primary: Liaison

Secondary: Admin, Bribery, Law, Security

If someone desires to be elected to public office, then they would be well advised to get a political aide to be their campaign manager. The political aide can then expect important positions when their employer is elected. An aide's job is to release press statements, write speeches, and ensure no scandals get out (or alternatively be the source of such improper liaisons). Many aides also head the security detachments for their employers, as this allows more control over information sources.

Scientist – Generic

Primary: Science skill

Secondary: related Science skills, related Technical skills

To be a scientist the character will have studied the chosen field to tertiary level. Start characters will have the equivalent of an honours degree (70+). Doctorates are normally gained at age 23 (101+). The scientist will have knowledge on related science topics and also know how to use and maintain various pieces of scientific equipment for their field. Pure science is the proposal of a theorem and the gathering of evidence and experimental testing to support the hypothesis. Technology is the application of science.

Security Guard

Primary: Security

Secondary: Animal Handling, Gun, Sensors

Security guards have a wide variety of duties, but their prime objective is the protection of objects, places or people. They accomplish this by patrolling and maintaining surveillance on the area, checking passes and other documentation, responding to alarms, and preventing acts of violence or theft. Animal handling is a specialised skill in this career, as it can be used on guard animals, to enhance security.

Advanced Career Templates

Advanced character templates list both career ideas for characters and for GMs to quickly generate Non-Player Characters based on the stereotype of the career and a few simple choices.

An NPC can be generated by choosing Stats with higher to lower values as indicated by the order of the Stats for the career. Skills are then apportioned percentile values based on the age of the NPC (which is likely to be already evident) and hey presto ... instant person.

The career templates present in a standardised format:

- the generic name of the career
- a list of Stats in order of importance for the career
- followed by the skills with specific percentages and increases per year
- along with common optional skills (labelled as Selective)
- and finally a description of the career and its variations due to race.

Advanced Career Template Examples

The following listing is a set of examples of possible careers. The list is by no means exhaustive and is presented as merely suggestions and options.

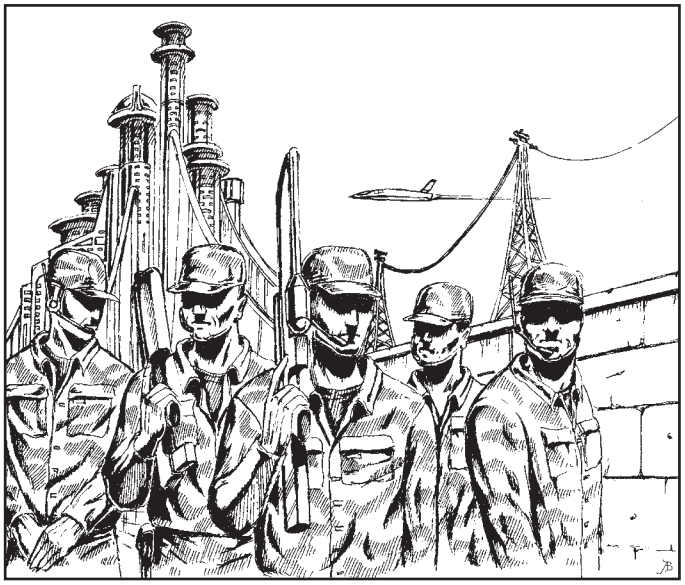
Ground Infantry

Stats: Dex, End, Str, Int

Skills:		
	Gun	**100+20p/y**
	Recon	**70+10p/y**
	Unarmed	**50+5p/y**
	Tactics	**10+5p/y**
	Selective	**70+10p/y**

Typical Selective:

Demo, Hvy Wpn, Mech Ops, Groundcar, Aircar, Leader



Infantry are the common planetary-based troops making up the base of the army and generally do the dangerous ground fighting on habitable worlds. Selective skills often depend on the speciality of the soldier in question. Competent officers often develop their Leadership and Tactical skills, while reconnaissance troops develop their Reconnaissance ability.

Military training involves a wide mix of skills, a number of which are included in the normal skills. Reconnaissance training includes Stealth, Gun training includes the use of a bayonet and grenade throwing, while Unarmed includes the use of a combat knife. Personnel with weapon training to at least the qualified level (70+) are also able to conduct routine maintenance operations on these weapons.

Typical ground infantry troops from advanced nations would use gauss rifles and wear combat armour at the very least. Heavy infantry units often use power armour systems to give greater mobility and firepower in the modern battlefield. Such soldiers would have good training in heavy weapons and mech operations.

Aliens such as the Andorians, Aronhi and Draconians, with their natural weapons, are quite adept with armed weaponry that resembles their own. Thus their unarmed and armed combat skills are combined. Orcoks have little gun training (excepting experienced officers) and thus have a mix of armed (sword) and tensile (crossbow) skills. Traditional Daryne are very similar to Orcoks in weapon skills. However, technophilic Daryne, especially in foreign service, tend to follow the trends of those they serve with.

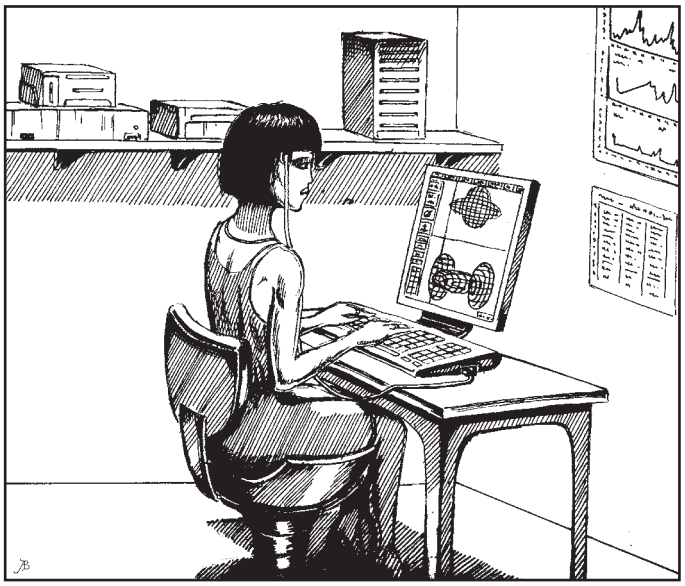
Computer Hacker

Stats: Int, Dex, End, Str

Skills:		
	Computer	**100+20p/y**
	Security	**70+10p/y**
	Electrical Engineering	**50+5p/y**
	Investigate	**10+5p/y**
	Selective	**70+10p/y**

Typical Selective:

Cybernetics, Intelligence, Mathematics, Sensors



A computer hacker makes a living out of gaining information through computer networks which have a value to some organisation or individual. Hackers and security personnel often have contests to see if one can stop the other. Many hackers do these activities for thrills rather than as a job. Some security computer programmers moonlight as hackers. This career is often financially demanding when it becomes professional, with many hackers getting various cybernetic implants to enhance their speed and performance while operating on the global net.

Although sophisticated computer systems are maintained by many races, most do not share humanity's passion for such recreational activities as hacking. Certainly the use of cybernetics for computer linking is unheard of amongst aliens, although a few exceptions are found amongst technophilic Daryne.

One reason for this is the human tendency to use their computers for socialisation and recreational purposes, whereas other races see computers as tools not toys.

Andorians are careful after past experience with Mechs to avoid intelligent machines.

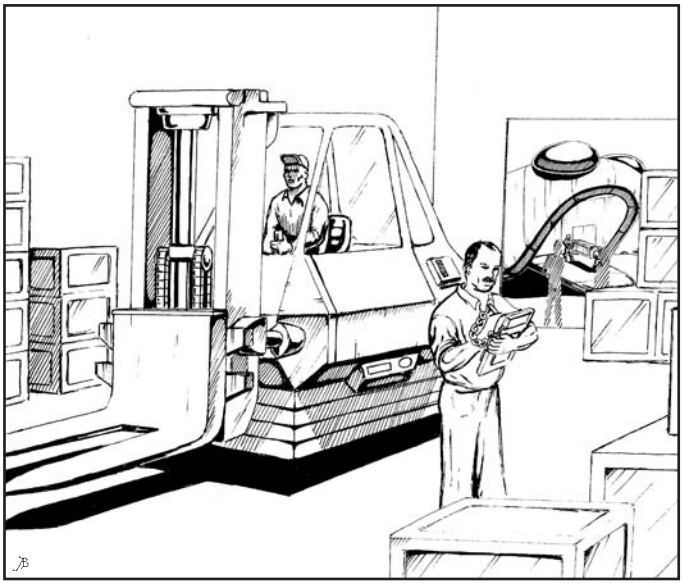
Merchant

Stats: Int, Dex, End, Str

Skills:		
	Trader	**100+20p/y**
	Liaison	**70+10p/y**
	Admin	**50+5p/y**
	Investigate	**10+5p/y**
	Selective	**70+10p/y**

Typical Selective:

Bribery, Computer, Law, Streetwise



The merchant, or trader, is the person who buys and sells products. Often this requires moving the products from one market to another. A trader normally aims to make a good return for their time and trouble. Ships that carry cargoes of a speculative nature would be advised to seek advice from a trader. Conventional traders are often found at the stock market and the futures market.

The merchant profession is a common profession for almost all alien races, since trade and commerce is the basis of most of their economies. Interstellar trade systems are where some differences appear. Less advanced races such as the Daryne and Orcoks conduct little interstellar trade, and have tended to adopt Terran practices in recent years, subcontracting most of their ventures. Andorians tend to have rather subdued activities, relying on the far more vigorous Draconians for efficient trade. The Draconians consider the merchant profession the most honoured, and have formed complex trade practices. Interstellar activities of Draconians are conducted by several competing specialised clans. The Aronhi also conduct trade at clan level, but this is only done because of the militarised nature of their trade vessels, and the fact that their operating crews are generally clan warriors. Aronhi merchants are therefore highly likely to be reasonably trained in warfare and personal combat as well.

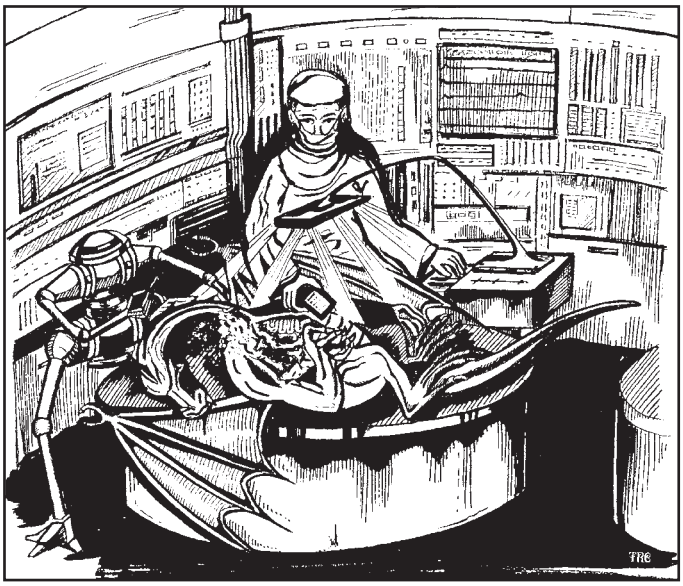
Medical

Stats: Int, Dex, End, Str

Skills:		
	Medical	**100+20p/y**
	Computers	**70+5p/y**
	Bioscience	**50+5p/y**
	Selective	**70+20p/y**

Typical Selective:

Chemistry, Genetic Engineering, Admin, Psychology, Cybernetics, vehicle



The medical personnel range from surgeons and medical researchers to first aid station attendants.

Front-line medical personnel in military service have Medical as a primary skill and weapon-related skills as secondary or selectives of their service arm. Non-combat military medical teams are not required to have more than basic training in combat skills, and more closely resemble civilian medical personal. A medical expert will often specialise in particular fields; some do research whilst others study alien biology, and more technical medics might develop medical robots. These specialisations are reflected in the choice of selectives and in further specialisations.

With races not as technologically advanced, such as the Orcok and traditional Daryne, much of the medical skill involves herbalism and magic rather than the smart robotic drugs that are the cutting edge of human technology. Some open-minded Daryne have been trained in medical technologies during service for the Coalition, Terrans, and the Forerunners.

Aronhi medical personnel are warriors if in military and spacefaring situations, but the civil requirements are covered by female Aronhi.

Some Draconian clans operate hospitals, while others run research facilities which compete for various research contracts.

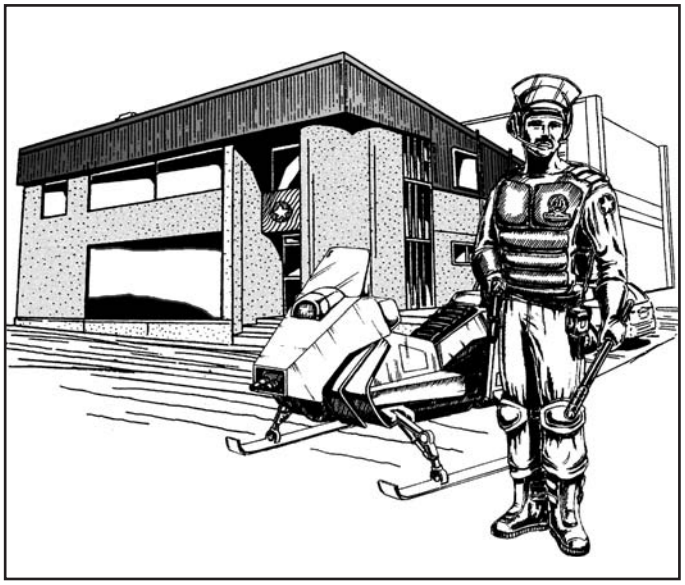
Andorian medical personnel are drawn from the parent caste. The parent caste is a female-only caste; in contrast the warrior caste is male only.

Police – Street Cop

Stats:	**Int, Dex, End, Str**	
Skills:	**Investigate**	**70+15p/y**
	Gun	**70+15p/y**
	Streetwise	**50+10p/y**
	Ground car	**50+5p/y**
	Selective	**60+5p/y**

Typical Selective:

Law, Surveillance, Unarmed, Computer



Street cops are the uniformed officers whose job is to keep the peace and investigate crime. The street cops are the often the first to arrive and secure the scene until the detectives arrive to co-ordinate the various police units involved and to take over from the uniformed officers. Street cops can be found patrolling their jurisdiction on foot, or in police vehicles, either spotting offenders or responding to dispatch calls. Most street cops are armed with handguns and body armour. Heavier firepower is often carried in the vehicle. Government agencies such as the Customs Service have similar profiles for rank and file officers.

Martian police are private corps, who win contracts in the various domes; larger corps often have their own police force for their domes. In times of war the corporation police forces are ceded to Martian military control.

The Orcoks have a militia-based force. A low-ranking officer class is charged with civil order of an area; the area is defined by the "Constable's" superior officer, and is patrolled by the lowest ranks charged with keeping the peace.

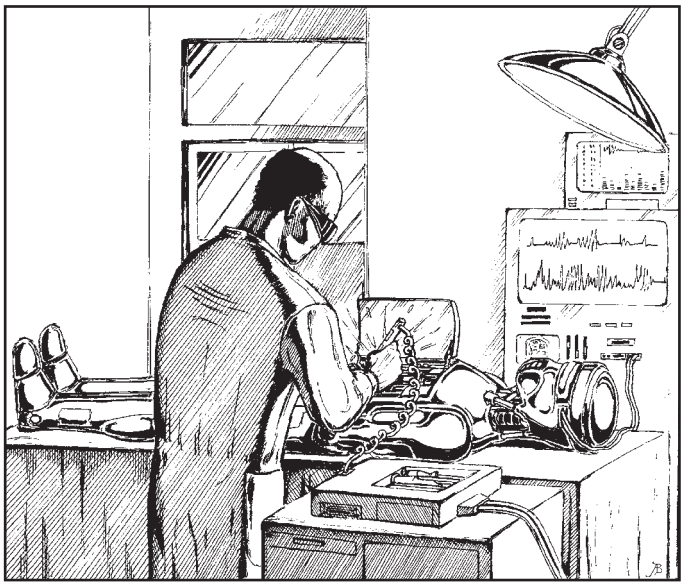
The Daryne village system is policed by the warriors. They hunt during peace, defend during war, and sort out civil disorder in accordance with the wishes of village elders. Orcok and Daryne forces might substitute traditional weapons for guns. Draconian police forces are usually of a specialist clan (extended family business). Andorians forces are drawn from the Gray warrior caste. Their job is that of civilian police person, but in time of trouble each warrior caste member is required to do what ever they can.

Robotic Technician

Stats:	**Int, Dex, Str, End**	
Skills:	**Electrical Engineering**	**100+20p/y**
	Robotics	**70+10p/y**
	Sensors	**50+ 5p/y**
	Armourer	**30+5p/y**
	Selective	**50+10p/y**

Typical Selective:

Mechanical Engineering, Structural Engineering, Computers



A robotic tech fixes robots when they break down and maintains them so that they don't. They can reprogram or alter the robots' systems with the correct tools. Robotic techs use Electrical Engineering to repair and maintain systems and Robotics skill to alter the existing system. Sensors skill is used for the sensor systems and is used in diagnostic work. Armourer is used if the outside casing has been damaged or any weapon system requires attention. Often robot techs who are specialists in particular fields of robots will gain knowledge in those fields, e.g. someone who fixes mining robots could include Mining as a selective option.

On large ships the engineers normally direct robots to carry out repairs. These robots would normally be maintained by a specialist member of the engineering crew, the robot technician.

The Aronhi use a great many military robots. The robot tech positions are often filled by the infirm or disabled warriors who wish to remain in the fight. Other warriors seek these positions for researching better weapons technology. Non-military robots are often operated and maintained by female Aronhi.

Andorian robot techs are drawn from the builder caste.

Draconian robot techs are part of a clan who use robots on a regular bases, maintaining and carrying out minor repairs. Major repairs, new designs and construction of robots are carried out by the robot techs of the robotics specialist clans.

Young Daryne have recently started seeking work in robotics amongst the Terran corporations.

Space Marine

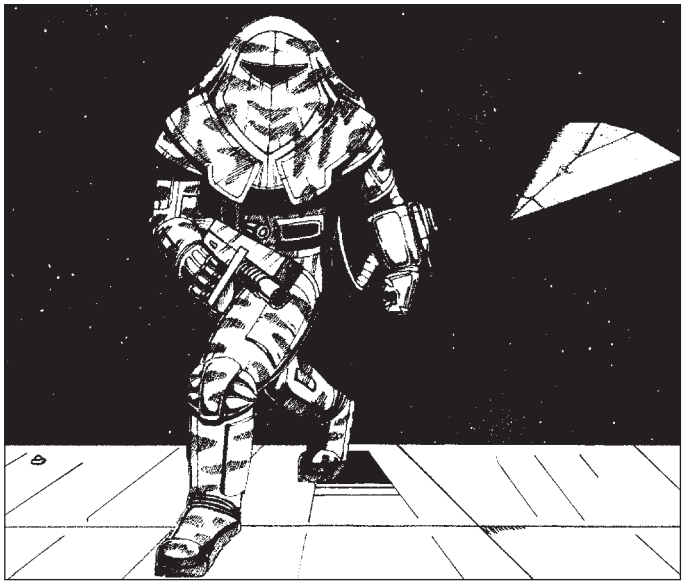
Stats:	**Dex, End, Int, Str**	
Skills:	**Gun**	**70+10p/y**
	Space Environ	**50+10p/y**
	Heavy Weapons	**50+5p/y**
	Tactics	**50+10p/y**
	Unarmed CBT	**30+5p/y**
	Selective	**50+10p/y**

Typical Selective:

Leadership, Mech Ops, Demolitions, Gravity Environ

The space marine is the space equivalent of the ground infantry. Amongst human forces they tend to be elite troops – specialist forces trained to handle the difficulties of fighting in space and other hostile environments. Only the large space powers deploy them in any significant numbers and even these countries normally consider the space marines to be superior to their ground counter parts. Part of the superiority is the amount of extra training that the marines require. They can also act in a ground military role, whereas the ground troops are only of limited use in space. The cost of outfitting a marine is high compared to their dirtside counterparts.

The space marines training includes fire fights inside spacecraft, how to move in zero gravity, and how to fight whilst wearing the spacesuits. Most marines fight in at least battle armour. Basic training includes ground combat and the skills associated with it.



Space marines are also trained in basics of starship workings. Retired marines are often found filling security and weapon posts on starships and space stations.

The Coalition have specialist space forces drawn form all coalition races.

Aronhi warriors tend to be trained on a requirement basis, and have no structured marines organisation.

Orcoks lack the technical background to be space marines, but the Daryne warriors serve the Coalition, fighting along side the Coalition races in all aspects of the military, including the space marines.

Starship Engineer

Stats:	**Int, Dex, End, Str**	
Skills:	**Electrical Engineering**	**100+10p/y**
	Structural Engineering	**70+15p/y**
	Mechanical Engineering	**70+10p/y**
	Computer	**10+5p/y**
	Selective	**50+10p/y**

Typical Selective:

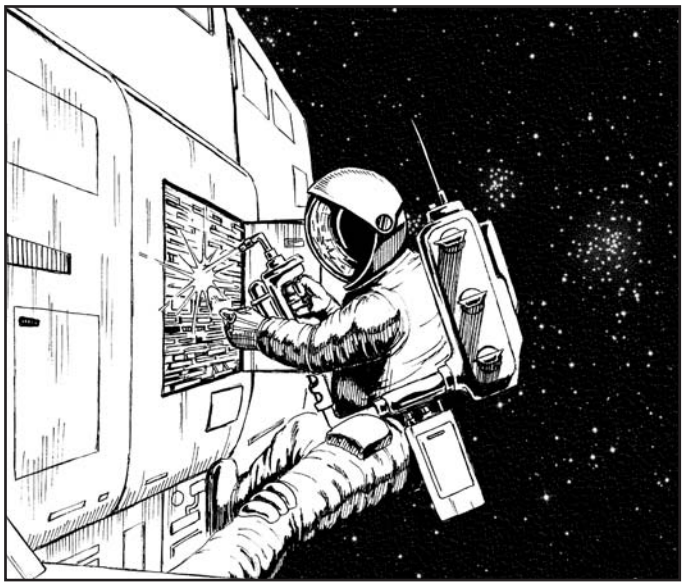
Robotics, Sensors, Space Environ, Armourer

When something breaks down on a starship, the engineer gets it going again. The engineer is also responsible for maintenance to prevent breakdowns. As starships are complex machines, all three engineering disciplines are required by the engineers. Most starship engineers start their careers as apprentice electrical technicians on the starships on which they serve.

If in military service it is quite common for an engineer to get a neural link for swift fault diagnosis operations. In the American Space Forces it is mandatory to have one.

All Andorian engineers and technicians are drawn from the builder caste; military service builders can be very skilled at combat but their primary skill is a technical skill.

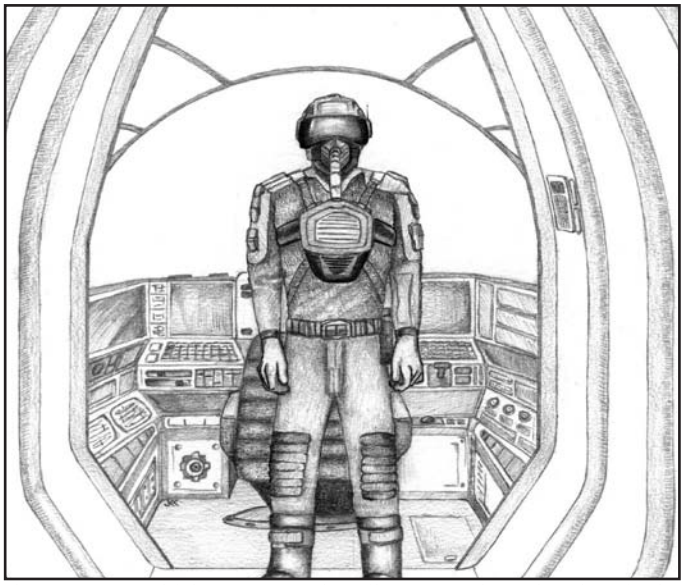
Draconian engineers are members of engineering clans, who contract their members to the crews of ship operating clans. Different clans serve military and civilian contracts.



Daryne in the past served as engineers on coalition vessels, military and civilian – now most seek employment amongst the Terran civil fleets.

Aronhi engineers are not required to be warriors, so there is a much higher ratio of females to males in engineering and tech position compared to other ship positions.

Starship Pilot



Stats: Int, Dex, End, Str

Skills:		
	Starship Pilot	**100+20p/y**
	Astrogation	**70+10p/y**
	Computer	**50+5p/y**
	Sensors	**10+5p/y**
	Selective	**70+10p/y**

Typical Selective:

Aircraft, Hvy Wpn, Space Environ, Tactics

Unless a starship is full automated it will require a pilot. The pilot's job is to plot the course and feed the information into the flight computer. A pilot would normally take manual control during the more difficult procedures such as landing or combat.

On large ships the pilot's position is often referred to as helm. On a long-range, sole-occupancy mission a pilot would be advised to have Mechanical Engineering as a selective, for those unexpected repair jobs. Fighter pilots have the luxury of leaving that to the ground crew. In military service it is quite common for a pilot to get a neural link with RV connections for swift control of their craft. In the American Space Forces it is mandatory to have one.

An Orcok starship pilot has never been recorded. Because of their unfamiliarity with technology, Orcoks are poorly suited to such a high-tech career, and the best an Orcok might get as ship crew would be as cargo handlers. On the other hand, the technophilic and long-lived Daryne have traditionally obtained careers as starship pilots by serving long-term contracts with the Coalition either in military or civil service, and in recent times they have been signed by with Terran corporations. A typical contract for the Daryne is 100 years. Draconian pilots are provided by specialist clans, with different clans handling military and civilian needs.

Aronhi pilots are drawn from the warriors of a clan. Sometimes warriors who are losing their edge in ground combat (through age or injury) specialise in bridge crew duties, so as to best serve the clan and maintain their warrior status. Andorian military ships are piloted by the warrior caste, and civilian ships are piloted by either

Street Gang Members

Stats: Int, Dex, End, Str

Skills:		
	Streetwise	**100+20p/y**
	Unarmed	**70+10p/y**
	Ground car	**50+5p/y**
	Stealth	**10+5p/y**
	Selective	**70+10p/y**

Typical Selective

Armed, Gun, Intrusion, Mechanical Engineering, Picking, Leader

Most street gang members are either runaways or rebels who join gangs to increase their chances of survival on the street. It gives them an identity and a sense of family. Most become involved in crime, and by the time they have reached adulthood they are members of an organised street gang.

Most street gangs compete for 'turf', so they can operate distribution networks for drugs, arms and other black-market items. These items being supplied by organised crime syndicates. Other street gangs act as enforcers for suburbs where the residents distrust the authorities.

Not much happens on the street without the gangs' knowledge, so street gang members can be interesting sources of information. The other type of street gang member is the biker, most of whom have some technical skills such as Mechanical Engineering. Their primary motivation is to ride their bikes, which may include controlling the road; they too can be just as prone to committing crime.

In societies such as the Andorian and Draconian worlds of the Coalition, little exists in the way of such groups. Daryne society seems to lack such individuals because of the tight-knit and caring nature of Daryne communities. However, Orcok city-states are rife with street urchins, gangs of thugs and other assorted groups. Aronhi gangs are really small clans made up of individuals who are dysfunctional within their original family and clan groups. These individuals band together for survival in the dominance struggles within their society. Many a great clan has risen from this position in written history as it proves itself in dominance patterns.

Skills

The skills listing is a guideline to the vast number of skills which a character may choose to learn. The list is far from complete. Notable absences are the skills that might be essential for a colonist to know – Boat Building or Shelter Construction – or the vast array of hobby and craft skills – Model Making, Pottery, Dramatics, or Horticulture. Nevertheless, the listing does represent the dominant skills used in most role-playing situations, along with a guide to the most appropriate STAT base for skills to draw on.

To achieve exceptionally difficult tasks, a person must rely on help from others by combining skills towards a common goal or by using specialised help packages, computer programs or specialist equipment. It is therefore possible to buy a solution to a problem where knowledge of the skill is lacking, or simply not high enough.

The player selects an occupation for his character and their level from a pool of 300 percentile points. Skills may exceed 100. The character must have at least one skill at a minimum of 70 that is directly relevant to the character's occupation. Start characters require one skill of at least 70 and three at 50 (or the option of skills at 100, 70 and 50). A starting character's highest skill level is the primary skill and should be related to the character's career or profession. The following skill list is only a guideline, but gives a good indication of skills used. The skill list notes the applicable statistic which provides the fundamental base level added to the number of skill points invested. The STAT base is found by dividing the applicable statistic by 5.

On average a character at start age should have around ten skills and an appropriate number of languages. This is a broad range of skills, given the wide scope the skill divisions in the game allow. Over time a character would be expected to learn a new skill and develop it into something proficient every 5 years if they were going through slow shifts into other occupations.

Remember that to be highly competent in any particular skill, a character may have to push it into a range of several hundred points. Keeping skills low but broad can be an advantage, but will tend to disadvantage a character when they are challenged by more difficult problems. The players and GM should think about how people in the real world have to specialise in a particular skills to become good at their occupation.

The skill list in the following section may seem rather limiting when the skill points that characters are allowed are figured into the equation. However, someone skilled in a particular area is well aware of how to use the tools for that skill. Thus a geologist would know how to use the computer, robotic and sensory equipment needed for such a skill. But a geologist wouldn't know how to program, repair or design such equipment beyond the most rudimentary level without the associated technical skills.

In essence this allows most people to use 'tools of the trade' without the need for additional skills. With this in mind, the required skill load decreases dramatically. In fact in general a rational and realistic analysis of skills shows that most people in the real world fit the profile given by the skill allocation given in these rules.

To achieve highly difficult tasks, a person must rely on help from others (Combined Skill Tasks) or from specialised help packages (Assistance programmes) or from advanced equipment. Thus the generation of greater finances allows an individual to hire or purchase the appropriate assistance to achieve a goal.

The GM will conduct the moderation of such assistance procedures according to the applicable section in the Rule Book, realistic mechanisms, and the GM's own flavour concerning such procedures.

The skills presented here are by no means complete. They represent the dominant skills used in most role-playing situations. If, however, the situation dictates otherwise, players should consult their GM for other skill options (e.g. music, art, cooking, brewing).

Skill Crossover

An individual skilled in a particular field is aware of how to use the tools for that skill. Thus a geologist would know how to use the computer along with the robotic and sensory equipment needed for modern geology. However, a geologist alone would not know how to program, repair or design such equipment beyond the most rudimentary level without the associated technical skills. They may be able to specify new requirements to another expert, but they would not be able to implement them. This allows most people to use their tools of the trade without the need for additional skills. The total number of skills required by a character decreases, since a competency in a single skill confers the necessary niche areas of associated skills insofar as they relate to the stated skill.

Skill Descriptions

The following is an expansion on each listed skill indicating its typical uses and scope, and suggesting possible modifiers where the use of a skill may be particularly easy or exceptionally hard.

ENVIRONMENT

Existing safely and treading lightly in one's environment is the fundamental skill which all creatures must possess. Every being exists to survive. These skills are the extension which intelligent creatures require where they place themselves in unusual environments.

Animal Handling

This skill allows a person to work effectively with trained animals such as police dogs, although most trained animals require a period of familiarisation with a new handler (i.e. +1 Diff level

until familiar). This skill also allows the training of animals, ranging from house training a pet, to handling beasts of burden, to handling a large predator in a circus act. People who work with animals should consider some Animal Handling skill.

Climbing

This skill indicates that a person has learned techniques for climbing difficult to treacherous terrain and surfaces. The objects they climb can range from walls to trees to mountains. Their training includes free climbing as well as the use of ropes and other specialised climbing equipment. With climbing equipment, a proficient climber can assist other less experienced climbers.

Gravity Environ

If a person is attempting to conduct tasks while in a different gravity than they are used to, things can become harder. Gravity Environ training is used to minimise the effects of gravity differences. The training also includes techniques for adapting to a planet's gravity faster if the person is staying for a prolonged time.

Hostile Environ

Hostile environment training focuses around skilling the individual about the dangers of working in hostile atmospheres and how to use a pressure suit (P-Suit) effectively. Those who have been trained in using environmental suits find the work more pleasant and less time-consuming. Modifiers for performing skills whilst working in an environment suit are reduced or nullified.

Hunting

A person with hunting skill is able to locate prey by studying its habits or by tracking the prey down by its characteristic marks. A hunter is more likely to surprise his prey and can skin and butcher the carcass after a successful kill. A hunter needs to spend some time getting to know the type of prey for full effect. A hunter often uses traps to capture the prey.

Marine Environ

This skill allows a character to communicate and work freely under marine conditions. A successful check removes extra task penalties on other task roles because of the environment. Marine environment shows the level of training a character has had in the use of marine equipment, both for breathing and for movement.

Ride

A character with this skill can ride beasts of burden (e.g. horses, camels). Most characters would have gained this skill with horses, but other types of riding beast can be found in certain areas on Earth and some of the colony worlds. Apart from horses, camels and elephants are regular mounts for different types of people on Earth. A character with riding skill can also drive a wagon pulled by an animal and keep it under control. Animal handlers wishing to break in animals as beasts of burden tend to have riding skills as well, although many rely on a good rider in their team.

Space Environ

Space environment involves both weightlessness due to zero gravity and vacuum conditions. This means that work is required to be done in suits which hinder work. Special manoeuvring devices need to be used to move around in such an environment. Although Grav Environ and Hostile Environ cover these conditions, it is rather unique and brings more danger than most planetary-trained operators with Hostile and Grav Env realise.

Survival

A person with this skill can find and gather food and water in wilderness areas. The preparation of gathered foods is also significant since without special preparations some food sources are poisonous. Some local knowledge aids immensely in preparing these foods. Characters can also find shelter and navigate if travel is required. This skill is most useful when they are lost or stuck in wildness environments such as deserts, tropical forests or oceanic areas.

MILITARY

Military skills are for military personnel. Every recruitment poster advertises an opportunity to learn skills you wouldn't normally gain. The skills under the military banner are those which fall solely into the military domain.

Intelligence

A character with this skill is familiar with information gathering in a covert manner. Gaining the correct information is vital to the intelligence industry. Being able to determine the validity of obtained information is crucial when false information can spell disaster on an interstellar scale. The transportation of information often involves the use of codes and some degree of espionage. Characters with this skill know more than most about the secret world of agents and how to protect information from others.

Recon

Reconnaissance work often involves observation to estimate the relative strength and disposition of the observed opponent. Individuals with Recon training are effective artillery observers. Reconnaissance individuals are often used to scout the way ahead for a larger group to determine impending dangers and the best possible route of travel. Recon is a field-based skill and is useful mainly in times of conflict.

Surveillance

This skill allows a character to monitor the activities and movements of someone, either by following that person or by the use of surveillance devices. Characters with Surveillance also learn anti-surveillance techniques. Surveillance work often involves bugging and phone taps to get a clearer picture of the target's action. Surveillance is often used by intelligence or law enforcement agents to obtain information.

Tactics

An individual with tactical knowledge can combine the information given to them and come up with the best operating solution. Such training is especially useful when in combat. When people are working together as a team, Leadership and Tactics are most useful. Someone with Tactics can often guess the enemy plans if supplied with good intelligence information. Characters with tactics can sometimes react faster than others, as they have a better idea about what the opposition is doing. If a group works together in combat then the Tactics bonus applies to the group.

SCIENCE

Science is hugely underrated in schools, but is the cornerstone of civilisation. Propose a theory, then devise experimental tests to support or disprove the theory. Then conclude the relative validity of the theory. In science nothing is necessarily what it seems, but for the time being the best theory is the accepted truism.

Astronomy

This skill allows the interpretation of observed astronomical data. It allows a character to comprehend the processes of stars and their associated phenomena. A character with this skill knows how to operate telescopes and other spectrographic equipment. An astronomer can try to identify stars about to nova or the possible presence of a black hole.

Bioscience

This skill involves the study of biological organisms and how they function. An organism could range from several tonnes of marine mammal to single-cell creatures. The life processes and evolutionary background can be ascertained through careful study. Much of Bioscience is concerned with how the organism overcomes its challenges in life. These primary functions are to breed, grow, feed and move. Some of the work is conducted in a laboratory, analysing collected samples. The other part involves observations of the organism in its habitat. Bioscience is made up of the disciplines of Biology, Botany, and Zoology. People with Bioscience skills of 100 or more tend to specialise in one of the sub-fields.

Chemistry

Chemistry involves the comprehension of the properties of the elements and the reactions that occur from mixing various chemicals together. A character skilled in Chemistry can mix chemicals to create the desired effect. So, with instructions or related knowledge a chemist could make some form of painkiller (Medical), or an acid effective on particular alloys (Metallurgy).

Genetic Engineering

A character with a background in Genetic Engineering understands the make up of the DNA and can separate the individual gene with the desired quality. The gene can then be transferred to the genes of a different organism. This allows the Genetic Engineer to create a variant with the qualities desired spliced in. This applies to plants, animals and higher life forms. But as in most cases such people are completely reliant on specialist equipment.

Geology

Geology involves the investigation and comprehension of processes which form planets and the various rocks and landforms which make up the planets. A character with this skill can interpret the geologic history of an area, and determine the most likely location of economic resources, or a supply of underground water. This skill allows the Geologist to determine and prevent hazards, identify floodplains, or determine the timing of volcanic eruptions.

Mathematics

Often closely tied with Physics, the study of mathematics allows the comprehension of complex formulae and mathematical equations. At the lesser end, with this skill a person can handle numbers well, (i.e. add up numbers in their head) whereas the rest of us need our wristcomps.

Metallurgy

An individual with this skill knows the properties and uses of metals, alloys and ores. The individual has learned the refining techniques to make various alloys. The metallic composition of an unknown alloy can also be analysed. A skilled individual could possibly create a new alloy.

Physics

These people make measurements, make more measurements, and then interpret what they measured. They understand the physical properties and the theories of reality and the universe. An individual with this skill could explain to you how the starship drive system actually works, but without relevant skills could not operate it.

SOCIAL

These are the skills of interpersonal relations, skills of communication, and skills of method and process. All are considered social skills because at their root is the necessity to understand the many variations of societies.

Admin

When running a business, company, government or any large organisation with a large bureaucracy, an individual needs administration skills. People such as accountants, economic advisors, clerks and bureaucrats require Admin. Managers make decisions but administration ensures that it goes through and the rest keeps working.

History

History is the key to understanding who we are and why we are the way we are. Individuals who understand history can learn from the past and not repeat earlier mistakes. They also generally have a feeling of belonging somewhere. The principles of studying history often help when trying to unravel the mysteries of the universe such as found at archaeological sites.

Investigate

Individuals with Investigate range from police solving crimes to astronomers who are searching amongst records for data on a star under observation. The Investigate skill involves the procedures for finding the clues and gaining information.

Literature

Literature is the skill that pertains mainly to being a learned scholar. Being able to quote obscure bits from classical works such as Shakespeare, Dickens, the Koran or the sayings of Mao are a hallmark of such people. Becoming an established writer or novelist requires a good skill in literature. The study of a culture's writing can give a meaningful insight into that culture.

Language

All characters are fluent and in most cases literate in their native language with a skill level of 100% – this falls outside normal skill acquisition.

Language is not a skill, only the knowledge of a particular language (English, Norwegian, Tagalog, Swahili, etc.). An individual may learn a language that is not their native tongue. The degree of skill indicates the level of fluency, while at higher levels the character may begin to develop a level of literacy in the particular language. Languages often contain nuisances which can lead those with minimal understanding of the language into misinterpretations of conversations. Languages are very useful in conducting business in foreign nations or with alien races. Being able to speak a language brings more prestige than using a translation device.

Law

Lawyers, solicitors, barristers, judges and to a certain degree police officers are familiar with the law. They have an understanding of all the implications of each law depending on their level of ability. Such legal knowledge tends to be either trial or civil law. However, legal knowledge is very important in the commercial sector, with corporate law consultants providing advice on how far a company can go without breaching the law.

Leader

Some people have the ability to make a group of individuals work as a team. Leadership skills a person in earning the respect of a group, and gaining their trust. It is the ability to manage and direct that group to pull together in a common aim. Military, corporate and governmental careers are examples of where leadership may be developed. Political or corporate leaders will go to great lengths to develop good leadership skills to control and manipulate the people within their organisations.

Liaison

An individual with liaison skills can negotiate and otherwise encourage people to see things their way. Such characters are often found in advertising, public relations and politics. Professional negotiators will often combine this skill with psychology and some prior research into a subject's past.

Linguistics

This skill covers the study of the development of language. With Linguistics it becomes easier to communicate with people whose language you do not completely understand. The structure of their language becomes better known by research. This works both with Earth and alien languages. This skill helps an individual learn a new language through experience in studying the language in question.

Philosophy

Philosophy involves the study of morals, ethics and religion and the way they impact on our way of life. It also often involves the study of how a society deals with the problems confronting it. The way a society responds will be related to past experiences and the current circumstances of that society. Philosophers will often have a reasonable degree of History skill as well.

Psychology

This involves the study of the mind and how it works. At advanced levels a psychologist can analyse a patient and help through counselling. In recent years psychologists have pondered over how the phenomena of psychic abilities work. The development of psionic talents is a result of psychological research proving the existence of psychic abilities and figuring out a scheme to develop such talents. Psychologists often study alien races to determine what motivates them to conduct certain actions, thus increasing the ability of one society to understand the other.

Trader

A trader is familiar with the processes of an economic system. With this understanding they can speculate on the economic future. Such individuals are commonly found working on the stock market, trading shares and futures on products and resources. This job often involves bargaining and many have keen Liaison skills as well. Other traders have an eye for a product that would suit a particular market and thus often work in distribution or importing firms. Smaller operators are often free traders who live by buying goods and selling them directly to consumers.

STREET

The skills termed Street or Clandestine could be learnt through legitimate channels, but are usually not. Exactly why someone might have a proficiency in these skills is greatly questionable even if they were now allegedly a good guy.

Bribery

A person with Bribery and some thing of value can try to arrange for someone to look the other way while something illegal is conducted. Often the wheels of an organisation need to be lubricated in order to get a speedy result. In many parts of the business world bribery is expected. A skilled briber is more likely to be accepted, and at a lower price. This skill also covers conducting efficient blackmail schemes if the information is made available to the person with bribery skills.

Disguise

There are times when individuals wish to go places without being recognised. At these times the Disguise skill comes in handy. Disguise can also be useful for changing your appearance so that you look older. A good disguise might allow a young man to drive through a police roadblock while dressed as an old lady. A person might seem visibly taller, older or younger. The more elaborate the disguise, the more costly the components. But only someone skilled in disguises can make the illusion convincing.

Forgery

This skill allows the individual to recognise when something is a forgery. A character can create forged documents, money or art works (with appropriate artistic skills) and pass them off as the original. As a society becomes more advanced forgery of money and official documents becomes harder. Forgery at a basic level covers attempting to write someone else's signature.

Gambling

Gambling is the skill for risk takers. Individuals with this skill have a better chance of choosing the winning horse at a race meeting. Gamblers are proficient at card games or dice. This skill increases the chance at winning and also at spotting when someone else is cheating. A gambler is always very good at playing games and usually very cool about a difficult risk.

Intrusion

An individual with intrusion skill can pick locks or bypass security systems. This is often combined with Computer skill

where computer-based locks are commonplace, or where there is a need to hack into a computer system. Individuals with Intrusion sometimes work legitimately as locksmiths or security consultants. However, like most clandestine skills, Intrusion is usually learnt on the streets during a mis-spent youth

Picking

This is the skill of nimble fingers; sleight-of-hand tricks, pickpocketing, shoplifting and concealment of objects are all covered by the umbrella of picking. A magician, or juggler might learn this skill in tandem with their circus skills, but by far the majority of professors of picking (or more correctly legerdemain) are petty criminals and children.

Stealth

Moving silently and unnoticed is much easier with this skill. It is especially useful if the individual is attempting to get close to someone in order to knock them out from behind. The success of stealth actions is modified by the awareness and alertness of the target. Stealth is also used if attempting to conceal oneself.

Streetwise

An individual who is streetwise will know the street environment – the society of gutters and alleys and the urban domains. They can find people or places and tap into the subculture. They have a better chance of locating black market contacts. They know the patch of a local gang and can read the mood of the street. They can see trouble coming and behave accordingly. This skill also allows the individual to adapt his speech quickly to that used by the local street residents, leading to greater acceptance in the community.

TECHNICAL

Technical skills are the practical applications of scientific theory. They are the essential skills for an advanced society.

Armourer

A skilled armourer can maintain and repair armour suits. These suits range from flak jackets to elite battle armour. An individual with this skill can also fix weapons systems ranging from sidearms to starship weapons. An armourer can keep their weapons in peak condition and so get the maximum out of their weapon. Customising a weapon to an individual's requirements is best done by an armourer rather than a normal technician or engineer, since they understand the nature of weapons better.

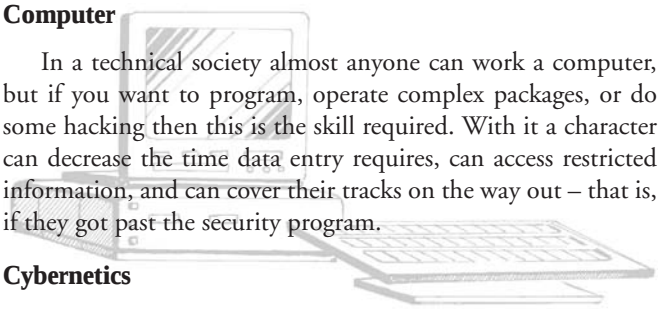
Astrogation

A character with this skill can plot a course for a spaceship so that it gets from its point of departure to the designation without running into large objects, such as a moon. Astrogation training covers both sub-light travel using gravitic and thrust drives as well as the use of hyperdrives.

Cleaning

If a laboratory is required to be absolutely dustless then it had better be cleaned by a professional. Chemical and biological spills can also be cleaned up by such a skilled person. At higher levels, decontamination procedures are learnt, allowing such a skilled character to aid in such incidents as nuclear disasters.

Computer



In a technical society almost anyone can work a computer, but if you want to program, operate complex packages, or do some hacking then this is the skill required. With it a character can decrease the time data entry requires, can access restricted information, and can cover their tracks on the way out – that is, if they got past the security program.

Cybernetics

A character skilled in Cybernetics can carry out maintenance of their own or others' cybernetic implants. The removal and installation of cybernetics systems must be performed in tandem with Medical skill and is normally only safely done in a hospital or cyberclinic with the appropriate equipment and staff.

Cybernetics differs from Robotics where the technology meets the biology. Robotics has no such interface and must rely on internal power, computer control, and connected sensors. Cybernetics may borrow power from the host, needs neural control and may connect to the sensory system of the host. These elements make the two fields sufficiently different to warrant independent skills.

Electrical Engineering

This skill allows an understanding of electrical and electronic systems. A character with this skill can repair a computer or rewire the house. They can repair any system which is electronic in nature, such as energy weapons, robotics system (straight repair), or a gravitic drive system.

Higher levels allows for the design of electrical devices and their construction.

Mechanical Engineering

An individual with this skill can keep mechanical systems working. These systems include combustion engines, conventional projectile weapons, and watercraft. Mechanical Engineering covers any moving part of a machine; therefore some faults in robotics, cybernetics, or any complex device may be worked on by a mechanical engineer since although they are not specialist in the field they will find that the principles of mechanics are similar across various applications.

Medical

An individual who has Medical skill is able to save lives, diagnose illness and administer the required medicine. At higher levels they can perform operations on patients to save their lives from near-fatal injuries. A doctor can work out if a patient has been poisoned or if they are suffering from a disease. At high levels it is possible to carry out field operations that stabilise a dying person. Medical also involves a knowledge of medical drugs and equipment.

Mining

An individual with this skill knows the basics of mining practices. They can operate the varying kinds of equipment involved, from a gold pan to a robotic drilling rig. Mining is also concerned with resource management, not just resource extraction. Mining is the practical side of Geology, which would be used in tandem to find the sites of new mines, and in determining the worth of a potential site.

Robotics

With this skill a character can use robotic systems of all types, whereas other skills might know how to use the robotics systems of their respective fields – medics and medical robots, miners and mining robots. Robotics technicians not only can use robots of all descriptions, they are also essential for the repair and maintenance of robotic systems. Knowledge of Robotics also permits the customisation, reprogramming and design of a robotic system.

Security

An individual skilled in Security can set up perimeters, install security sensors, design new systems, and prevent access to various levels of authority. Lower-skilled individuals are more likely to be guards, and may have some animal handling ability with respect to using a guard dog. Security skill can be combined with Computer skill to create effective software security procedures and programs for computer networks. In total, the security skill encompasses all of the field of security, both the simple patrol and monitoring of guards and cameras, to the advanced electronic and computer security applications that are mandatory to any industry.

Sensors

The raw data coming form a sensor device won't make any sense unless you have Sensor skill. With the skill, a person can interpret the incoming data and set the sensor device to locate the desired information.

Sensors skill is useful for any technician trying to fix a sensor device. Similar to robotics, people with skills in areas which use sensors regular will know how to read their sensors, e.g. a doctor can read a medical scanner but the radar screen is just a machine that goes 'bing' without Sensor skill.

Structural Engineering

The structural component of any machine involves the structural supports and housing of devices. Structural Engineering also includes large projects such as designing and overseeing the construction of a bridge. The superstructure of a starship would also fall under Structural Engineering, as would the replacement of armour on a fighting vessel. At the simplest level this skill covers house building and carpentry.

Survey

This skill allows mapping and measurement of resources (geographic surveying). It also involves mapping of areas and collecting data on population levels, etc. (sociographic surveying). Mapping can typically involve an unknown area on a new planet. Engineers, Geologists and Miners use surveying to create accurate maps of appropriate data for their own projects.

VEHICLE

The control of vehicles is an essential skill for any mobile population. We all have feet, but when you need to fly you need wings.

Aircar

The ability to pilot/drive an aircar. Aircars include any vehicles which are grav powered and capable of flying, but unlike aeroplanes they handle like normal ground cars. In small-scale personal vehicles, gravity reaction (GR) craft are known as aircars. These include any vehicle which is grav powered, as the flight principles of aircars are the same for all types of GR craft. Aircar vehicles are normally quite a prestigious form of transport. The higher the skill the safer, smoother and more efficient the journey. Typically these vehicles are simply a nice form of conventional atmosphere travel and ultra-high-class shopping trolleys at lower levels; such models of GR vehicle may be piloted safely. However, many designs of GR vehicles have more flexible applications such as travel in hostile atmospheres, or in various very low to very high gravities. In some cases the vehicles are capable of reaching low orbits. Only pilots of GR vehicles at higher levels may attempt to pilot GR craft under such conditions.

Aircraft

If you want to fly a conventional atmospheric flying machine, such as aeroplane, helicopter, or microlight, then you will require Aircraft skill.

If the vehicle is powered by Grav engines, then use Aircar skill.

Ground car

Ground vehicles include cars, trucks and bikes. They move on wheels, tracks or rollers, or hover above the ground. Piloting of any of these vehicles requires Ground car. Most ground-based transport is considered Ground car for skill purposes since they use similar control principles. Difficulty for driving really comes down to the control systems with respect to vehicle type, size, manoeuvrability, etc.

Marine Craft

An individual with this skill can pilot most water vehicles. They are normally surface boats powered by paddle, sail or power momentum, or submarine vehicles that operate below or on the surface. Vehicles capable of operation on land as well as water are considered Ground cars, such as hovercraft. Any land vehicles that travel under wind power using sails require both Marine craft and Ground car skills.

Mech Ops

If you want to wear powered armour or something bigger, then this skill is the required. Mechs include any vehicle that uses legs for their movement. Mechs can have more than two legs and range in size from power armour to combat walkers to giant machines towering over battlefields. Mechs either operate by mimicking the actions of the pilot who stands in the centre of the mech and feels the movement of the vehicle around them, or in the larger mechs by use of complex piloting controls, often including a neural link to the pilot.

Starship Pilot

This is the skill which allows the successful piloting of spacecraft. A spacecraft is any vessel capable of travel outside the atmosphere (except for some Gravitic vehicles and Aircraft). A spacecraft can be any type of space-traversing vehicle from a small in-system runabout to an enormous colony ship with millions of people aboard travelling from star to star.

WEAPON

So many times, in so many newspapers, we read of the misuse of weapons; it is rarely the skill that is at fault, and never the device.

Armed Combat

This skill allows the use of blade weapons ranging from daggers and street blades to a duralloy katana. It also includes the use of blunt weapons such as maces and piercing weapons such as spears. It also includes any improvised weapons such as bar stools and frying pans.

Armed Combat skill is the umbrella skill for a proficiency in hand-employed or melee weapons.

Heavy Weapons

This skill covers training in vehicle-mounted weapons as well as those on a starship and large naval vessels. All installation weapons and artillery pieces are considered heavy weapons, as are any support weapon with a crew of three or more such as heavy machine guns, and missile launch systems such as air defence missile/radar integrated systems. The only exception is where gun weapons are installed for passengers to use, such as in APC or cargo-door-mounted antipersonnel weapons for the crew to repel infantry.

Demolitions

An individual with this skill has learned how to use explosives safely. They can arm or disarm explosive devices. They know the correct amount of explosive required to complete the required task and the correct location to place the explosive in for maximum effect. Demolitions skill also includes training in the laying of minefields and the removal of mines.

Gun

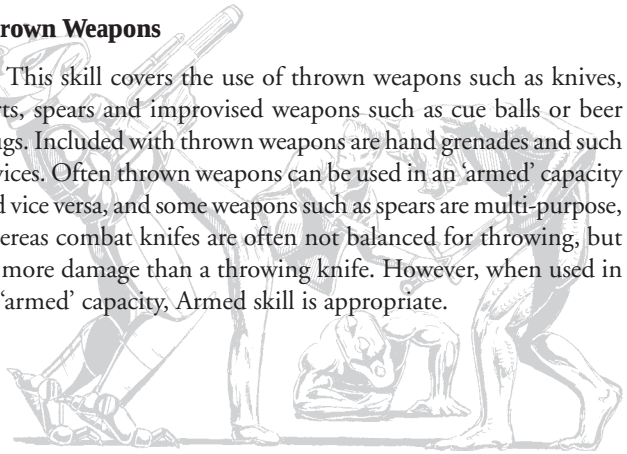
Gun skill covers weapons from advanced laser rifles to matchlock muskets. It also includes man-portable support weapons such as grenade launchers, light machine guns, mortars, light antitank weapons (LAWs) and flamethrowers. The distinction between a gun and a heavy weapon rests with whether the weapon can be carried and used by a single individual.

Tensile Weapons

This skill covers the use of bows, crossbows, slings, and other missile devices that require a force applied by the user. It does not include hand-hurled weapons. If an individual fires a stone at a window, they must use a hand-held catapult for Tensile Weapons training to come into play. A tensile weapon differs from projectile 'gun' weapons by deriving its power from the strength of its operator (crossbows are the one exception, but they are included here as their characteristics make them more like a tensile weapon than a projectile weapon).

Thrown Weapons

This skill covers the use of thrown weapons such as knives, darts, spears and improvised weapons such as cue balls or beer mugs. Included with thrown weapons are hand grenades and such devices. Often thrown weapons can be used in an 'armed' capacity and vice versa, and some weapons such as spears are multi-purpose, whereas combat knifes are often not balanced for throwing, but do more damage than a throwing knife. However, when used in an 'armed' capacity, Armed skill is appropriate.



Unarmed Cbt

This skill covers all the styles of unarmed fighting including boxing, wrestling and the various forms of unarmed martial arts. The higher the skill the greater the training and the more likely the style is that of a martial art.

MISCELLANEOUS

Miscellaneous skills are all the hobby, craft, sport, or interest skills which don't fall anywhere else.

Acrobatics

Individuals with Acrobatics have learnt techniques that allow for better balance and control of movement. They can jump further and higher than other people of similar STATs. Landing techniques to reduce impact damage from falling are all part of the training. Such individuals have learnt to tumble and land properly. Acrobatics is useful for getting out of harm's way, such as to avoid a thrown object. Tightrope walking and other such feats can be achieved with Acrobatics.

Cooking

No don't pass this skill by – the two people that no one in a combat unit should get on the bad side of are the medic and the cook. The cook can be everyone's friend. Not just anyone can make a few pounds of rehydrated protein taste good enough to eat... Hey where are my old boots? Cooking skill at the various levels allows an individual to produce dishes of inventive quality from a myriad of ingredients, the limits rest only with imagination and the gullibility of the diners. Squirrel Soufflé, Rancid Aardvark Pate, Peppered Shank of Commanding Officer.

Dance

The co-ordination of poise and grace can do much for individuals who suddenly find themselves in ballrooms of society. In modern nightclubs it is the most talented movers and shakers who leave in company. Dance should not be seen as just pretty girls in twill skirts. It represents a massive segment of arts and culture, and as a skill it embraces so many variations: court dance, jazz and modern dance, breakdancing, ballroom dancing, disco, salsa, lambada, tango, highland dancing and tribal dance rituals, ice-dancing, as well as ballet.

Musical Instrument

A knowledge of musical instruments, musical theory, harmonics, and musical notation has many obtuse applications beyond the obvious ability to play an instrument and read its associated music notes. Singing is also included in Musical Instruments skill.

Sport

This skill covers almost any physical competition or game. Typically, sports are based more on the skilful application of physical strength than in brute force, thus DEX is listed as the base STAT, but athletic sports such as discus, shot put and javelin are arguably more the province of STR. Exactly which STAT is used as the base STAT is a decision for the GM. Sports such as skiing, cycling, skydiving, water skiing, swimming, equestrian and luge are all included. The combat-type sports of boxing, wrestling, karate, etc. are not covered, as they firmly come under the Unarmed Combat skill. Target shooting, archery and javelin are sports but could be used in a combat situation.

Skill Usage

The Application of Skills

When the time comes to actually do something with a skill, the GM needs to consider whether the task is so simple that it is unreasonable to test the skill of the character. It becomes tedious if at every street corner a character must roll against their Ground car skill in order to successfully stop at the traffic lights. Swerving to avoid a child chasing a ball is another matter.

When there is a requirement in the game to check whether a character was successfully able to perform a task, a skill test is required. If the character has an appropriate skill then the percentage level of that skill is used for the basis of the character's ability in the skill. If the character does not possess the skill then they may perform the skill test using the skill's listed STAT base as the basis for the character's ability in the skill, but the task modifier level is increased by one level (typically this makes a test like this an academic exercise in failure or phenomenal luck).

To test against a skill, the player rolls 1d100 and the dice modifier is then added (or subtracted) from the result according to the task modifier. If the result is equal to or below the skill or STAT base, then the player has succeeded. If the result was above the skill or STAT base then the player has failed. An unmodified roll of 100 means automatic failure. An unmodified roll of 01 means an automatic success, partial success or exceptional success depending on the circumstances.

Task Difficulty Modifiers

The following table is a guideline to varying the task's difficulty on the basis of the how complex an application of the skill the particular task is. These Dice Modifiers (DM) will appear frequently throughout the rules and adventure texts.

Difficulty	Difficulty Term	Abbreviation	Dice Modifier	Success Level
-2	Very Easy	VEasy	-80	1
-1	Easy	Easy	-40	2
0	Moderate	Mod	0	3
1	Hard	Hard	+40	4
2	Very Hard	VH	+90	5
3	Very Hard 2	VH2	+180	6
4	Very Hard 3	VH3	+360	7
5	Very Hard 4	VH4	+720	8
6	Very Hard 5	VH5	+1440	9
7	Very Hard 6	VH6	+2880	10

When applying Task Difficulties, the difficulties set by the GM are not relative to the experience of the character concerned. They are absolute difficulties under normal conditions for a person with some skill in that area. They are concrete difficulties irrespective of person and knowledge. Modifiers apply to such things as adverse conditions in which performing them (like being drunk, bad weather, or trying to do it more quickly or more quietly than normal) or with some assistance aids.

Expertise

Because a skill number means little in real terms, a system of categories describes the level of the skill for use in describing to a player how qualified a person is.

Skill Percentile	Ability Level
0-49	Amateur
50-69	Recognised
70-100	Qualified
101+	Expert

Combined Skill Actions

Sometimes situations dictate that characters work together on completing a task. Or perhaps to succeed at a particularly difficult task the sum of individuals may be sufficient to bring success. Many hands make light work.

Firstly the characters involved must use the same skill, or possess complimentary skills (depending on the task). The GM should then determine how many characters can work on the task, based on practicalities of the situation, space constraints (if any) and at what point too many cooks spoil the broth.

[*If you figure the mechanics properly you'll notice it does it anyway. Example: person 1 has 10 skill, and person 2 has 100 skill. Their effective skill is about 82. This can be handled naturally without the GM even thinking – let the players figure it out – their fault if they don't figure out the optimum for their group.*]

The resultant skills total is determined as æ of the sum of all characters' skill levels.

Group Skill = (sum of character's skills involved) x 0.75

Timing

Many tasks being performed by a character will involve a certain amount of time to complete. Many people may want to do an assessment task roll to determine how long the task is likely to take if a lot of time is involved.

Most tasks that a character will perform during their gaming lifetime cannot be defined within the framework of the rules being presented and it will be the domain of the individual GM to apply some common sense in determining both difficulties and times associated with that task.

In some cases, such as psionics, drug use or combat, some specific times are given. Most are given as action costs.

These action costs reflect 1 second intervals, referred to as combat rounds within the combat rules. In such cases a task will take the number of seconds to complete as its action cost.

Multiple Actions

It is possible for a player to conduct more than one action in a round. The effective skill or STAT level of the character will be reduced according to the number of actions if they are used to perform these actions. This reflects the hurried nature of trying to perform tasks faster than normal or in association with unrelated ones. See the combat rules for an expansion and examples of these modifiers at work.

Number of Actions	Skill Modifiers
1	1/1
2	1/2
3	1/4
4	1/8
5	1/16
etc.	etc.

Like multiple actions, it may be possible for a character to rush a normal task without conducting different actions. If the character tries to speed up the time required then they should pay the penalty of multiple action costs. For instance, a lock-picking job may take 4 actions. Thus normal time would be 4 seconds. A hurried job may involve attempting this in 2 seconds, thus paying an action penalty for 2 actions per second. Some intrusion experts, if they are good enough, may try and squeeze such an activity into 1 second for a 4-action penalty cost under the multiple action costs.

Methodical Work

If a character has plenty of time and can prepare carefully and work in a methodical and careful fashion, they may often have a better chance of success. When undertaking such methodical work it is best not to be interrupted since it would destroy the concentration of the character.

In general the task will become 1 difficulty less if they spend about double the amount of time normally required to complete the task. Any improvements for additional time beyond this are purely up to the GM involved. However, there is a limit to how increased time can increase the chance of success. Once timeframes stretch into an interruption of the flow of gaming, then the GM must determine how to handle the situation as a role-playing situation.

Familiarity

It seems obvious that people are not going to be familiar with every piece of equipment under the sun. This is especially true of civilians with respect to sophisticated military weapons and vehicles. The best way to handle this is to apply a penalty of one extra task difficulty level until the person becomes familiar with the particular piece of equipment.

When dealing with alien-designed equipment this penalty can also be applied for equipment that is of similar design. However, if the alien item is of a fundamentally different design due to anatomical differences or simply doesn't make sense to anyone else, then a permanent penalty of at least two extra task difficulty levels should be applied.

Xenology

Xenologists study aliens, alien xenologists study humans and other aliens. Xenology is the study of intelligent lifeforms different to our own, the culture, the science and the technology. Looking inwardly at one's own culture, origins and development is Anthropology; looking at another's is xenology. A skilled xenologist has a good understanding of alien culture, of how an alien culture might react to the culture of the xenologist, and what steps might be taken in cross-cultural negotiations. In general someone will study aliens with respect to their chosen field of study, or occupation.

Depending on the circumstances involved, a character may have a skill that applies to that race only rather than to their own race. As such, a note should be made next to the skill. Treat this like learning a specific language, such as Andorian. A xenologist interested in Andorian history would literally have history – Andorian. For each alien race another skill must be effectively learnt.

However, in some cases physiology or psychology may bar a xenologist from performing that skill to the optimum a native may learn, in which case a difficulty penalty should be applied according to the difficulty and differences involved.

For those not specialising, then penalties relating to familiarity and physiology/psychology differences should apply. This generally calls for people specialising in a particular xenological field.

Skills List

The skills are listed with their STAT bases in categories of skill types.

Skill List Stat Bases

Environment

Animal Handling	DEX
Climbing	STR
Gravity Environ	CON
Hostile Environ	CON
Hunting	INT
Marine Environ	CON
Ride	CON
Space Environ	DEX
Survival	CON

Military

Intelligence	INT
Recon	INT
Surveillance	INT
Tactics	INT

Science

Astronomy	INT
Bioscience	INT
Chemistry	INT
Genetic Engineering	INT
Geology	INT
Mathematics	INT
Metallurgy	INT
Physics	INT

Social

Admin	INT
History	INT
Investigate	INT
Language	INT
Law	INT
Leader	INT
Liaison	INT
Literature	INT
Philosophy	INT
Psychology	INT
Trader	INT

Street

Bribery	INT
Disguise	INT
Forgery	DEX
Gambling	INT
Intrusion	DEX
Picking	DEX
Stealth	DEX
Streetwise	INT

Technical

Armourer	DEX
Astrogation	INT
Computer	INT
Cybernetics	INT
Electrical Engineering	INT
Mechanical Engineering	DEX
Medical	INT
Mining	STR
Robotics	INT
Security	INT
Sensors	INT
Structural Engineering	STR
Survey	INT

Vehicle

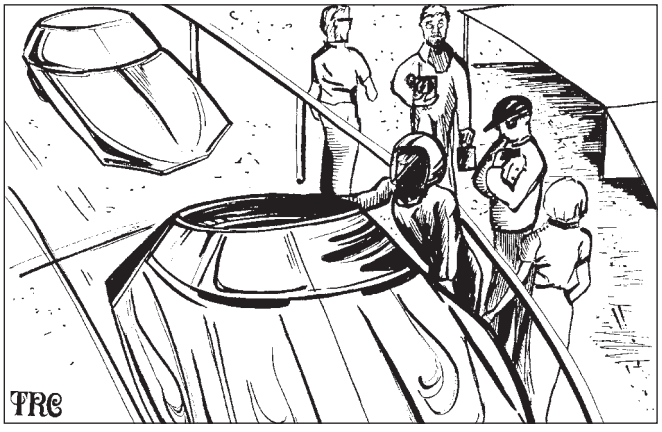
Aircar	DEX
Aircraft	DEX
Ground car	DEX
Marine Craft	DEX
Mech Ops	DEX
Starship Pilot	INT

Weapon

Armed Combat	DEX
Demolitions	DEX
Gun	DEX
Heavy Weapons	INT
Tensile Weapons	DEX
Thrown Weapons	STR
Unarmed Combat	DEX

Miscellaneous

Acrobatics	DEX
Cooking	INT
Dance	DEX
Musical Instrument	DEX
Sport	depends on sport



Psionics

Psionics is the title for the supernatural application of the mind's power. Telepathy, ESP Telekinesis and other such names for the abilities we barely understand are all part of the science of psionics.

Whilst some campaigns revolve around aspects of psionics in both a game-mechanics sense and a campaign social structure, FSpace as a rule tends towards a rather low-key psionics system. Instead of a high-powered system in which the character may teleport here and there, annihilating an enemy's mind with a shock before lifting their downed space fighter out of the swamp with merely their telekinesis and the encouragement of a mentor – all of which would require a careful accounting system and yet more notekeeping – FSpace has abilities that are somewhat subdued but whose usefulness is continuously available to a player, skill test on their PSI talent notwithstanding.

On each race profile the table of PSI Potential shows the race's propensity toward psionics. This indicates whether a greater percentage of the population are psionically talented and to what extent, or whether psionics is for the race merely something that others do.

To determine whether a character has psionics and at what potential, roll on the appropriate PSI Potential table for the characters race.

Human PSI Potential Table

1d100 Roll	PSI Potential	Skill Max	Max Talents
01-50	None	0	0
51-90	Latent Psionic	50	1+ Shield
91-99	Minor Psionic	100	2+Shield
100	Major Psionic	no max	no max

Psionic Potential (PSI) is a measure of how good a character will be when they attain psionic abilities. Roll once on this table for each character, and note the resultant d100 value – this is the character's PSI Potential.

Psionic Potential dictates the number of psionic talents that may be developed by that character and the maximum skill level attainable in those psionic talents. Racial bonuses on psionic talents are not part of the maximum level of a skill. Thus a Gray Andorian minor psionic would normally be able to build Empathy to only 100, but in the area of Empathic Communication they would be treated as having 150.

Sixth Order Forces

Terran twentieth century science became well versed in the understanding of the four most obvious orders of forces within the universe, namely those of gravity, electromagnetism, strong nuclear and weak nuclear. However, this knowledge was never extensive, and Terran humans never stumbled upon the existence of other orders of forces till late in the 22nd century.

The Aratani have long known about the fifth and sixth order of forces, and this is where the label, sixth-order forces derives from. Terrans typically refer to such forces as psionics when applied to organic systems.

Sixth-order patterns arise from the thought processes occurring in complex neural systems such as the brain in organic or inorganic beings. A psionic is classified by the ability to use sixth-order forces through neural processes to manipulate the material world.

Although psionics manipulate other forces and matter they utilise a medium that can affect these other forces. Sixth-order forces are the medium used for this.

Sixth-order forces operate quite differently from conventional methods of operation. The Gildorph use their psionics to propel their vessels through hyperspace, telepaths communicate instantaneously over distances of up to light minutes and teleports change location instantaneously. This shows that sixth-order forces can be used both in extradimensional terms as well as breaking perceived fundamental limitations.

Terrans have had little ability to quantify psionics in scientific terms until the last 30 years. During this time Terrans have managed to unleash their dormant psionic potential. However, significant prejudice or lack of educational facilities and funding has tended to result in very few Terrans with these potentials actually developing their talents.

With respect to technological applications of sixth-order forces, Terrans have barely scratched the surface, having only built crude detectors and shields. In general Terran technology is primitive, and they have had little long-term knowledge of psionic processes.

Such repressed psionic knowledge is common for many other races, such as the Aronhi, Orcoks and Yzzin. Other races that have a better appreciation of psionics include the Stotatl, Stavira, Chlorans, Forerunners and Andorians. For some of these active psionic races, their technology reflects capabilities derived from devices utilising sixth-order techniques, most of which are closely related to their organic understanding of psionic talents.

Psionic Talents

Psionic talents are areas of psionic discipline which are closely associated. A talent is treated like a skill for purposes of use and character development. When a character is generated, the GM should consider how psionically developed a character is. Amongst many races psionics are common and part of their culture and communication. In such cases let the player freely use the skill point pool to spend on psionic talent, skills and languages as they see fit within any other guidelines for careers. In some cases a character with potential may not develop any talents.

PSI talents use INT as their STAT base in just the same fashion as skills, but PSI talents cannot be built using normal experience points; instead a special system applies (see the Experience system, page 52).

A talent level cannot exceed the PSI Skill Max level defined by the PSI Potential Roll (excluding racial bonuses).

Difficulty Rating	Task Difficulty
1	VEasy
2	Easy
3	Moderate
4	Hard
5	VHard
6	VH2
7	VH3
8	VH4
9	VH5

Like normal skills, psionic talents can be used to do combined psionic skill tasks. This allows psionically endowed characters to pool their abilities and achieve greater feats than they would normally be able to.

Other talents do exist, but are not very common, and some may be restricted to certain races because of their unique psionic abilities.

Unlike normal skills which may be attempted by unskilled characters, psionic talents do not behave in the same fashion. If a character has no psionic potential, then they cannot even attempt the use of psionic talents, simply because they don't have that appendage, as an analogy.

However, an undeveloped psionic may try to use a talent if they have any idea of what can be done with it. Use the INT STAT base and conduct rolls at 2 difficulty levels higher. If a character slows the process down to action costs equating to minutes rather than 1 second round intervals, then the difficulty is only 1 higher.

Psionic Resistance & Non Psionics

Many psionic powers may try to rifle through the minds of intelligent beings or tamper with them. In these cases the victim has some innate resistance unless they are a willing recipient of such actions.

The resistance to such actions is the INT STAT base of the victim used as a penalty DM against the psionic when attempting their psionic ability.

This resistance is the same for psionics as for non-psionics.

It is possible for non-psionics to try and actively resist mental tampering (or reading of surface thoughts or memories) if they suspect they are being the target of such activity (or forewarned by a psi detector). In this case a non-psionic would attempt a task very similar to that of the psionic talent of Shield. The difficulty roll would be using the INT STAT base at 2 difficulty levels higher. If the character has any training in mental discipline, e.g. psychology of interrogation or certain meditation techniques, then the difficulty is only 1 level higher.

Such active resistance by non-psionics is only maintained for as long as that person concentrates on such an activity to the exclusion of all else.

Line of Sight

Most of the talents operate by line of sight or familiarity of a locality unless specifically stated. In general psionics must rely on their senses to help pinpoint the object or area they wish to monitor or manipulate with their psionic talents. In some cases a psionic may specify the opposite side of a wall they see, or 300 metres directly in front of them through dense jungle.

This comes down to the character knowing their present position relative to the position of the area or object they wish to deal with. This information doesn't have to come from the character's real senses or psionic ones. Instead, position information may come from technology-oriented devices such as inertial locators, maps, remote cameras or a combination of other methods.

If a psionic is trying to find a specific familiar person, then a telepath or empath can try and selectively tune their talent to the known patterns of that person in hopes of detecting them within a particular range. Once detected the psionic can determine where they are and begin to use talents based on the location of that specific person (while still paying range costs, of course).

Foreign Intelligences

In some circumstances when a telepath or an empath is analysing an intelligent being of alien origins (with respect to themselves) they encounter thought patterns very 'alien' to their own. In general, emotions have a universal nature if the beings in question do have a particular emotional response. Understanding the reason for an emotion requires information on their thoughts, thus the use of telepathy or the non-psionic approach of psychology.

When probing an unfamiliar alien mind it is often harder for a telepath to understand what their thoughts are and the context in which they are set. Generally this means an unfamiliar alien intelligence is about 1 task difficulty level higher for a telepath to probe or manipulate the thoughts of. In some cases this might be considerably higher, such as dealing with sentient machines, depending on the nature of the telepath.

Familiarity with such intelligences will obviously make such dealings easier and won't impose penalties. The GM should deal with how long and at what time a character becomes familiar with an alien intelligence.

Psionic Modifiers

Many psionic talents relate the difficulty of the task or the length of time in Actions which the task will take in terms of the range at which the task is manifest, or the extent to which a psionic talent may be used to effect another dice roll.

Difficulty and Range/Area

Many talents have abilities that work on either range or area of effect. In such cases a task difficulty increase is made to the base-ability task difficulty according to the stipulated distance the psionic is trying to use their ability at.

When both range and area are involved, such as scanning a remote building for signs of life, then the difficulty increase for both the range of building and the area of the building apply to the psionic ability roll (in this case being able to detect life under empathy or telepathy).

The following table indicates the Task Modifier relating to physical distance or area of effect.

Range/Area Modifier	Distance
0	0-10
1	10-100
2	100-1km
3	1km-100km
4	100km-1000km

For Example

Sissy wishes to use her telekinesis to lift a set of keys from a hook at the far end of a corridor 50 metres away. Telekinesis has number of task difficulty modifiers relating to the weight of the object and the speed of movement. The keys weigh less than 5 kg and Sissy is happy not to be in a rush. Therefore the difficulty only relates to the range. At 50 m the range is in the second hardest range of 1. Telekinesis has a difficulty of 1 + range. In this case 1 + 1. Therefore Sissy's telekinesis talent test is made with a Task modifier of 2 Very Hard with a dice modifier of +80%.

Difficulty and Degree

Some psionic abilities involve modifying task rolls for other activities or other similar effect. When this occurs the task difficulty of the ability increases according to the psionic's desired degree of effect for that ability. The following table shows the relationship between the degree of effect and the difficulty in attaining the level of effect. The Amount refers to the percentage Dice Modifier the psionic gains by employing the psionic talent.

Degree Modifier	Amount
0	5%
1	10%
2	20%
3	40%
4	60%

Timing & Actions

All psionic abilities have a particular time cost relating to the difficulty of the particular task being attempted. Like time costs in personal combat, these action costs are measured in seconds (combat rounds). The action cost indicates the number of seconds required to conduct that task at the difficulty shown.

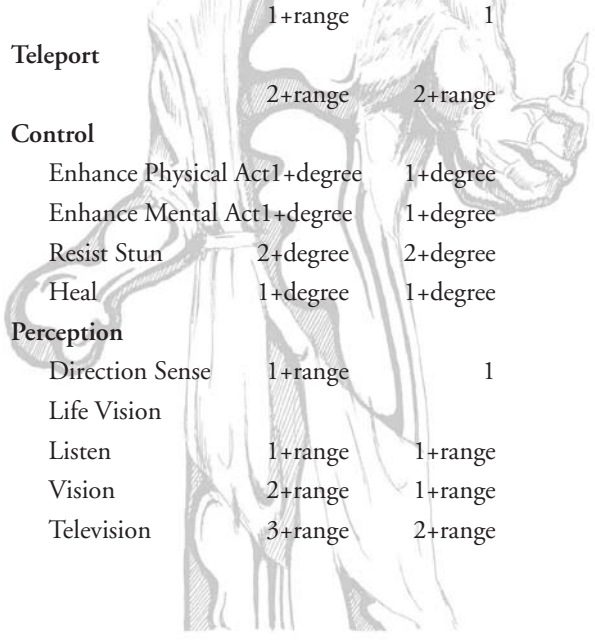
However, like other tasks they may entail conducting multiple actions within the same timeframe, thus hurrying the amount of time needed. Multiple action cost penalties will therefore apply with psionics as with any other skill.

Like multiple action situations, psionic abilities may be rushed without conducting different actions. If the psionic tries to speed the time required up then they should pay the penalty of multiple action costs. For instance, if a psionic with Control uses healing for a 40 point effect, the actions required would be 4. Thus normal time would be 4 seconds. A hurried psionic may try to attempt this in 2 seconds, thus paying an action penalty for 2 actions per second. Some psionics, if they are good enough, may try and squeeze such an activity into 1 second for a 4 action penalty cost under the multiple action costs.

In some cases a psionic has plenty of time and may concentrate on the task being performed in a methodical manner and thus have a better chance of success. See the methodical work section of the skill usage section for more details.

Difficulties & Action Costs Table

Talent	Ability	Difficulty	Actions
Shield			
	1 (special)	1	
Empathy			
Detect Emotions	1+range	1	
Alter Emotions	1+range	1+range	
Detect Psi	1+range	1+range	
Detect Life	1+range	1+range	
Empathy Commo	1+range	1+range	
Telepathy			
Detect Psi	1+range	1+range	
Detect Life	1+range	1+range	
Telepathy Commo	2+range	1+range	
Read Thoughts	2+range	1+range	
Probe Memory	3+range	1+range	
Suggestion	4+range	2+range	
Memory Edit	5+range	10+range	
Telekinesis			
	1+range	1	
Teleport			
	2+range	2+range	
Control			
Enhance Physical Act	1+degree	1+degree	
Enhance Mental Act	1+degree	1+degree	
Resist Stun	2+degree	2+degree	
Heal	1+degree	1+degree	
Perception			
Direction Sense	1+range	1	
Life Vision			
Listen	1+range	1+range	
Vision	2+range	1+range	
Television	3+range	2+range	



Talents

The following is a list of Psionic talents which a character may learn; other talents do exist, but are not very common.

Shield

	Difficulty	Actions
Shield	See Below	1

This talent involves establishing a form of mental shield to protect the individual from having their mind read or manipulated. The action cost involves the establishing of the shield. Thereafter it is maintained subconsciously. The task roll is used to determine the highest difficulty that is successfully attained. If it succeeds a VEasy then the Shield Rating is 1. If the roll succeeded a VHard role then the Shield Rating is 5. The Shield Rating acts as the task difficulty increase in psionic activities attempting to penetrate the individual's Shield. If the individual concentrates for 10 rounds the active shield may be reinforced by allowing the psionic to roll the shield task again, with the new result counting, unless it is below the original Shield Rating. This Shield Reinforcement lasts for 1d10 minutes. If the psionic becomes unconscious or goes to sleep, a task roll against the difficulty associated with the Shield Rating must be done to maintain the shield. The Shield Rating of an active shield acts as AR (armour rating) against neural weapons (sixth-order forces).

A shielded character also offers resistance against direct psionic actions such as being pushed by telekinesis, for example. However, such shielding is ineffective against being struck by telekinetically thrown objects. Protection from such events requires telekinesis or other means to defend

This talent involves establishing a form of mental shield to protect the individual from having their mind read or manipulated. The action cost solely involves the establishing of the shield, thereafter the shield is maintained subconsciously. A shield almost always is successful; the task role is used only to determine the level by which the shield succeeded. This is done by turning the task modifier table around, reading the success level as the resultant rating of the shield.

For Example

Anderson wishes to establish a shield. Her shield skill is 75%. If she were to roll 74% on the skill test she would get a shield at rating 3. However, if she rolls 34% or less then she has succeeded her shield test by more than 40%. Therefore the task difficulty level she would have been able to cope with is 1. The net result is that her Shield Rating would be at a level of 4.

The level at which a shield is established (or the Shield Rating) refers directly to an additional task modifier which another psionic must include when attempting to penetrate the shield.

If the individual with a shield already established concentrates for another 10 rounds the active shield may be reinforced by allowing the psionic to role the shield task again, with the new result counting, unless it is below the original Shield Rating. This Shield Reinforcement lasts for 1d10 minutes (rolled by the GM and not disclosed to the player). If the psionic becomes unconscious or goes to sleep, a task role against the difficulty associated with the Shield Rating must be done to maintain the shield. The Shield Rating of an active shield acts as AR (armour rating) against neural weapons (sixth-order forces).

Empathy

This talent allows the individual to detect the emotions of a being or a group of beings within close proximity to the psionic (i.e. location known). If a being's mind is reasonably familiar to the psionic then this can be done at considerable range without the psionic actually knowing the being's location. The current emotional state of a being can be either intensified or decreased by a psionic with this talent. If the mind of the being is well known to the psionic, then this can be performed in the same manner as Emotion Detection. The psionic can also use this talent to detect non-shielded psionic beings or shielded psionics using active talents within the range specified by the psionic. This can give some sense of the direction and strength of psionic activity. This talent can similarly be used to detect life within range, giving general information on type, intelligence and location. Empathy allows for empathic communication with another being. The task and action cost is related to establishing the communication; thereafter it only costs 1 action per round to maintain. This talent can be used on aliens at one difficulty higher.

The empathy talent is about those mental activities of a being that pertain to their emotional state of mind. This talent can detect various emotions, communicate emotions to others and aid in altering the emotional state of the intended subject.

Detect Emotions

This ability allows the individual to detect the emotions of a being or a group of beings within close proximity to the psionic (i.e. location known). If a being's mind is reasonably familiar to the psionic then this can be done at considerable range without the psionic actually knowing the being's location. The general emotional state of a group of people may also be determined. Both range and area difficulty costs apply in such cases.

Alter Emotions

The current emotional state of a being can be either intensified or decreased by a psionic with this talent. If the mind of the being is well known to the psionic then this can be performed at considerable range, as with Emotion Detection.

Detect Psi

The psionic can also use this talent to detect non-shielded psionic beings or shielded psionics using active talents within the range specified by the psionic. This can give some sense of direction and strength of psionic activity as well. Both range and area attributes affect the difficulty of this task.

Detect Life

Given that lifeforms with some kind of brain emanate sixth-order forces (psionics), it is possible for an empath to detect such emanations. This ability is used in a similar fashion to detect life within range, giving general information on type, intelligence and location.

Note, however, a psionically able being gives off a higher magnitude of emanations, often making them appear more intelligent. Thus it is common practice to run a scan for psionics at the same time to eliminate such phenomena.

Empathy Commo

This talent can also be used for empathic communication with another being. The task and action cost is related to establishing the communication; thereafter it only costs 1 action per round to maintain. Empathic communication involves the projecting of the psionic's emotions to the target, allowing them to understand the psionic's emotional expression and maybe gauge their intentions and general meaning. Meanwhile the psionic is also monitoring the subject for their reactions to the communication and outside influences. Although not a perfect communication method it does allow intentions and general meanings to be exchanged.

This ability can be used on a group of people, but the psionic will only pick up the general reaction of the group. Specific individuals must be targeted to find out their specific reaction to the communication. Such communication is generally used to influence reactions of larger groups.

Telepathy

This talent allows the individual to read the thoughts or memories of a another individual within close proximity to the psionic. If the target's mind is reasonably familiar to the psionic then this can be done at considerable range without the psionic actually knowing the target individual's location. The current thought state or memory of a being can be changed in order to suggest something by a psionic with this talent. The psionic can also use this talent to detect non-shielded psionic beings or shielded psionics using active talents within the range specified by the psionic, giving some sense of direction and strength of psionic activity. Telepathy can detect life within range, giving general information on type, intelligence and location. Finally, telepathy can be used for telepathic communication with another being. The task and action cost is related to establishing the communication; thereafter it only costs 1 action per round to maintain. This talent can be used on aliens at one difficulty higher or on sentient machines at two levels higher.

The telepathy talent is about those mental activities of a being that pertain to their thoughts and memories. This talent can detect various thoughts, communicate with them and attempt to alter their thoughts or memories.

Detect Psi

This ability is identical to that described under Empathy.

Detect Life

This ability is identical to that described under Empathy.

Telepathy Commo

This talent can also be used for telepathic communication with another being. The task and action cost is related to establishing the communication; thereafter it only costs 1 action per round to maintain. When communicating, the only thoughts received by the psionic from the other party are those directed towards them by the other party. To read all thoughts in such a conversation requires the read thoughts ability to be used at the same time.

Read Thoughts

This ability allows the individual to read the current thoughts of a being within close proximity of the psionic (i.e. location known). If a being's mind is reasonably familiar to the psionic then this can be done at considerable range without the psionic actually knowing the being's location.

The task and action cost is related to establishing the reading 'tap'; thereafter it only costs 1 action per round to maintain.

Probe Memory

Like reading thoughts, a psionic with telepathy can probe the memories of a being. The psionic must specify to GM what information they desire, and if successful the GM will supply this. Failure means the psionic didn't find the information they wanted, in general because they didn't peruse the appropriate section of the being's mind. Attempts can be repeated after failure, although with no particular bonus for having tried already.

The nature of the psionic's query should be one sentence for each task attempt, and the GM should reply with a couple of sentences. If the nature of the question was broad then the reply should also be broad. Over time with multiple probes more specific information can be gathered only if the psionic begins to ask more specific questions, with narrow responses required. The GM should handle the scope of the information gathered by the psionic.

The target of the probe will not be aware they being scrutinised until such time as the probing psionic fails a probe. At such time the target is informed that some memories have been dislodged for some reason (indicate those being asked for by the psionic) and that the target is getting the chilly feel of ghostly fingers in their head. Let the target respond in an appropriate fashion.

Suggestion

This ability involves inserting a suggestion into the thoughts of the recipient. In most cases a suggestion will be just like an additional thought that may trigger changes of action in the recipient with little effort. Such mild suggestions are 1 difficulty less than normal. Mild suggestive techniques only involve strengthening or weakening the recipient's thoughts. Close monitoring of the recipient's mind is needed for this mild use, and requires quite some time to study the recipient to make it effective.

A suggestion with some mental force (normal difficulty) can prompt a recipient into an action not in line with their own thoughts. Resistance rolls may be called for if a being is subject to something such as a suggestion which may force them to conduct actions they do not want. Normal resistance does apply against the psionic attempting the task. If they succeed in that, a moderate task roll should then be done by the psionic using their telepathy skill at normal difficulty (i.e. no action penalties), with the recipient's intelligence acting as a negative dice modifier against the psionic. If the roll succeeds the recipient will think or act in the manner desired by the psionic. If the roll fails the recipient realises 'alien' thoughts have entered their mind, will know what they are, and may react accordingly within the context of the gaming environment.

Memory Edit

One of the most powerful telepathic abilities is the ability to edit the memories of a target being. Although it may appear powerful, it has many restrictions given the lengthy nature of inserting or erasing enough memories to make it useful to the psionic's purpose. In most cases where lengthy changes are required, the subject must be rendered unconscious for many hours to make such dramatic changes feasible without the subject

noticing. If a subject is conscious and the psionic fails a roll, the subject will know exactly what is being tampered with. The subject will react accordingly.

Each memory edit task reflect the insertion or deletion of one piece of discrete information. This may involve a number, a name, a place, etc. It takes multiple tasks to, for instance, construct the fact that the subject did or didn't meet a particular person on a particular day at a particular place and was given a phone number. The GM will determine the extent required to achieve the objective and how effective it will be.

Given that memories are tied in with many other events, it is often very hard to erase or change very specific information that is tied into the subject's day-to-day life or the core of their existence. Such things include their name, recognition of people close to them and generally anything they regularly encounter in their lives. To change such details requires major overhauls and might involve significant suggestions and brainwashing techniques.

On a quick basis this talent does allow a psionic to quickly erase a piece of critical information the subject has heard only once, and maybe replace it with some false information. Such a change may be a simple telephone number, access number, bank account number or a person's name or address.

Telekinesis

This talent involves moving objects by the power of the mind. The base object size is up to 5 kg. Increase the difficulty by 1 for every additional 5 kg. The rate of movement of the object in question is normally 1 meter/round (m/s). Increase the difficulty by 1 for every additional 5 m/s.

Only one discrete object can be moved per task using this talent. If multiple objects are to be moved then multiple action rules apply.

Concentration on this task must be maintained while the psionic wishes to move the object. When the psionic is no longer concentrating on the task, the object being moved will begin to obey normal unmodified motion based on its velocity, gravitational influence, etc.

Some major psionics have learnt to craft their talent into a virtual telekinetic hand. This allows more complex manipulation or the movement of a group of objects within the hand. They difficulty of such a hand is 4 higher than normal.

Teleportation

This talent involves the virtually instantaneous transportation of the psionic from one location to another via dimensional space. The action cost is for initiating the teleport. The destination location must be well known or this action becomes 3 difficulty levels higher. Perception talents are often used to peruse a location before 'porting' to it.

The base weight that can be transported is the individual's weight plus 20 kilograms (kg). Increase the difficulty by 1 for every additional 50 kg. This means it is possible for a teleport to transport another person with them who is in close physical contact.

Failure to succeed a teleport task usually means that nothing occurs. A total failure (i.e. 00 on the dice) will mean the psionic arrives at a different destination somewhere within their intended range.

Control

This talent allows the psionic a greater control over their own body functions. Psionic preparation through the use of the Control talent can either enhance the Dice Modifier of a physical act like bending a steel rod or can likewise enhance mental skills for a single purpose, such as fixing a broken gravitic module. The enhancement lasts for one task role and only for the stated action ,which must be attempted directly after the preparation. The degree by which the activity is enhanced acts as a Dice Modifier (DM) in favour of the psionic. If it is being used to enhance a skill task, then that skill's STAT base indicates whether it is mental or physical. Control can also be used to resist stun effects. The effects of the resistance only apply to the next stun effect against the individual, or for 10 rounds, whichever comes first. Healing of damage can also be done using this talent.

This talent is about controlling the biochemical nature of the psionic's own body using psionic control. In many ways this is like non-psionic disciplines that produce such changes, but works in a more direct manner through direct manipulation of the body in certain areas.

Enhance Physical Act

Psionic preparation using this ability will allow the enhancement of a physical act such as bending a steel rod. The enhancement lasts for one task roll for the activity prepared for, which must be done straight after the preparation. The degree by which the activity is enhanced acts as a Dice Modifier (DM) in favour of the psionic. If it is being used to enhance a skill task, then that skill's STAT base indicates whether it is mental or physical.

Enhance Mental Act

Psionic preparation using this ability will allow the enhancement of mental acts such as fixing a broken gravitic module. The enhancement lasts for one task role for the activity prepared for, which must be done straight after the preparation. The degree by which the activity is enhanced acts as a Dice Modifier (DM) in favour of the psionic. If it is being used to enhance a skill task, then that skill's STAT base indicates whether it is mental or physical.

Given that psionic talents use INT as a STAT base, it is possible to enhance a psionic act before attempting it. However, the enhancement of mental acts doesn't work when applied to further enhance the enhancement of a mental act. Such cascading doesn't work within the normal confines of these psionic talents. It has been known to occur in rare individuals, but this has been the result of years of intense meditation into one tiny insight about the nature of the universe. Such feats seem relegated to monasteries of monks who spend generations reflecting on the nature of certain aspects of existence, social order or scientific enquiry. As they might say, 'Wisdom is gained through learning, suffering and sacrifice, not some easy trick of the mind.'

Resist Stun

Control can also be used to resist stun effects. The amount of resistance to stun effects with each use of this ability depend on the desired degree of effect that the psionic wishes to attempt. Once succeeded, the degree represents the amount of stun resistance as a dice modifier the psionic has achieved for that task. This effects of the resistance only apply to the next stun effect against the

individual, or for 10 rounds, whichever comes first. Such displays of pain resistance often occur when deliberately putting oneself into mortal situations such as firewalking or being electrocuted while working on something.

This can also be used to resist certain poisons that cause stunning, pain or paralysis. Refer to the combat and medical sections for more details on such effects.

Heal

A psionic with this ability can accelerate the healing processes in their own bodies to incredible rates that defy normal biochemical processes. The amount of damage healed with each use of this ability depends on the desired degree of effect that the psionic wishes to attempt. Once succeeded, the degree represents the amount of life points restored to the psionic. Any use of such healing techniques will close an open wound, stopping bleeding of that wound and the risk of further blood loss. Use of this talent must be done per wound to be closed even if all damage points have been healed with prior uses of this ability. Otherwise bleeding and further damage will occur.

Perception

This talent can be used to provide a sense of direction in an unknown area. It can provide directional information of a generalised locality, such as a town, the sea or through a mountain range. The task role is for initiating getting the desired direction at that current time. This talent can also be used to listen or view (or both) a remote location as if the psionic were actually present. The location would have to be familiar or well known by the psionic.

The perception talent is about heightening a psionic's own senses so that they can project them to remote localities and use their normal sensory powers at locations that their embodied sensory faculties cannot reach.

Direction Sense

This talent can be used to provide a sense of direction in an unknown area. It can provide directional information to get to a particular location (if the location is known to the psionic), such as a town, the sea or through a mountain range. The task roll is for initiating the getting of the desired direction at that current time.

Life Vision

This ability allows the psionic to visualise the sixth-order auras of life forces in the environment around them. In many ways it is like detect life except it works with the range and field of vision limitations of their own eyes.

The auras the psionic sees are shaped according to the form of the beings seen. If used in conjunction with empathic detect life or detect emotions, the auras become colour tinged according to the emotion or nature of intelligence of the subject being viewed.

In cases of extreme darkness this type of vision can give a form of night vision to the psionic if enough life is present. This works best in forest, savannah or woodland terrains. Inside artificial facilities it would give only partial visibility as the dominant sources would be the trace bacteria, fungi, lichen and insects hidden in nooks and crannies throughout such a facility.

This ability doesn't allow vision of other objects that don't contain a life force, such as concrete, stone, dead wood or metallic structures that harbour a bare minimum of microscopic infestations.

Listen

This ability involved the ability to hear, as though with the psionic's sense of hearing, at some remote point. This may involve listening in on a conversation at a distance or on the other side of a wall, or simply listening to a remote location the psionic is very familiar with. The task roll is for activation of the talent. Continued use of the talent once activated involves an action cost of 1 per round.

Vision

This ability is very similar to the Listen ability and works in a similar way. The ability allows the psionic to view a remote location as if they were standing there. Eyesight is restricted to that of the psionic as if they were there under the same lighting conditions as the location being viewed. The psionic may change the orientation of this ability's 'eyesight' at the remote location but cannot move it about without applying another task roll. Action costs to retain the vision after activation at the same location are the same as Listen.

Television

This ability is just the combination of the Listen and Vision abilities being used at the same location. Refer to their entries for descriptions of use and limitations. Action cost to maintain watch on location after ability activation is 1 action per round.

Psionic Related Equipment

Given that psionics use something known as sixth-order forces to undertake their manipulations, technological solutions for detecting, enhancing or blocking the use of psionics can be achieved.

Device	Cost (ec)	Weight (kg)
Amplifier	100,000ec	2.0kg
Erindoritherne	500 ec	0.005kg
Pocket Psi Detector	1000ec	0.1kg
Psi Shield Helmet	10,000ec	1.0kg
Psiothene	1000ec per dose	0.05kg
Strachiac Field Projectors	25,000ec	5.0kg

Amplifier

This helmet and belt pack device is an optimised psionic amplifier. It decreases the difficulty of all psionic activities by one level.

Erindoritherne

This is an oral drug which is used to increase the consumer's resistance to suggestions, whether psionic, hypnotic or by other means. It adds a +50 modifier in favour of the consumer in such resistance rolls. Activation takes about 20 minutes after consumption and lasts about 3 hours. Further use of such pills while already under the influence of Erindoritherne will render it ineffective for the duration remaining. Fortunately no side effects are known for overdosing beyond an overabundance of sugars in the bloodstream. Older chemical formulations are known to cause

hallucinations during overdosing, actually making the consumer more susceptible to suggestion the more they overdose.

Pocket Psi Detector

This small penlight-sized device is designed to detect sixth-order forces or active psionics within 10 m. It has a tolerance setting to ignore psionic Shields. The device indicates the presence of psionics by beeping, vibrating, flashing or any combination of these.

Psi Shield Helmet

This device is designed to create a sixth-order force shield which provides an active psionic Shield Rating of 3 against psionic abilities and neural weapons. Less efficient devices of SR 1 are available for concealment under hair for 3000ec and weigh 0.02 kg.

Larger systems incorporating this technology are used on many military starships and bases to shield against unwanted psionic intrusion or manipulation. Some civilian facilities are known to use such systems where confidential information is involved.

Psiothene

This psionic drug is the least hazardous of psionic-enhancing substances such that multiple doses per day are free from the risk of side effects. Psiothene enhances all psionic talent percentage levels by 50 points for an hour. Additional doses while under the effects of a previous dosage do not have any additional effects.

Strachiac Field Projectors

These devices come from the Coalition and have their origins in military technology development. Such systems involve projecting a psionic dampening field over an area, making it hard for psionics to operate in that area. This is often used in vital areas of military starships (along with hull psi shielding) to make direct action by psionic intruders extremely difficult.

A number of Andorian companies have produced portable units designed for open area use to allow privacy to be maintained with respect to psionic spies. The portable units affect an area about 20 m in diameter. Within that area the effects are similar to that of a psi shield with a rating of 4.

Although these are cheap for their potential, the Coalition bans their export to worlds outside their state. Some Daryne who have been in Coalition Army service have been known to acquire these, and have since returned to Daryn with examples of some of these devices.

North Atlantic Institute of Geomancy

This academic university has drawn much criticism in the past decades since its founding, being labelled unprofessional, unacademic, and an indoctrination centre for devil worshippers.

The fears surrounding the teachings and research of this Institute may evoke considerable fear in various Terrans, but most of those fears are holdovers from Terra's ignorant past.

The Institute was founded at the dawn of the psionic age for Terrans which began in the early 2150s. It was founded as a training ground for psionic teachings, but also for applied sciences involving psionic sensitives, primarily in the areas of geophysics.

Many of the graduate students who stay with the Institute are developed psionics who are studying the geologic nature of the North Atlantic region and its impact on the living organisms in the region. Their primary research focuses on the alterations of sixth-order patterns in localised areas emitted by lifeforms due to geophysical effects present.

It is well proven throughout may race's sciences that things in the environment that affect an organism will affect its emanating sixth-order patterns. This happens more so with higher orders of life.

What makes most people fearful of this Institute is its research into the occult practices and beliefs, particularly such concepts as leylines and other strange geophysically paranormal phenomena.

In essence their central contention is that Earth is a geomagnetic power source with an innate symmetry in which various places on the globe exhibit increasing electromagnetic phenomena which spark changes in local flora and fauna and can bring an active sentient psionic more in touch with the sixth-order pattern of the universe.

Further descriptions of their beliefs wrap around many concepts about Gaia, innate empathic abilities of life, 'the force' and a myriad of concepts out of mythology, modern fiction and parapsychology.

Many rumours abound about inner circle of graduates and staff actually practicing occult rites. However, the Federal Bureau of Investigation has unearthed no evidence showing that any of NAIG's 'ritual re-enactments' break any Federal laws, and they are well within their rights to practice such rituals and undertake such research, given the fundamental links now associated with certain rituals and psionically controlled phenomena.

The Institute also cites other races that are very aware of these geophysical phenomena, such as the plant-worshipping that is dominant in Stotatl society, the desert spirits of the Nandina, and many of the weird practices of the Andorians. The Institute even claims that the ancient Aratani were aware of this phenomena, and that the key to ancient Aratani centres of civilisation (collectively referred to as Atlantis in western literature) are these locales of geomagnetic power.

*__geomancy__ "o*man`cy n. [OE. geomance, geomancie, F. g[‘e]omance, g[‘e]omancie, LL. geomantia, fr. Gr. ge`a, gh^, the earth + mantei`a divination.] A kind of divination by means of figures or lines, formed by little dots or points, originally on the earth, and latterly on paper.*

Experience Points

Experience points are awarded at the end of a module or at certain points in a campaign. These EPs are awarded for certain major actions undertaken by the player during the module. Avoiding combat occurs when the character is attacked by the opponent and the character attempts to remove himself from combat, possibly undertaking some defensive measures. The character only gets the EP if he successfully gets out of combat and takes no offensive actions. The rating of the opponent is based on a comparison with the player character.

Characters only develop skills or STATS that they have actually gained the experience in. When handing out EP the GM notes down the major skills used by the character to gain the EP. The player can only spend the awarded EP on those skills listed. The STAT bases used for those skills also determine which STATS the EP can be spent increasing.

Upon receiving EP the character must spend them on raising STATs or skills. For skills the relationship is 1 EP per skill point, For STATS the same relationship applies except it is 5 EP per STAT point. The average EP that an average player should get from a module should be no more than 50 EP.

Notice that skill progression is not capped within FSpace. This is unlike other game systems, where skills max out and characters get to expand their skills to know a huge segment of what is possible. In those with narrow skill bands it means they have to have an almost nonexistent experience system, and players get disgruntled through not seeing any real experience.

FSpace uses greater margins between potentials to simulate the increasing demand on better knowledge to achieve harder goals. This forces people to specialise or generalise depending on their approach to applying experience.

By having defined group task rules you can see the value in building skills and see how a group can achieve a task well out of the range of the individuals involved.

The use of percentile dice creates the variation, but does not absolutely control outcomes given certain skill levels. The certainty is that some situations will become normal, but that there will also be failure in some situations.

When you see multiple actions in combat rules and tasks, and modifiers within those, you'll see further reasons for having such huge gaps and understand why no capping is involved.

If you were to change task difficulty thresholds and skills you'd have to change the entire mechanics of the game.

Fifty EP is considered to be the average annual experience gained by a character while conducting a highly active life. If you are using the career templates as a guide, you'll see this relationship in the advancement of skills in the templates per year beyond the base skill levels.

The bigger gaps represented in skill difficulties represent the increasing level of experience needed to achieve a new level of competency in a particular field of expertise. This means each new level in effect costs more experience. This forces characters to specialise more as they develop if they want to get better in a particular area.

Potentially, if a character could earn 50 points per year, they would gather about 500 in 10 years, or 1000 in 20 years. Thus once a human hits middle age they could potentially be leading in one particular skill if they focused all their experience in that area.

In a way, the increasing threshold from one potential to another is as if the character class experience increases by the amount required to get to next level. The difference with FSpace is that it is treated on a per skill basis, and that the actual experience load per threshold is reflected in the skill rating on a one-to-one basis and in task difficulties defining those thresholds. Thus we do not need an increasingly complex experience system.

I do realise that the skills are simplifications, but that means we do not generate a complex career or skill system. This in turn means that the emphasis of the game is not placed in that area of mechanics. What we have is a skill system that is easy to understand and manage, leaving specifics up to the style of the GM and the competencies of the players involved.

If more complexity (or simplicity, in rare cases) is required then I totally encourage a GM to develop and enhance the skills and careers section to fit their requirements.

These mechanics were created to keep certain kinds of roleplayers happy, but still give a flexible structure from which to build a more complex structure should a GM wish to. Rigid career structures with selective/personal development skills, occupation specialities, terms of service, or even an experience level system can all be built around this framework.

By altering weightings in the experience system you can even change the flavour and feel of character development and the long-term growth of players within the game.

Impossible Task EP

When a character succeeds on a task in which he only has the natural 01 chance of succeeding, then EP are rewarded. The EP are handed out on the basis of the number task levels above the hardest one the character can actually perform with his or her skill.

For example: Norm has groundcar at 10, and attempts a hard task. If he succeeds, then he gets EP for a 1st-level impossible task. If he pulled off a VH2 task, then he would have acquired 4 EP for a 3rd-level impossible task. This also applies if a combined skill action succeeds which would normally be impossible for the character, although only half the number of EP are awarded compared with the character's skill. For 1st impossible task the EP is still 1.

Training

New skills can be learnt by receiving instruction in them. The cost varies according to the form of training and how good the training source is. Only a limited number of EP points can put into the skill initially. It must be remembered that training never provides EP. Successful training allows the character to apply and use the STAT base for that particular skill. Experience will allow the character to improve this skill.

Determining whether the student acquired the skill dependents on the instructor's ability level and the tasks undertaken both by instructor and the student.

Instructor must do a Mod skill check.
Student must do a Mod INT check

Source	Cost (per/hr)	Time(hours)
Expert	1000	10
Qualified	300	30
Recognised	100	50
Amateur	10	100

Triple cost if using self teaching material

Psionics

Psi skills cannot be built using normal experience points. Instead a special system applies, and Psi skills are built by applying Psi EP which are gained in a different way to normal experience. Specifically, if actions performed by the character were accomplished by the use of psionics, then Psi EP should be awarded rather than normal EP.

Experience and Campaign Flavour

If a campaign run by the GM is to focus mainly around combat, or if the GM wants a different flavour to a campaign, then they can change the weightings given to different types of experience.

Fast Track combat campaigns would most likely have the combat experience altered from a basis of per combat to per opponent. This leads to rapid development of characters. With this sort of experience weighting, the GM should make sure the characters only spend their EP in skills actually used in those combat situations, otherwise they may rapidly develop skills totally unrelated to their actions during the game.

Weighting the experience system towards either thinking or pure combat can upset the long-term progression of characters. If players want to develop skills rapidly under the experience weightings presented here, then they have to specialise in particular skills.

EXPERIENCE POINT TABLE

ACTION	EP
Dealing with a minor combat	1
Dealing with a normal combat	2
Dealing with a major combat	3
Dealing with a great combat	4
Avoiding combat with a minor combat	2
Avoiding combat with a normal combat	3
Avoiding combat with a major combat	4
Avoiding combat with a great combat	5
Successful execution of a major plan	3
Partial success of an executed major plan	2
Failed execution of a major plan	1
Helping law enforcement agency in important matter	1
Saving life using medical knowledge or equipment	1
Completing objective of mission / module / adventure	5
Completing a 1st level impossible task	1
Completing a 2nd level impossible task	2
Completing a 3rd level impossible task	4
Completing a 4th level impossible task	6
Completing a 5th level impossible task	8

Daryne in native dress (carrying Terran multispectral scanner)

Gravity Environment

Statistics

Physical STATs are modified by gravity of the world the character is on, according to the character's homeworld gravity.

Format – (STR and CON)/(DEX)

Note: When CON is modified, it doesn't affect LIFE or StunEND.

Homeworld Gravity	Planet Gravity Zero-g	Low-g	Norm-g	High-g	Ext-g
Zero-g	+0/+0	-20/+20	-40/+40	-80/+80	-160/+160
Low-g	+20/-20	+0/+0	-20/+20	-40/+40	-80/+80
Norm-g	+40/-40	+20/-20	+0/+0	-20/+20	-40/+40
High-g	+80/-80	+40/-40	+20/-20	+0/+0	-20/+20
Ext-g	+160/-160	+80/-80	+40/-40	+20/-20	+0/+0

Character Heights

The average human height varies according to the gravity of the homeworld, although there is still a great variation in human heights regardless of native gravity. Some other races, such as the Draconians, have very little variation in size due to homeworld gravity.

Gravity	Average Height
Zero-g	8 feet
Low-g	7 feet
Norm-g	6 feet
High-g	5 feet

Skill Use

Since STATs are modified by the environmental conditions, the STAT bases for skills might very well change. Certain tasks can be modified according to the gravity difference from the character's homeworld.

Gravity Difference	Task level Increase
Same	0
1	1
2	2
3	3
4	4

This can be modified by having the Grav Ops skill. If the environ skill check succeeds then the other task can be performed normally.

Gravity Difference	Difficulty
1	Moderate
2	Hard
3	Very Hard
4	Very Hard 2

Combat

Gravity has a profound effect on projectile weapon range. The maximum ranges listed in the weapon tables are those for normal gravity. The table below shows how to adjust the maximum ranges for the various gravity classes. Keep in mind that this gives a new base range for these weapons, and that long range aimed fire is computed from the new base range. In a zero gravity weapon shots do continue on their path. However, the ability to hit a target at ranges beyond those covered with the new base range is quite impossible without some fire control device similar to modern artillery weapons.

Gravity	Maximum Range Modifier
Zero-G	8 x normal
Low-G	2 x normal
Normal-G	normal
High-G	1/2 x normal
Extreme-G	1/4 x normal

Equipment

Gear	Price (ec)	Weight (kg)
Exoskeleton	50,000	10

Atmospheric Environments

The presence (or lack of) an atmosphere can have profound effects on operations by humans (or aliens). Differences in atmospheric pressures can severely impair the endurance of someone operating in those conditions. The presence of high proportions of certain gases can also affect people. Some planetary atmospheres have gaseous compositions which can be quite toxic to humans.

Pressure Differences

The table below shows the adjustments that should be made to endurance (END) when operating in atmospheric pressures other than homeworld pressure. This table can also be applied when the oxygen content in an atmosphere is different, but the actual atmosphere pressure is standard.

It is also important that people living in mountainous regions such as Tibet and Nepal are effectively at Thin pressures. Individuals from such localities should be treated as coming from Thin pressure atmospheres.

There are several methods used to overcome low-pressure effects. Compressors or small air tanks can be used to supplement the oxygen intake of an individual.

Homeworld Atmosphere Pressure	Planet Atmosphere Pressure		
	Thin	Standard	Dense
Thin	0	+20	+40
Standard	-20	0	+20
Dense	-40	-20	0

Vacuum Conditions

Some worlds, such as Mercury and the Moon, have atmospheres that are effectively a vacuum. A human cannot survive unaided in such conditions. Not only do they need an artificial atmosphere, but they need a containment suit. Vacsuits are the usual means of providing atmospheric support for individuals in vacuum conditions.

Exiguous pressures such as on Mars are similar to vacuum conditions. However, conditions are not quite the same. A pressure suit is typically enough to support a human; a vacsuit is usable, though a bit bulky.

Tainted Atmospheres

Some atmospheres may be breathable, but have a significant gaseous taint. Exposure to this kind of atmosphere can cause severe medical problems depending on the taint. Normally apply -20 to endurance (END) if breathing unaided. To counteract this, filter masks are normally used to eliminate the taint from inhaled air.

Hostile Conditions

Some atmospheres have gas conditions which are unbreathable. Planets such as Venus with its CO_2 and Titan with its N_2 are unsuitable for humans. However, a pressure suit is commonly used on such worlds, while other extreme conditions would dictate that a Hostile Environment Pressure Suit be worn. Exposure to such atmospheres will result in death by asphyxiation.

Combat

The pressure of an atmosphere can have a significant effect on weapon range. Consult the table below. The composition of an atmosphere can also effect the use of weapons. Lack of oxygen can effect conventional projectile weapons, requiring oxygenated ammunition. Lasers can also be affected severely by composition or taints. The GM must decide on these effects.

Pressure Range Change Table

Pressure	Range Change
Vacuum	x2.0
Exiguous	x1.5
Thin	x1.2
Standard	x1.0
Dense	x0.7

Environmental Suits

All environmental suits come with an internal life support unit which can supply 48 hours of air and has temperature controls appropriate for the suit type. All suits come with a com-link to allow easy communications between people. Vacsuits come with varying degrees of thermal insulation and radiation shielding, because of their extensive use in space. Most suits can have additional electronics installed, such as small computers and sensory gear.

The Hostile Environment P-suit is designed to take intense conditions in noxious gases and extreme temperatures and pressures. Due to the toughened nature of all Vacsuits, there is a basic armour rating for each suit type as described below.

Suit Type	AR	Price (ec)
Light Vacsuit	2	4000
Medium Vacsuit	3	10,000
Heavy Vacsuit	4	35,000
Light P-suit	1	2000
Hostile Environ P-suit	6	100,000

A variety of suppliers manufacturer a huge range of variations on the basic Vacsuit design, mostly these involve, colour, additional built in equipment, and comfort factors. These customisations can add greatly to the basic price.

Terran Light P-suit

Equipment

Gear	Price (ec)	Weight (kg)
Atmosphere Tester	100	0.5
Compressor	60	1.0
Environ Bubble	2500	10.0
Gas Mask / Air Filter	50	1.0
Rescue Ball	500	3.0
Space Proofing	+10%	-
Weapon Space Proofing	+20%	-

Atmosphere Tester

This small instrument is used to determine the pressure and composition of an atmosphere. It indicates whether the atmosphere is breathable and if any toxic elements are present.

Compressor

This device is worn over the nose and mouth and acts to compress the atmospheric gases and thus enable the wearer to breathe in a thin atmosphere.

Environ Bubble

This is an inflatable pressure tent suitable for four people. It has an inflatable airlock for egress. Its life support system can provide air for 48 hours for four people, along with providing adequate temperature control.

Gas Mask / Air Filter

This device is worn over the nose and mouth for use in tainted atmospheres; it removes the atmospheric taint and enables normal breathing.

Rescue Ball

Most passengers on spacecraft are not skilled at operations in space in vacsuits. The rescue ball is an inflatable life-support bubble with four hours air supply. Passengers are commonly put into these during emergency situations.

Space Proofing

Most equipment is unable to function in vacuum (or hostile) conditions. In order to use the equipment, it must be pressure-sealed, sensitive electronics and instruments must be shielded, and the device must be modified to operate at low temperatures.

Weapon Space Proofing

Most weapons have problems operating in vacuum (or hostile) conditions. They must be pressure sealed for such use. With conventional projectile weapons, self-oxygenated ammunition (see Marine section) is of significant advantage, otherwise the effective range is limited to 20% of normal.

Marine Environments

Statistics

Physical statistics are modified due to the denser medium of water.

STR	-0
DEX	-10
CON	-10

Skills

Since STATS are modified by the environmental conditions, the STAT bases for skills might very well change. Remember that skill usage will be modified according to effects of water, and its effect on human senses. As a standard, the base difficulty of any skill tasks should be subject to a task difficulty increase of +1 level unless a character has Marine Environ skill. Since vision is greatly affected depending on illumination, murkiness, etc., the modifiers for visibility in the standard combat rules should be applied. Skill checks that rely on hearing should be penalised by an increase of +1 level unless special marine sonic hearing devices are used in the hands of someone with Marine Environ skill. Smell underwater is impossible for humans, the only equivalent being chemical testing devices. Touch is not impeded unless rigid gloves are being used. Human speech does not carry at all through water, so communication must be either by hand signals or by use of underwater communicators (Sadio). Effective skill and STAT levels cannot be greater than the Marine Environ skill if the character wants to benefit from Marine Environ, otherwise they suffer normal penalties.

Movement

The maximum movement is 3 m, but it is more effort to move through water. Movement can be assisted by the use of either hand propulsion units or backpack water jets.

Movement	END Costs
0	none
1	1 END per 10 minutes
2	1 END per 1 minute
3	1 END per cbt rnd

Depth

Human were never adapted for operating underwater for more than a few minutes for depths up to 20 m. With the use of air tanks or breathers humans can operate down to depths of 150 m. With special gas mixtures the operational depth can be pushed down to 400 m. With liquid-breathing suits this barrier can be pushed to almost 2000 m. Highly advanced rigid suits have been known to go down to 5000 m.

Combat

Underwater combat using terrestrial weapons and techniques is not very easy. For armed, unarmed and firearm attacks, increase the difficulty level by +1. Standard thrown and tensile weapons are harder to use, so increase the difficulty by +3 levels instead. If a person has Marine Environ skill and is using specially modified underwater weaponry, then no disadvantages occur. Increase difficulties for evasion and defence by +1 level unless the person has Marine Environ skill. Remember, however, that even for Marine Environ-skilled individuals, effective skill and STAT levels cannot be greater than their Marine Environ skill if they want to benefit from Marine Environ, otherwise they suffer normal penalties.

Combat equipment suffers from severe problems unless made for the marine environment or waterproofed. Range-finding and pin-targeting systems will not work unless they have been modified for green frequency laser light. Laser weapons suffer from a shorter range (1/3) unless they have been modified for green laser frequencies. Sonic weapons work just as well underwater as in atmospheres. Projectile-type firearms normally don't work at all, unless their ammunition is self-oxygenated and modified. Even then they suffer from causing half damage from water retardation effects. For other kinds of ranged weapons, their targets receive an extra 1 AR per 10 m from the weapon.

Electronics

Any non-waterproofed electronic device that is taken into water becomes permanently non-functioning.

Marine Equipment

Device	Cost (ec)	Weight (kg)
Marine Sonic Hearing Device	10,000	1.0
Sonic Communicator (Sadio)	1000	0.5
Sonar Vision System	30,000	2.0
Hand Propulsion Unit	500	1.0
Backpack Water Jet	5000	5.0
Wetsuit	400	2.0
Dry-suit	800	3.0
Air-Tank Gear (SCUBA)	500	5.0
Breather Mask	2000	1.5
Deep-Dive Tank System	5000	10.0
Liquid-Breathing Suit	300,000	20.0
Rigid Suit	1Mec	100.0
Green Laser Modifications	+30%	-
Waterproofing	+10%	-
Weapon Waterproofing	+20%	-
Oxygenated Ammo	+50%	-

Marine Sonic Hearing Device (SHD)

This device is designed to compress the sound frequencies used by cetaceans into the human hearing range. With special audio-digital processors this device allows almost normal perceived hearing in the marine environment. It also auto-adjusts to dampen out harmful sounds. Because of this function it provides an extra +10 to Stun END with respect to sonic weapons while submerged. Using this system, a human talking while wearing a breather can be heard up to 100 m away.

Sonic Communicator (Sadio)

This small device is designed for use in conjunction with a breather mask or a rigid suit. It uses a sonic system similar to that of dolphins to transmit voice communications up to ranges of 1 km. It uses a high-speed trinary communications protocol, which can be encrypted using a marine version of the 'Encrypte' (see the 'Communication Gear' section).

Sonar Vision System

This device is based on the same principle as that used by cetaceans for underwater non-visual 'seeing'. It builds up a terrain image using sonar pulses. It can also be used in a passive mode, relying on external sonic sources. It resembles a conventional electronic binocular system. It displays the composite image in a similar way to terrestrial imaging gear. In an active detection mode its own sonar pulse system can give good vision out to about 250 m; under passive conditions its range is reduced to about 20 m.

Hand Propulsion Unit

The hand propulsion unit is a small hand-held propeller designed to aid a diver in taking some of the strain off long-distance swimming. It can produce a movement rate of 1 metre/round for the user. Because of its method of use it is not suitable for letting the diver exceed the upper limit of 3 m/rnd. Instead it allows a diver to travel at 3 m/rnd while only paying a 2 m/rnd END cost.

Backpack Water Jet

The backpack propulsion unit is designed for high movement rates underwater. Using a jetstream motor it provides a modest velocity of 4 m/rnd, and with the diver at full swimming rate a total movement rate of 6 m/rnd can be achieved.

Air-Tank Gear (SCUBA)

With the use of air tanks humans can operate down to depths of 150 m. A normal single tank will sustain the user for about one hour. The harness rig can carry two tanks at once if required. Higher compression tanks (four hours each) are available for about 800ec. Advanced diving systems can come with a recycling unit that retains exhaled air and scrubs out the CO2 for reuse. Such a system will allow operation for up to 18 hours, but costs around 10,000ec.

Breather Mask

With the use of a breather mask humans can operate down to depths of 150 m. This mask functions by forcing dissolved oxygen gas out of seawater for breathing purposes (similar to the gills of a fish). Because it relies heavily on the levels of dissolved oxygen, it operates with varying degrees of efficiency in areas of stagnant water. A breather mask's primary use is in conjunction with a recycling system (similar to the tank system) to obtain some oxygen from the seawater whilst making up any shortfall from tanks. Depending on the water oxygenation conditions this may extend operations with a single tank from twice as long to nearly indefinite use.

Deep-Dive Tank System

With special gas mixtures used in an air-tank system the operational depth of human beings can be pushed down to 400 m. This often involves the use of inert gases to counteract the poisonous effects of oxygen at high pressures. A deep-dive tank system cannot be used effectively with a breather mask because levels of oxygen at greater depths are reduced below the effectiveness of the breather masks

Liquid-Breathing Suit

With liquid-breathing suits the depth barrier can be pushed to almost 2 km. This system involves the use of an oxygen-rich liquid to counteract the effects of pressure. This is an unpleasant experience, and is only done by highly skilled marine specialists. The suit resembles a typical medium vacsuit. It is used instead of rigid suits because of fewer limitations on movement and hand dexterity for manual work.

Rigid Suit

Rigid suits combine submersible technology with a suit to allow underwater operations by humans at great depths rather than using remote systems. Highly advanced rigid suits have been known to go down to 5 km. The suits use the special gas mixes of deep-dive systems for internal pressure purposes. Modern suits have their own integral life-support systems, unlike earlier designs.

Green Laser Modifications

Most atmospheric laser systems are unsuitable for marine work and only operate to an effective range one-third that of their atmospheric performance. Range-finding and pin-targeting systems will not work unless they have been modified for green frequency laser light. Laser weapons suffer from shorter range (1/3) unless they have been modified for green laser frequencies. This modification system involves either a frequency adapter or physical modifications, depending on the device in question.

Waterproofing

Equipment for use in marine conditions will require special waterproofing in order to operate. This is true of electronics, cameras and other water-sensitive devices.

Weapon Waterproofing

Many conventional weapons will require special waterproofing in order to operate in a marine environment. If they are combustion-based projectile weapons they will also need oxygenated ammunition.

Oxygenated Ammo

In order for conventional projectile ammunition to work underwater, its propellant has to be oxygenated to support combustion. Special oxygenated ammunition is therefore required for underwater operation.

Survival

The Survival skill enables one to live, if only barely, under adverse conditions, whether it be desert, arctic or some other form of unfamiliar hostile terrain. It does not enable one to survive in a hostile environment, the applicable environment skill is necessary for that.

The important thing to remember about survival is that one's mental attitude is just as important (if not more so) than any equipment. As a brief guide, a human being can survive 3 weeks without food, 3 days without water or 3 hours without shelter under extreme weather conditions. However, with a negative mental attitude this is reduced to approximately 3 minutes.

While various specialist survival equipment is available it is not necessary to have it in order to survive; a basic but effective survival kit can be carried in a pocket.

Survival Skills Table

All task levels assume reasonable conditions, both weather and personal. The GM will adjust the task levels upwards as conditions dictate.

Task Descriptions

Pitching a tent

This is quite simply the pitching and striking (taking down) of a tent. The task also includes the efficient folding and packing of the tent.

Packing a backpack

There are three important aspects to packing a backpack effectively: weight distribution, fitting all the items in, and ease of access. The latter is extremely important, especially under combat conditions when you might need to replace a magazine or find a medical drug rapidly.

Finding possible pure water

The character is able to work out likely locations for water to be found within the area.

Recognising pure water

When a water source has been found, this task enables the character to realise whether or not the water is in fact drinkable.

Finding possible edible plants

If a character is successful in his attempt, he works out the likely location of edible plants. The bioscience skill can be used instead of survival if a person has it; this is at one task level lower.

Scavenging

This task is generally only used in emergencies, and enables the person to find odds and ends of food under most circumstances.

Obtaining water

This involves the building of water traps, dew collectors and home-made condenser units. Under reasonable circumstances a character should be able to obtain enough water to prevent or at least slow down dehydration.

Constructing a temporary shelter

This task is the choosing of a good location for a shelter, the gathering of materials and the construction of a temporary shelter normally only suitable for a few nights at best. This can take anywhere between 20 minutes to two or three hours depending on the circumstances.

Recognising edible plants

Having found plants a character must determine what parts, if any, are edible. Once again if the bioscience skill is available this can be used at one task level lower.

Making a temporary still

In some ways similar to the task of obtaining water, this involves the building of a reasonable-quality water still, similar to a condenser unit.

Fitting water retention suit

The correct fitting of a water retention suit is imperative for it to work efficiently. A failed roll will result in an incorrectly fitted suit; it may be either too tight resulting in excess water retention or too loose resulting in unwanted water loss. It is normal procedure to have a 'buddy' check the fitting of the suit. This does not of course guarantee correct fitting.

Fitting heat retention suit

This is similar to the task of fitting the water retention suit although harder because of the complexity of the suit. As with the water retention suit, incorrect fitting can result in either too tight or too loose a suit. In this case either can be deadly.

Task	Diff
Pitching a tent	Automatic
Packing a backpack	VEasy
Finding possible pure water	Easy
Recognising pure water	Mod
Finding possible edible plants	Mod
Scavenging	Mod
Obtaining water	Mod
Constructing a temporary shelter	Mod
Recognising edible plants	Hard
Making a temporary still	Hard

Fitting water retention suit	VHard
Fitting heat retention suit	VHard2

Survival Equipment

Gear	Price (ec)	Weight (kg)
Arctic clothing set	2000	10
Backpack	30/50/80	3/5/7
Cooking set	40	2
Dog sled	1000	50
Heat retention suit	10000	10
Hiking boots	50	2
Knife (Survival)	100	0.3
Knife (Multi-function)	50	0.2
Mint cake pack	10	0.1
Rations (Standard)	10	0.3
Rations (Luxury)	20	0.5
Snow Shoes	100	2
Stove (Large)	500	20
Stove (Portable)	50	2
Survival Kit (Basic)	30	1
Tent (One person)	150	2
Tent (One person thermal)	300	4
Tent repair kit	50	1
Thermal blanket	10	0.05
Water canteen	5	0.05
Water condenser unit	4000	20
Water purification tablets	10	0.01
Water purification unit	500	0.5
Water retention suit	10,000	10

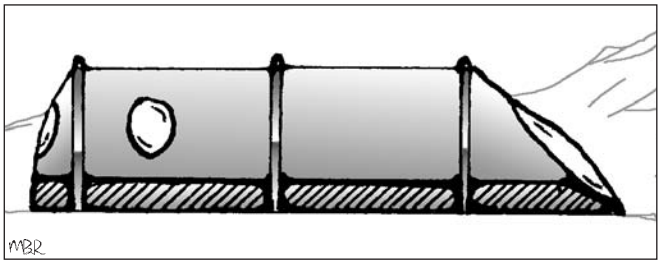
CLIMBING

The Climbing skill, although not essential for survival, can be very useful.

As a guide, a successful roll will result in the following distance being climbed safely before having to recheck. The distance varies according to the skill level. The GM can vary the distance climbed (normally upwards) as he sees fit. The actual difficulty level of the climb will be determined by the GM.

Before starting the climb, an Easy task roll is made for the character to determine the difficulty level of the climb.

When there is an organised climbing expedition, the leader of the climb will be required to make two climbing rolls, one for his own climb and the second to determine if he has succeeded in making the climb easier for those following. If the character succeeds in both then the level of difficulty for those following is reduced by at least one level.

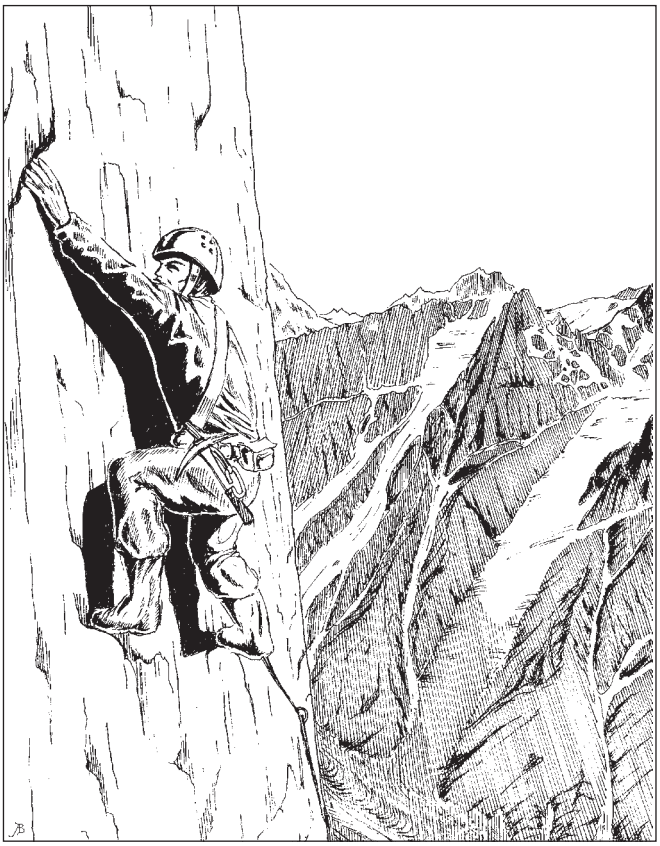


Skill Level	Distance climbed (m)
Amateur	10
Recognised	20
Qualified	30
E1	45
E2	75
E3	105
E4	135
E5	165
E6	195

After skill level E6 the climb rate increases at the rate of 30 m per skill level obtained.

Climbing Equipment

Gear	Price (ec)	Weight (kg)
Brake clip	10	0.03
Carabiner	3	0.03
Climbing boots	60	2
Crampons (pair)	20	0.2
Figure-of-Eight	10	0.03
Harness	10	0.05
Ice axe	20	1
Ice pick	20	1
Pitons (10)	10	0.5
Piton gun	100	2
Rope (50 m)	50	1.5
Rope Joiner	10	0.01
Brake clip	10	0.03



Navigation

When you are travelling in the wilderness, navigation is one of the most important aspects of survival. Without adequate navigational skills the chances of survival are greatly reduced. Navigating on earth is a fairly simple matter – most of us do it automatically in our everyday lives – but in the wilderness it is slightly different. The easiest way of navigating is of course by using a compass, although there are several alternatives available if for any reason the compass is lost or damaged. You can also navigate using the either the sun or the stars.

On worlds with which you are not familiar it is harder although not impossible to navigate without any mechanical aids or maps. As a general rule you should spend a full day watching the movement of the sun and/or stars and use them to ensure that you head in a straight line. When you are under stress this is not as quite as easy as it sounds, as stress affects your sense of direction in the same way that excess alcohol or any stimulant does.

Tasks

All task levels are based on Earth navigation and assume reasonable conditions, both weather and personal, For unfamiliar planets and/or adverse conditions the GM will adjust the task level accordingly.

Navigating with compass and map.

This is by far the easiest navigation task, as you have all of the essential aids with you.

Navigating with just a compass.

This is slightly harder than with both compass and map, and care must be taken to ensure the accuracy of the compass on a fairly regular basis.

Navigating with just a map

This is similar to navigating with just a compass. It is essential that you spend time to locate a distinctive landmark if possible. Without a distinctive landmark the task level will increase accordingly.

Celestial navigation

Unless you are familiar with the night sky you should stick to using the sun as a navigational aid. Although not by any means a simple task, it does give you an idea of direction.

Navigating blind

The hardest level of navigation, as you are relying solely on your built-in sense of direction.

Task	Level
Compass and Map	VEasy
Compass only	Easy
Map only	Easy
Celestial	Mod
Blind	Hard

Navigation Equipment

Compass (Magnetic) 10ec 0.03 kg

The compass has not changed much in hundreds of years. Modern devices do cater for use on various worlds where magnetic fields are oriented differently. The compass computes the orientation with respect to true north using the magnetic data. This is reflected in maps for other worlds being referenced according to true north (i.e. polar) co-ordinates. However, maps of Earth still use magnetic orientation for navigation even though they are constructed around the poles of rotation.

CompuSextant 1000ec 3.0 kg

The CompuSextant is a parallel development to inertial locators and has lasted well into the period of reliable inertial devices. It operates like a normal sextant, but uses an internal system to provide positioning data without the operator requiring much in the way of navigation skills. The sextant is intended for use on worlds where adequate satellite telemetry has not been established for the use of GPS systems. It is optimised for rugged conditions and can be used on vehicles and surface ships. Sextants are typically set to give positions on both latitude/longitude and distance/bearing from a set point. Input of the planetary "starmap" data and reference maps is done through an I/O port on the device that is often connected to a portacomp unit. Power is either through vehicle mains or a battery.

GPS Receiver 100ec 0.1 kg

On a fully civilised world with all the comforts of technology and satellites, no one ever need be lost. A small Global Positioning System (GPS) receiver can pinpoint the location of the user to within millimetres. If the device is connected to a wristcomp with mapping data then navigation becomes very simple.

Inertial Locator 300ec 0.1 kg

This device measures the velocity changes it is put through to determine the route the user has travelled with respect to the starting point. It gives positioning data with respect to the starting point, and can be used to retrace a route. It records all 3D movement, and with a wristcomp it can display this route over a terrain map for navigation purposes.

Combat System

During play a situation could arise where a character gets invoved in a combat, whether it be a pub brawl or a military firefight. This section deals with the basic rules by which the GM can run a combat situation.

COMBAT ROUNDS

These last one second only, and are the timeframe in which combat actions are performed.

INITIATIVE

The groups involved roll 1d10s. The group with the highest number wins the initiative, and gets to choose whether to go first or last within each action phase.

Initiative modifiers

+1 per 200 levels of INT
+1 per 100 levels of Tactics
+1 per 200 levels of Leader

Initiative modifiers for leadership only apply if a character is commanding a group of people.

ACTIONS

Within the round each player must decide whether to evade, defend, move, attack or reload. Each character must declare the number of actions they will be conducting during the round. This means that the character will pay the price for preparing for multiple actions even though they may not use them.

MULTIPLE ACTIONS

It is possible for a player to conduct more than one action in a round. These actions must be declared as usual. The effective skill or STAT levels of the character will be reduced according to the number of actions if they are used to perform these actions. A character is penalised for the amount of actions declared, even though fewer actions may have been performed.

Number of Actions	Skill Modifiers
1	1/1
2	1/2
3	1/4
4	1/8
5	1/16
etc	etc

ACTION PHASES

A round is broken into multiple action phases in which actions are conducted. The winners of initiative decide whether they want to go first or last within an action phase. Characters who are conducting actions may then use one action to do something during the phase. Only one action may be used. However, if attacked, a character may use a spare action to defend, evade or resist an attack.

RANGE

A player will not know the precise range of a target unless he has a rangefinder or does an appropriate INT, recon or hunting check (at the same difficulty as the range hit difficulty). If the player can't determine the range accurately then the GM should give a rough estimate of it. The range given on the weapon tables are the maximum range of those weapons under normal firing conditions.

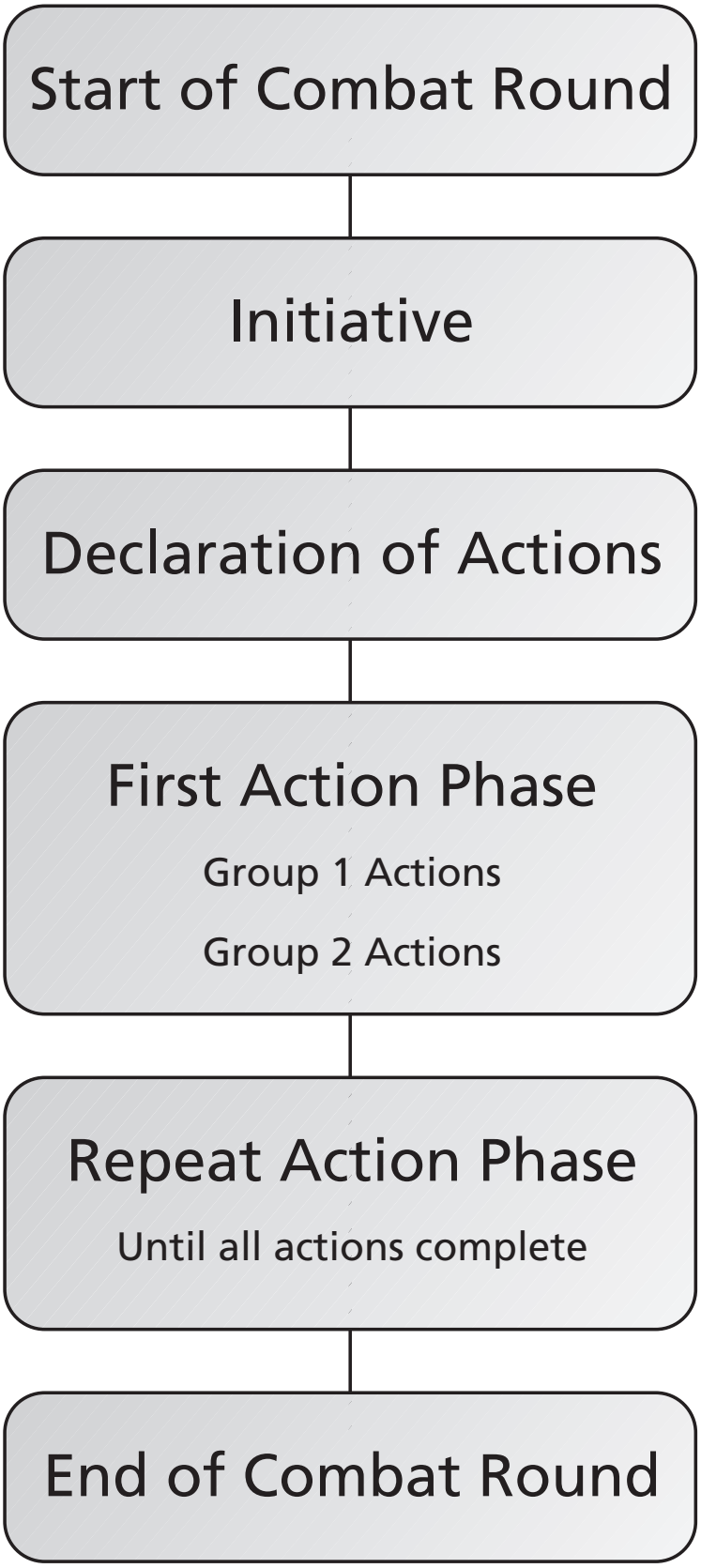
MOVEMENT

A human can move a maximum of 10 m every combat round. Movement during combat alters the range between opponents, and can affect endurance (END) due to physical effort. Movement is conducted during an action phase. Turning one face on a square map expends 1 m worth of movements. It would therefore take one full movement class of 2 m to turn to face the rear. For aliens with higher or lower movement rates than 10 m, divide their maximum movement by 5 to determine how many metres of movement is available for each movement class. If it is 15 m movement then it will be 3 m per movement class.

Total Movement (m/cbt rnd)	Movement Class
0	0
1	1
2	1
3	2
4	2
5	3
6	3
7	4
8	4
9	5
10	5

High levels of movement take the equivalent of a number of actions. This has the effect of lowering a character's ability to conduct other actions.

Combat Flowchart



Movement Class	Action Cost	END Cost
0	0	none
1	1	none
2	2	1 END per 10 minutes
3	3	1 END per minute
4	4	1 END per rnd
5	5	10 END per rnd

HITTING

The attacker rolls 1d100 and adds the range difficulty modifier to the roll. The player hits the target if the result is under his skill level (just like skills). Some situations dictate that the difficulty modifier may be increased, e.g. trying to hit a gun in a target's hand, or a target behind cover.

GUNS

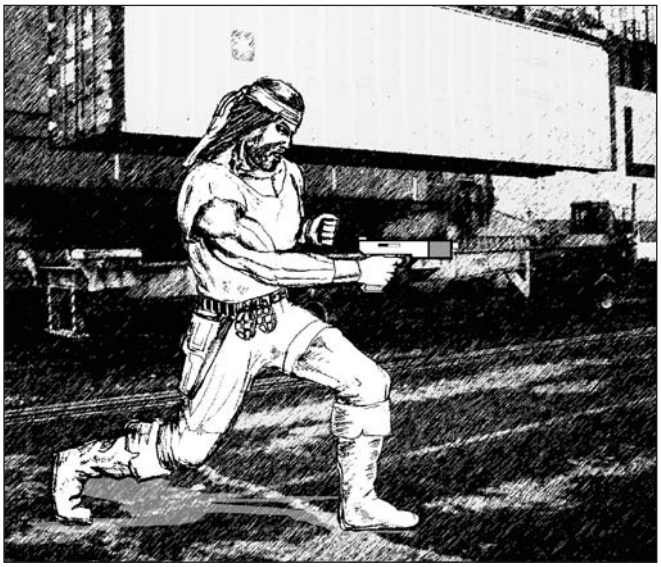
The hit difficulty for a gun is determined according to the range of the target and the type of firearm.

Type	Easy	Moderate	Hard	Very Hard	VH2
Handgun (H)	0–5	6–25	26–50	51–250	251–500
Rifle (R)	-	0–25	26–250	251–500	501–5 km

A gun can be fired using DEX STAT base at one level higher, or INT STAT base at two levels higher.

Long-Range Aimed Fire

Various weapons have a maximum range listed for them. This is the range over which the weapon is effective during the normal firing conditions that occur during a combat round. However, someone like a sniper often wants to fire over an extended range. By 'lining up' for several rounds, a sniper can improve the range of the weapon being used. For each round (up to five) spent before firing the range of the weapon can be extended by 20% of its base range. In order to succeed in 'lining up' the sniper must roll a sensor or gun task check at the range difficulty they intend to fire at to be successful in range extension. They may then fire normally at that range difficulty if they successfully 'line up'.



Short-Range Aimed Fire

For accurate firing over ranges within the standard range listing, another technique is used. This is commonly used in target shooting or in tight situations. For every round spent before firing (up to three) the difficulty of the shot can be reduced by one level (to a minimum of Very Easy). In order to succeed the user must roll a sensor or gun task check at the standard difficulty for the range of the target. If they succeed then they fire with adjusted difficulty.

THROWN AND TENSILE WEAPONS

The range difficulty for thrown and tensile weapons depends on the Strength (STR) of the character.

Diff	Type Thrown (T) and Tensile (Tn)	example STR 100
Easy	0–5	0–5
Moderate	6–1/4STR	6–25
Hard	1/4STR–1/2STR	26–50
Very Hard	1/2STR–STR	51–100
VH2	STR–2xSTR	101–200
VH3	2xSTR–3xSTR	201–300

Thrown weapons skill is used to hit with thrown weapons. DEX STAT base or tensile weapon skill is used to hit with tensile weapons.

GRENADES

Grenades have several considerations over standard thrown weapons. Firstly, all targets within the area of effect (AOE) of a grenade are subject to damage calculations unless evaded (see Evasion for specifics). If the grenade hit roll fails then its location must be determined. Rather than use complicated bounce rules, a simple method involves checking to see whether the grenade falls short or long along the throw line to the intended target. Firstly roll 1d10. If the result is 1 to 5 then the grenade has fallen short in the middle of the lower range difficulty. If the result is 6 to 10 then the grenade has fallen long in the middle of the higher-range difficulty. An automatic 00 roll on the hit roll results in the grenade landing in the middle of the Easy difficulty range.

ZONE WEAPONRY

Weapons with a zone are similar to grenade AOEs, but are linear AOEs projected by the weapon. All targets are hit within the zone. The limitation, however, is that only the nearest two targets (human sized) along each metre of the zone are hit. If the hit roll fails then the weapon has fired in a slightly different direction to the primary target. The GM should decide how to run this according to the circumstances and the weapon involved.

Zone Weapon Misses

Because of the profound effects of these weapons down their zones, a system of defining their direction is needed. If the firer misses then the GM needs to determine its base direction by rolling a D10 and consulting the table below

Roll	Direction
1–3	Left
4–5	High
6–8	Right
9–10	Short

Once the general direction is known the GM should roll another D10 to determine how far the general 1 m zone has deviated from the original target.

Roll	Deviation (metres)
1–2	1 m
3–4	2 m
4–6	3 m
7–8	4 m
9–10	5 m

The GM should then determine the weapon results.

AUTOMATIC WEAPONS

Semi-automatic weapons are distinguished by firing more than one round of ammunition in a round. The ROF designates the number of shots that can be fired by the weapon in a round. However, if the weapon has Burst capacity, burst firing can be done. For each ROF during burst fire, the burst contains as many rounds as noted under the burst column. These travel down a one-metre zone, and tend to divide between two man-sized targets. Therefore a burst with 3 rounds will have one round impact a single human in the zone, with a 50% probability of a second round hitting him.

Fully automatic weapons are indicated by the number of rounds fired out in a round under the Auto column. Divide the number of rounds as evenly as possible across a three-metre zone. Treat in a similar fashion as burst fire for semi-automatic weapons.

One bullet is released down each zone per action phase in full or burst fire, until all rounds for the fire type are used. Auto fire must begin within the first 3 action phases, while burst can begin within the first 4 action phases of a combat round.

American Infantry grunt pulling injured comrade from firefight

Flame-throwers

Flame-throwers are well known for setting flammable material alight. If the flame-thrower is using conventional gas then the material will burn according to standard combustion rates for that material. If the gas is of self-burning material such as napalm, combustion will continue for longer. If a human target is hit by napalm then they will continue to suffer the effects for five rounds.

UNARMED COMBAT

Hand-to-hand combat uses various kinds of attacks in combat. The unarmed manoeuvre table shows the various attack forms. The hit difficulty is listed for each attack. Hand-to-hand manoeuvres can be done using appropriate STAT bases (STR or DEX), but are harder; the difficulty is listed on the table.

	Name	Diff	Stat
i.e.	Punch	Easy	Mod

ARMED COMBAT

The armed weapon table in the weapon section lists the weapon types and the base difficulty for the weapon. Of course DEX STAT base and STR STAT base can be used in place of armed cbt, but at a higher base difficulty, which is usually one difficulty higher.

Of course, the attacker can perform a harder attack with a weapon. Two special manoeuvres also exist, but are a lot harder than the base difficulty:

Disarm an armed opponent	- 3 levels higher than base difficulty
Break an armed opponent's weapon	- 5 levels higher than base difficulty

EXPOSURE

If a target is behind some form of cover, the exposed portion of the target becomes harder to hit. Aiming for specific part of the target also increases the hit difficulty. Attempting to hit a hand or eye increases the difficulty by 3 levels. Aiming for parts of a target that are behind cover increases the difficulty level by a further level. Consult the Exposure Diagram for specifics.

For example, the attacker attempts to hit a hidden arm of a target behind full cover:

+3 levels for full cover

+1 level for arm location

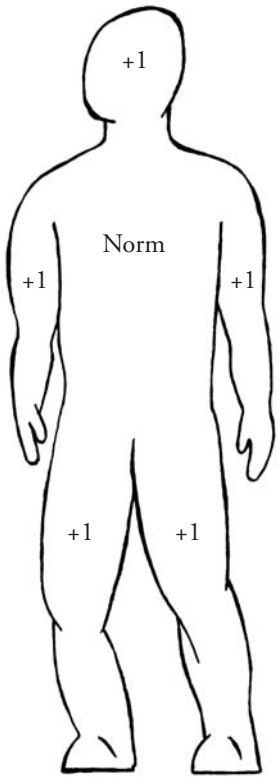
+1 level for hidden location

This makes it +5 levels harder. If the attacker had been aiming for a hand in this situation it would have been +7 levels higher. Only elite marksmen would ever attempt this.

Since situations like this occur, sensors such as Thermographic imagers can be used (conditions permitting). Such a sensor system could negate the hidden location modifier and the cover modifier (but not the AR bonus the target may have from the cover). This makes such a situation more feasible with only a +1 level. However,

Locality aimed hit difficulties

Hands	3 higher
Eyes	3 higher



Stun Class Table

Stun Class	STR DM	Int
I	-60	1rnd
II	-40	1rnd
III	-20	1rnd
IV	+0	1rnd
V	+20	1rnd
VI	+40	1rnd
VII	+60	1rnd
VIII	+80	1rnd
IX	+100	1rnd
X	+200	1rnd
XI	+300	1rnd
XII	+0	1min
XIII	+40	1min
XIV	+100	1min
XV	+200	1min
XVI	+300	1min

Unarmed Maneuver Table

Name	DIFF	AM	DP	Stun	STAT	Note
Punch	Easy	0	1	I	Mod	
Hard Punch	Mod	0	2	III	Hard	
Front Kick	Mod	0	2	III	Hard	
Trip	Mod	0	1	I	Hard	Knockdown (KD)
Twin Punch	Mod	0	1e	I	Hard	2 opponents
Hold	Hard	-	-	-	VHard	STR at VHard to break
Knockout Punch	Hard	1	2	V	VH2	
Side Kick	Hard	2	4	V	VH2	
Throw	Hard	0	1	I	VHard	Knockdown
Tackle	Hard	0	1	I	VHard	10m move first, both KD
Twin Hard Punch	Hard	0	2	III	VHard	2 opponents
Reverse Turning Leap Kick	VHard	3	8	VI	VH3	
Limb Break	VHard	4	3	VI	VH3	
Disarm	VHard	-	-	-	VH3	remove weapon
Twin Kick	VHard	1	3e	IV	VH3	2 opponents
Jumping Twin Kick	VH2	2	6e	VI	VH4	2 opponents
Disarm II	VH2	-	-	-	VH4	get weapon for self
Back Break	VH2	2	4	VIII	VH4	
Stun Pressure Point	VH2	-	-	XIV	VH4	
Neck Break	VH2	-	kill	-	VH4	VHard STR to resist
Paralyse touch	VH3	Nil	-	X	VH5	Last as long as held

Note

e – applies to each opponent with this specific maneuver

a sensor skill check would have to be made at the same difficulty as the adjusted hit difficulty (i.e. +1 level). If the roll fails the attacker does not get the advantage of the sensor (i.e. attacks at +5 levels) for that round.

EVASION

A defender may attempt to evade or dodge an attack. This is accomplished by using DEX or a skill such as acrobatics.

Evasion Table

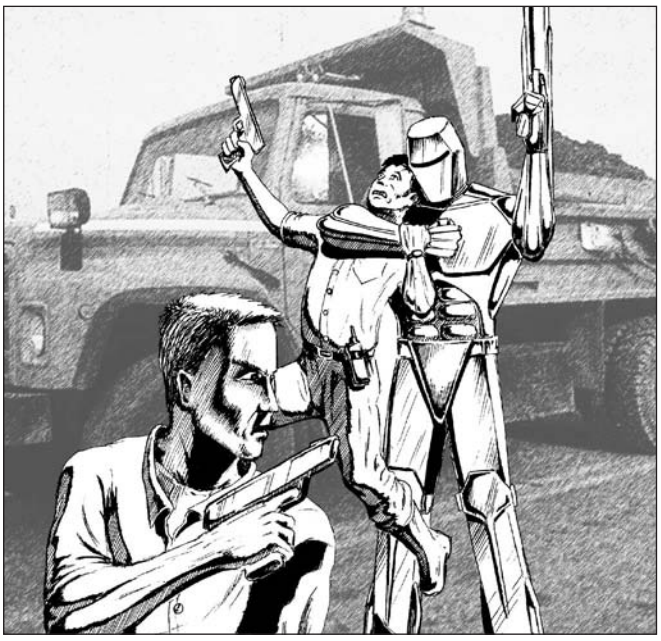
Hit Difficulty	Evading Difficulty
Very Easy	Very Hard 2
Easy	Very Hard
Moderate	Hard
Hard	Moderate
Very Hard	Easy
Very Hard 2	Very Easy

Evading grenades can only be done if the grenade has an area of effect (AOE) of 1 m or the character is at the edge of the AOE. This also applies to zoned weapon attacks as well.

DEFENCE

A defender may attempt to defend or block an attack. This is accomplished by using DEX, unarmed (or armed if the defender is using an armed weapon). If both combatants are using armed weapons or both combatants are unarmed, then it easier to defend, so long as the defender has the appropriate skill.

Hit Difficulty	Defend	Armed vs. Armed or Unarmed vs. Unarmed
Very Easy	Easy	Very Easy
Easy	Moderate	Easy
Moderate	Hard	Moderate
Hard	Very Hard	Hard
Very Hard	Very Hard 2	Very Hard
Very Hard 2	Very Hard 3	Very Hard 2



A grenade cannot be defended against. A gun can only be defended against if it is within hand reach (1 m) of the defender. Special unarmed training is known to exist for defence against archaic missile weapons. Defending of this sort is two difficulty levels higher than the hit difficulty. Shields can be used for defence as well. However, against missile weapons and firearms, shields will only provide armour protection if defended.

LIFE

LIFE is based on the character's original CON. LIFE represents the amount of damage a character can sustain. The first number represents relatively safe damage levels, while damage that goes into the second number indicates that a biological being has gone into blood loss which will result in eventual death.

Robots and other constructs become inactive if the damage goes into the second number. However, constructs do not suffer from blood loss.

LIFE		CON / 2xCON
		Safe / Critical
Example	50 CON	50/100

STUN ENDURANCE

Characters and mechanisms (i.e. robots) have a stun endurance (Stun END) which is equal to their original CON in the case of characters. This is what is checked against for stun effects. Since damage affects the resistance to stun effects, the current Stun END is equal to 1/3 of total remaining LIFE.

ARMOUR

Armour protection may be on the target in question during a combat. The armour rating (AR) is fundamentally important in determining of damage. Often the AR of a target varies with the various locations on the target. Hidden locations concealed by cover gain an added armour bonus for those locations from the AR of the cover in question.

HIT LOCATIONS

Determine the hit location (unless an aimed shot) based on the appropriate exposure (see Exposure Diagram) by rolling 1d10.

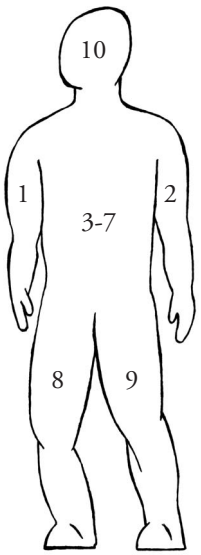
Head Location Hit Effects

Hits doing damage to the head area can cause more severe concussion effects than normal. Often these effects become serious when dealing with hits striking any other part of the body.

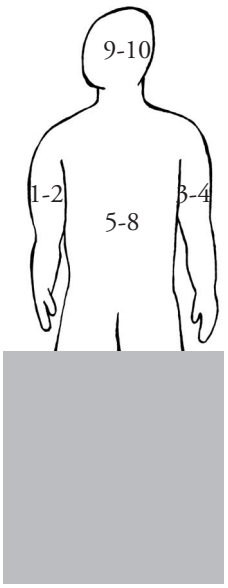
Damage	Type	STR DM Penalty	Other
10+	Single	10	
20+	Single	20	
50+	Accumulative	40	
100+	Accumulative	60	Apply to any locality
100+	Single	50	Lose 1 INT

Exposure diagram

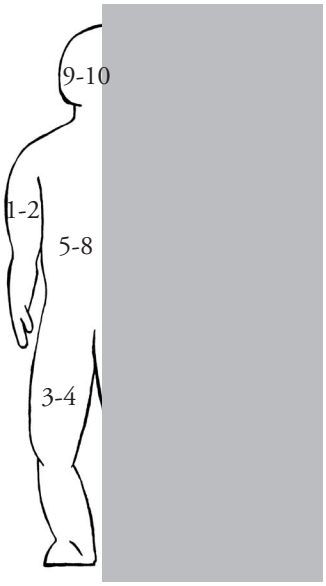
Exposed
Diff: Norm



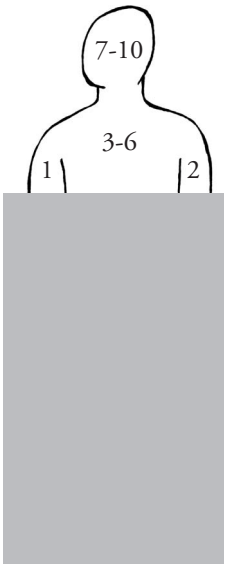
Partial cover
Diff: 1 Higher



Partial Cover
Diff: 1 Higher



Cover
Diff: 2 Higher



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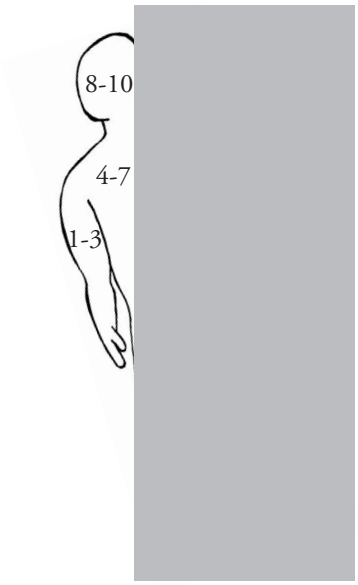

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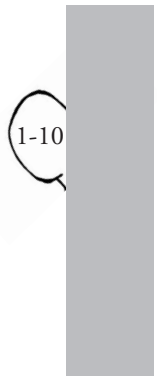


Locality	AR bonus from cover
Exposed	0
Partial	1/2 cover AR
Full	Full cover AR

NON-LETHAL WEAPON PENETRATION

Non-lethal weapons are those weapons whose damage potential (DP) is 0. For these weapons to have a chance to affect their target, they must penetrate any armour protection the target has. This is calculated with the formula below:

1d10 + AM - AR

If the result is 1 or more then the armour has been penetrated.

DAMAGE

Damage is determined by rolling 1d10, adding the armour modifier (AM) of the weapon, subtracting the armour rating (AR) of the target, adding the strength bonus (STR/100) if applicable, and multiplying the result by the damage potential (DP) of the weapon. If the result is greater than 0 then damage to the target has occurred. Apply the calculated damage to LIFE.

The formula to calculate damage is

Damage=DP x (1d10 + AM - AR)

Strength bonuses occur when using armed weapons or unarmed manoeuvres. The following formula should be used to calculate damage instead:

Damage=DP x (1D10 + AM - AR + (STR/100))

STUNNING

Many weapons and attack forms cause stun effects. Consult the Stun Class Table to find the STR DM and Int for the particular weapon. The defender must check to resist by rolling 1d100 and adding the stun strength DM (STR DM) of the weapon. If the result is under the character's Stun END then they suffer no effects. If the player fails then they check to see how long they are unconscious for by the degree of failure on resistance check times by the stun time interval (Int).

i.e. ((roll + STR DM)–Stun END)x Int

	Name	STR DM	Int
e.g.	Police Issue Stunner	+40	1 minute

BLOOD LOSS

When the damage inflicted on a biological target goes into the second number, the organism suffers from blood loss by losing 1 LIFE point until the 10 points have been lost due to a particular wound or the blood loss is stabilised.

PRONE COMBATANT ON GROUND

The grounded target becomes one difficulty easier to hit. The grounded defender may dodge and defend. The grounded person may also attack with armed, grenade or gun. Unarmed attacks are limited to attacks of DP 2 at best that can be performed on the ground.

American Infantry uniform – rear

KNOCKDOWN / BACK

Any weapon that has a STR DM >= +100 or DP >= 10 and which hits, then the target is knocked back 2 m (optional: Vhard DEX check or get knocked down as well). If the target falls unconscious then it falls to the ground. Standing up after being on the ground counts as one action.

COLLISIONS

Various types of collision can occur in combat. Some involve forced stops or ramming manoeuvres. Damage from a collision is 1d10 - (10 - movement) with an AM of 0. Both objects take the damage. In ramming, the target can evade as normal. A Moderate DEX check for those involved or they are knocked down.

VISIBILITY

Since sight is the primary sense used for most combat situations, reduced visibility increases the difficulty of most things. Reduced visibility can be from a lack of light from or too much illumination. Various vision sights are capable of counteracting visibility problems depending on the target object and the reason for the visibility difficulties.

Visibility	Difficulty	Example
Normal	Normal	Normal
Dim	+1 level	Misty
Partial	+2 levels	Nighttime (with moon)
None	+3 levels	Moonless night

CARRYING CAPACITY

The amount of weight a person is carrying can effect their level of endurance (END). This can usually effect the duration for which a character can operate at peak in a combat. Carrying Capacity (CC) is based on strength (STR).

Weight	END Cost
1/8 STR	none
1/4 STR	1 per hour
1/2 STR	1 per 1/2 hour
STR	1 per minute
2STR	1 per rnd

Endurance

This is calculated from the current constitution of the character, including such things as gravity modifiers. Damage also affects endurance (END); apply 1/4 of damage to endurance. When END drops to zero the character is exhausted and can no longer continue with any physical and most mental activities without resting, and possibly obtaining some food for energy.

WEAPON ACCESSORIES

Weapon accessories modify the effect of weapons quite drastically. Dimmers, silencers and flash suppressors are designed to lower the visibility or sound created by certain weapons. Rangefinders give the range of the target. Pin targeting modules put a visible dot on the target to help aiming, giving a -20 DM on the to hit roll, but a sight is needed to see the dot on the target if over 50 m. The Magnum module is similar but gives a -50 DM to hit and can be seen up to 100 m without a sight. Stabilisers on rifle-sized weapons provide a 10 DM to hit. Sights have various features, some of which are obvious, and others which have been discussed previously; however, they provide a 20 DM to hit when used to hit targets over 100 m away.

By attaching a shoulder stock and an extended barrel to projectile handguns, they become rifle-type weapons giving better range performance (double maximum range and use the rifle range difficulties). Bayonets are dagger-type weapons which turn a rifle into a pike-type weapon.

MISCELLANEOUS

Doing such things as opening/closing doors, picking up a weapon, drawing a weapon or glancing around a room at the major details take an action each. Dropping a weapon or tool does not count as an action.

Break Hold

When a character is locked into a hold they can use an action to attempt to break out of it.

Moderate STR DIF check
(STR DIF = Defender STR - Attacker STR)
Hard DEX DIF check
(DEX DIF = Defender DEX - Attacker DEX)

Limb Break Resist

The natural strength of a character can be used to resist a limb being broken. It doesn't cost an action initially. However, if resisted the attacker can continue trying to succeed by spending an action. At this point the victim must spend actions to resist; only the initial resistance doesn't attract an action cost. This continues until the victim breaks the hold as above.

Moderate STR DIF check
Hard DEX DIF check

Neck Break Resist

The natural strength of a character can be used to resist their neck being broken. It doesn't cost an action initially. However, if resisted the attacker can continue trying to succeed by spending an action. At this point the victim must spend actions to resist; only the initial resistance doesn't attract an action cost. This continues until the victim breaks the hold as above.

Hard STR DIF check
Very Hard DEX DIF check

Paralysing Touch Resist

When a character is attacked by a paralysing touch the victim can resist the attack.

Very Hard CON DIF check
(CON DIF = Defender CON - Attacker CON)

Offhand Weapon Use

Every person has a particular hand that is more co-ordinated than the other. The only exception to this is with ambidexterous races.

When using a weapon in the offhand a penalty to hit is applied because of the lack of co-ordination. The penalty inflicted is not to add the DEX base to the particular skill to find the effective skill level. This means a 10 point difference to someone with a DEX of 50.

The only way to compensate for this penalty is to develop a high base skill.

If using two weapons at once during multiple actions, the non-application of the DEX base to the offhand can actually be quite profound in its effects.

American Infantry uniform – side

Combat Equipment

Even before races gain full intelligence, they often develop weapons. Weapons are mainly used for warfare by civilised races. As technology develops, weapons become more advanced, specialised and diversified.

FIREARMS

Sidearm and rifle-sized missile weaponry was developed to harm targets at range without closing quarters where things can become more personal and deadly. Firearms become the mainstream weapons for races after industrialisation.

BALLISTIC WEAPONS

These are the type of weapons that are commonly used today. They use 'Black Powder' (gunpowder) as the propellant for their ammunition. The one big difference between the weapons used in FSpace and the weapons used today is that most of the ammunition used is caseless; it has no brass casing – instead the propellant is solid and it is all used when the round is fired. Caseless ammunition has several advantages: the rate of fire is greater, the weapon is not as prone to jamming or misfiring, the ammunition is not as susceptible to dampness, the magazine can hold more ammunition and finally there is no shell ejection port to become clogged (a common problem with cased ammunition). The only real disadvantage with caseless ammunition is that it is harder to make your own in the field. The most common weapon that uses caseless ammo today is the HK G11.

Types of Weapons

Revolver

This is a sidearm weapon that holds its ammunition in a series of chambers (normally six). After each round is fired a new round is brought into position when the chambers revolve. Revolvers generally have a greater range and a slower rate of fire than their modern counterparts the pistol family. The loading of one round of ammunition is one action unless you have a speed loader.

Pistol

Like its brother the revolver this is a sidearm weapon. The pistol, however, is a magazine-clipfed weapon and as such generally has more ammunition. They generally have a greater rate of fire and a shorter range than the revolvers. The changing of a magazine takes one action, but if you reload the magazine then this takes one action plus the number of rounds loaded.

Machine Pistol

Like the revolver and the pistol this is a sidearm weapon. The machine pistol, however, has a both a greater rate of fire and a larger magazine capacity. This weapon is semi-automatic.

SMG

The sub-machine gun is also a sidearm weapon, having both a greater rate of fire and magazine capacity than the machine pistol. This weapon is fully automatic.

Flechgun

This is a specially developed weapon developed for use in spacecraft in zero-g conditions. It uses low-energy anti-personal flechettes. They are designed for low penetration work, so that hull breaches don't occur. Predominantly used by ship crews.

Rifle

The rifle is the standard military weapon. Because of the greater range it is particularly popular with hunters. Rifles generally have a larger magazine than the pistol and can be single-shot, semi-automatic or fully automatic according to the model used. The ACR is the most highly evolved model of this concept.

Shotgun

The shotgun is a popular close-combat assault weapon. The shotgun does not fire a single round of ammunition, but rather it fires a spread of shot that scatters over a small area (unless solid shot is used). The auto-shotgun can use shot loads – the statistics for these are the same as shot loads for the normal shotgun.

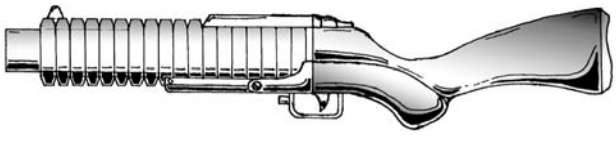
GRENADE LAUNCHERS

M-203 'Thumper'

This is a single-shot grenade launcher that is 'under-slung' on a rifle. It is a very versatile weapon as it can fire any type of grenade. It uses standard 40 mm launcher grenades and can also be used to fire mini-missiles.

Grenadier

Like the M-203 this is a grenade launcher; however, the Grenadier is a weapon in its own right and has a greater range due to its longer barrel length. This weapon cannot be underslung. It uses standard 40 mm launcher grenades or mini-missiles.



Grenadier

Auto-Grenadier

Like its brother the Grenadier this is a grenade launcher. However, the Auto-Grenadier has a slightly shorter range but also has both a greater rate of fire and magazine capacity. This weapon cannot be underslung. It uses standard 40 mm launcher grenades. Because of its magazining it cannot use mini-missiles. Instead the mini-missile launcher (MML-40) is designed to cater to this requirement. The GL-20 is a similar weapon, but handles 20 mm rounds and has a higher rate of fire. The MML-20 is similar to the MML-40 but is designed to handle 20 mm mini-missile projectiles.

Light Anti-Tank Weapon (LAW)

The LAW is a disposable weapon designed to take on light armoured targets and vehicles. It is more effective than using grenade-based munitions for penetrating armour. Heavier versions of the weapon such as the medium anti-tank weapon (MAW) are also available.

FLAME-THROWER WEAPONS

Similar to the flame-throwers of today, this fires a 'sheet' of flame. The 'modern' flame-thrower, however, has distinct differences. Firstly, it has a compressed gas tank. Napalm backpack tanks are available for differing damage requirements. Flame-thrower weaponry also began incorporating laser technology as general weaponry technology improved. The handflamer is an example, where a self-oxygenated napalm is heated by laser ignition to a near plasma state when fired.

NEEDLER WEAPONS

These weapons are similar to their ballistic cousins. They use small (usually 3 mm) metal alloy needles, which are designed to perform in a similar fashion to conventional rounds against targets. The propellant, however, is a compressed gas. Advanced technologies can compress air to such a degree that it is highly effective as a propellant. The magazines include the ammo and a compressed gas cylinder. Advanced versions of this weapon have inbuilt air compressors, with the magazines including a powercell instead of a gas cylinder. Survival models often include a solar power unit for powering the compressor.

German Infantry MAW in action

GAUSS WEAPONS

These weapons use an electromagnetic linear accelerator along the barrel to propel small (4–6 mm) alloy rounds towards the target. The magazine contains both ammunition and the powercell. These weapons are the result of eventual miniaturisation of larger 'railgun' weapons used in space and artillery weapons.

AMMUNITION TYPES

For most projectile weapons, alternative ammunition types are available. These enhance weapon performance depending on the desired use. The modifications are based on the standard solid ammunition. Gas and tranq-based rounds can have other effects depending on the type of gas or drugs used in them. A common lethal drug used for tranq is cyanide based. Ammunition types are designed for projectiles of at least 5 mm in size.

Aeroshells are versatile projectiles that have a number of interesting properties. They can be set with a variety of detonation conditions either manually (Easy Armourer task) or automatically via an attached Aeroshell Detonation Selector (2000ec, 0.1 kg). In a normal setting these projectiles have contact detonators. If selected, they can detonate by proximity with targets (1–5 m by selection), or they can be range detonated. Range information can be fed in manually (3 actions) or by a connected rangefinder. These rounds find wide usage with military forces of Northern Hemisphere countries. Aeroshells can only be used with weapons that use ammunition of at least 10 mm.

Projectile Modification Table

Type	AM	DP	AOE	Zone	Stun	Weight	Cost
AP	+2	+0	-	-	+0	x1.25	x2.5
Tr	0	1	-	-	varies(XII)	x1.0	x1.5
DS	+4	+0	-	-	+1	x1.25	x3.5
DADS	+7	+0	-	-	+1	x0.9	x5.0
Gas	0	1	2	-	varies(XII)	x1.0	x2.0
HE	+0	+4	2	-	+1	x1.0	x2.5
HEAP	+6	+1	1	-	+1	x1.2	x5.0
PA	+8	+3	1	-	+2	x1.1	x8.0
FA	+12	+5	3	-	+3	x1.2	x30.0
Flech	3	2	-	1	I	x0.8	x3.0
Tr Flech	0	0	-	1	varies(XII)	x0.7	x3.5

Ammunition Type	Abbreviation
Armour Piercing	AP
Tranquillizer	Tr
Discarding Sabot	DS
Duralloy DS	DADS
High Explosive	HE
Plasma Aeroshell	PA
Fusion Aeroshell	FA

RADIANCE FIELD WEAPONRY

Certain weapons sold by the Aratani work on an unknown principle called radiance fields. The SPS-2 is a common example sold in Human space. Other kinds are sold within the Coalition. They project a bold of energy that travels towards the target. This unknown form of energy emits monochromatic light as it travels. The frequency of this light seems to vary according to the strength of the weapon used. However, emitted light from such weapons is blue in coloration from all observations. Scientists from various nations on Earth are studying these weapons to ascertain the scientific principles on which they operate. However, this has been hindered by the method of construction of weapons, which seems to be based partly on molecular engineering and is hard to analyse. The Aratani are the only known manufacturers of such devices in known space.

LASER WEAPONRY

Laser weapons are produced in a variety of formats depending on the conditions of use the weapons are intended for. Lasers predominantly work on the principle of creating a high-energy pulse of coherent electromagnetic radiation (i.e. light) which is directed at the target. They achieve this by using stored electricity to excite the substance in an extreme energy coherent radiation emitter (commonly called laser diodes). Lasers are dominantly designed to emit on only one wavelength of the electromagnetic spectrum.

So-called 'beam' lasers emit laser light in wavelength bands of either UV (ultraviolet) or IR (infrared), which includes human visual colours. Phase burners operate on the principle behind conventional microwave ovens, except that the power output used against a target is significantly higher. Sabre lasers use x-ray wavelengths, while grasers use gamma rays. Sabre laser weapons are the current cutting edge in Human military lasers for infantry use. However, beam laser-based weapons are still the most commonly used. Graser-based weapons are commonly used by the Coalition Army Corp, and are produced by the Andorians.

The wavelengths set on a laser weapon are designed for optimal use within certain atmospheric conditions. Modifications such as changing the wavelength settings for marine conditions can be done by qualified technicians or barrel-fitted wavelength converters.

ENERGY WEAPONS

Energy weapons come in two basic types that are used for atmospheric work. These types are plasma and fusion weapons. They are similar in operation, and work by using lasers to heat deuterium (an isotope of hydrogen) while in magnetic containment. A plasma gun heats the deuterium until it reaches a super-temperature gas, referred to as a plasma. A fusion weapon works the same way, but maintains the plasma at high pressure until the deuterium begins to fuse, giving off greater quantities of energy.

Early plasma weapons rely on projectiles that use plasma-based explosives. These weapons have gradually dropped in minimum size from large missile systems to the point where they fit in projectiles of 10 mm rifle and pistol ammunition. These kinds of munitions greatly enhance the capabilities of ballistic weapons.

The plasma holdout and the PR series plasma guns use cartridge-based plasma systems. Cartridge systems resemble large-calibre ballistic systems with a low-strength linear accelerator along the barrel similar to gauss weapons. A cartridge includes a deuterium sphere, ignition lasers, magnetic field generators and a power source. The deuterium plasma is created within the cartridge. The plasma then reaches a point where it overcomes containment and vaporises the cartridge, using it as plasma mass which is ejected down the barrel by the linear accelerator.

Beam-style plasma weapons don't use disposable plasma generators, and are built into the weapon for continuous use. These weapons tend to be smaller and lighter, with ammo clips containing only deuterium and a power cell. Beam-style weapons are rare at the infantry scale, being advanced technology. ARES on Mars and one or two German companies are the only producers of such weapons. The Stotatl are known to use beam-style plasma weapons extensively. The Aratani and Andorians are also known to produce such weapons, but seem able to produce fusion-grade weaponry

GRENADES

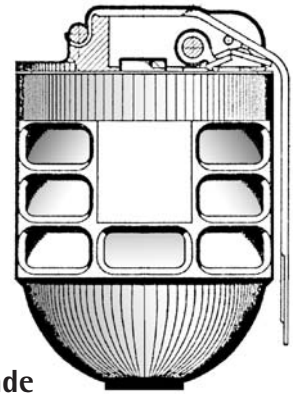
These types of weapon were developed to deliver high-class firepower at ranges that many firearms cannot match. Grenade launchers were invented later to increase the range of these weapons, which are otherwise just thrown.

Grenade Warheads

Sonic grenades use ultrasonic frequencies that are inaudible outside the area of effect (AOE). Sonic grenades can be recharged at half their original cost. Smoke grenades provide 10 rounds of obscuration equivalent to partial darkness. Flash grenades provide a blinding flash that affects the retina fairly badly for 4 rounds with the effects of full blindness. Prismatic grenades provide 10 rounds of cover as partial darkness, and affects lasers, giving an AR of 3 against them. Thermite grenades rely on a burning substance to defeat armoured targets. This burning effect is similar to napalm flame-throwers. However, the effects last for 3 rounds.

Hand Grenades

Most hand grenades use 'always impact' fuses (Red Devils) which explode on impact with the target on the same turn they are thrown. Other grenades use various delay timers from 0.1 s to 10 s depending on requirements. A variable timer is becoming standard on some military grenades, and can be set to 0.1 s or from 1 s to 5 s in 1 s intervals. A special firing device can often be fitted to compatible grenades, allowing them to be activated by various methods. These are typically tripwire and pressure methods. These devices and the accessories normally cost 20ec. Twenty-millimetre-based hand grenades are not available; these are for launcher grenade systems.



Typical Hand Grenade

Rifle Grenades

These grenades are specially made for use in clipping onto the barrel of a projectile rifle (ballistic or gauss – not needler or flech). They are propelled by firing a normal round of ammunition (other rounds will create disastrous results). The range of these weapons is half the range of the weapon firing the grenade. These grenades cost 10ec more than standard 40 mm rounds. An adapter is needed for the barrel end for firing these grenades. They cost 50ec.

Launcher Grenades

Grenade-type munitions can also be launched from various dedicated weapon systems such as the Grenadier or the M-203. They come in various configurations for use. These grenades cost the same amount as hand grenades but cannot be used as hand grenades without significant modification. The range of these weapons varies according to the length and type of barrelling used by the launching weapon. Airburst warheads are available but cost 50% more. These are either preset using a range setter (50ec/0.1 kg) or by the weapon changing the setting according to range-finding information. This can only be done by weapons such as the CGR or GL-20 (with rangefinder). Airburst ammo will detonate on impact if the set range is not reached because of obstructions.

Rifle and launcher grenades normally have a minimum distance after firing before arming for safety reasons. This is normally 2 m and is set by the manufacturer. However, a Hard Armourer or Demolitions skill task can remove this safety feature. Some manufacturers make their devices without this feature but normally charge a premium of an extra 10%.

Mini-Missiles

Grenade-based weapons are extremely useful in delivering heavier firepower than normal projectile rifles. However, they are limited with respect to range. Special propelled grenades are available for use by infantry as an alternative to light disposable systems. These rocket-assisted munitions (RAM) must be used in weapons which can accommodate their longer length, such as the M-203 or Grenadier. They cannot be used in the Auto-Grenadier or the GL-20 because their magazines cannot handle the longer rounds. Specialised weapons such as the MML-40 or MML-20 are designed for this use. RAM grenades have a range of 1 km.

Later developments allow these mini-missiles to contain self-guidance systems to track and hit a target. These homing systems use IR sensors to track targets. The homing system table shows the additional cost for the homing system and its DM to hit which is used to effect the hit roll. To use these missiles, a PIN targeting unit must be mounted on the weapon of use.

In the last decade ARES has developed a better propulsion system using gravitic systems. This system gives these rounds a 10 km range and cost 200% more than the standard warhead. These rounds are referred to as GRAM or gravitic assisted munitions.

40 mm Grenade Table

Type	AM	DP	Stun	AOE	Cost
Sonic Grade 1	0	0	IV	5	50
Sonic Grade 2	0	0	IX	5	60
Sonic Grade 3	0	0	IV	10	80
Sonic Grade 4	0	0	IX	10	100
HE	5	8	V	10	60
HEAP	10	6	V	2	100
FRAG	6	6	V	20	80
CONC	2	3	VII	20	70
Thermite	10	4	V	1	100
Smoke Grenade	-	-	-	10	20
Flash Grenade	-	-	-	10	40
Prismatic Grenade	-	-	-	5	100

20 mm Grenade Table

Type	AM	DP	Stun	AOE	Zone	Cost
DS	10	10	V	-	-	10
Frag	6	6	V	10	-	40
Flech	3	2	II	-	1	5
PA	14	13	VII	1	-	40

Homing System

Grade	DM	Cost
1	-10	40
2	-20	80
3	-40	160
4	-80	400

Weight Table

Size	Type	Weight
40 mm	hand	0.2 kg
40 mm	rifle	0.3 kg
40 mm	launcher	0.3 kg
40 mm	mini-missile	0.4 kg
20 mm	launcher	0.1 kg
20 mm	mini-missile	0.15 kg

EXPLOSIVES

Explosives are not directly used as a combat device. Instead they are used for demolition work or for traps, which often involve tripwires. Claymores are specifically designed fragmentation devices which throw metal fragments mainly in one direction for use in traps. Treat claymores as having a small AOE, while they also have a zone-type explosion with a range of 10 m and a zone of 3 m. The claymore is detonated by a tripwire, but can be triggered remotely using a tripwire cable.

The other explosives shown on the table are mainly used in demolition work. They are optimised explosives designed to cause significant damage to structures and the like. The ARES Blockbuster is a plasma-based explosive that has been developed to cater for heavier demolition jobs against stronger structures

without having to resort to larger conventional explosives. These demolition explosives can be detonated by tripwire, timer, radio detonation or some other method. They are normally equipped to be detonated by tripwire or timer (up to 10 hours). Radio detonation units cost 20ec and weigh 0.05 kg for the radio unit.

Explosives Table

Type	AM	DP	Stun	AOE	Cost	Weight
Claymores	6	6	V	2*	100	0.3
Demo charge	8	8	V	10	100	0.5
Satchel charge	8	20	VI	15	400	1.5
ARES Blockbuster	15	20	VII	10	1000	1.0

WEAPON ACCESSORIES

Weapon users often want increased performance from their weapons. Many different kinds of accessories have been developed to cater for this need, without the users having to resort to buying better weapons that still do not quite fulfill their requirements.

Item	Price	Weight
Bayonet	20ec	0.3 kg
Barrel extender	300ec	1.0 kg
Electronic Imager Sight	1000ec	0.3 kg
Flash suppressor	150ec	0.6 kg
Green laser modifications	+30% cost	
Gun cam	100ec	0.1 kg
Magazine Loader	300ec	0.3 kg
Magnum Module	5000ec	0.5 kg
PIN targeting	1000ec	0.2 kg
Rangefinder	500ec	0.1 kg
Shoulder Stock	100ec	0.8 kg
Sig ID	10,000ec	0.1 kg
Silencer	100ec	0.3 kg
Space proofing	+20% cost	
Speed Loader	150ec	0.2 kg
Stabiliser	2000ec	0.6kg
Starlight Imager Sight	4000ec	0.3 kg
Telescopic Sight	100ec	0.2 kg
Thermographic Imager Sight	3000ec	0.4 kg
Waterproofing	+20% cost	

Bayonet

Bayonets are dagger-type weapons, which when fitted onto the end of a rifle turn it into a spear-like weapon for close-quarters combat.

Barrel extender

By attaching a shoulder stock and an extended barrel to projectile handguns, they become rifle-type weapons, giving better range performance (double maximum range and use the rifle range difficulties).

Electronic Imager Sight

Electronic sights have various features, some of which are obvious, and others are discussed elsewhere. However, they provide a -20 DM to hit when used to hit targets over 100 m away.

Flash suppressor

Flash suppressors are designed to lower the visibility of ballistic-type weapons when they are fired. This reduces the visibility of the firer, especially when operating in night conditions.

Green laser modifications

Most atmospheric laser systems are unsuitable for marine work and only operate to an effective range one-third that of their atmospheric performance. Range-finding and PIN targeting systems will not work unless they have been modified for green frequency laser light. Laser weapons suffer from shorter range (1/3) unless they have been modified for green laser frequencies. This modification system involves either a frequency adaptor or physical modifications to the device depending on the device in question.

Gun cam

This camera device is normally found attached to a rifle. It is used for a variety of purposes. Hunters and assassins use it to confirm that the target was hit properly, while in the military they are connected to AV comlink systems to provide real-time combat footage for command posts.

Magazine Loader

This is used to auto-load an empty magazine with new projectiles. The device itself takes one full round to load a magazine and has a capacity of about 40 rounds of 9 mm ammunition. It can be used with differing ammunition types and sizes (3 mm to 14 mm), but the internal capacity will change according to ammo size.

Typical Aratani Army Infantry (indoor uniform)

Magnum Module

The Magnum module is similar to a PIN targeting module but gives a -50 DM to hit and can be seen up to 100 m without a sight. It works on the same principle, but projects three concentric rings of arcs onto the target. The spacing of these arcs helps a marksman guess the hit locality and use a weapon with more accuracy. This unit comes standard with a built-in rangefinder. Non-visual light models are available, but a cost of 10,000ec.

PIN targeting

PIN targeting modules put a visible dot on the target to help aiming, giving a -20 DM on the to hit roll. However, a sight is needed to see the dot on a target if it is over 50 m away. The targeting dot is projected using a visible laser. Some military laser designators have an inbuilt rangefinder as well and typically cost 1200ec (includes waterproofing). Some PIN units use non-visual light lasers in either the infrared or ultraviolet. This means the intended target is often not aware they are being targeted. However, it does mean that a thermographic or ultravision system is required to see the dot. These units typically cost 1500ec.

Rangefinder

Rangefinders are used to find the range of the intended target. They do this by using a laser beam that is bounced off the target. The device then displays the range of the target in metres. These devices are invaluable in aiding a marksman in determining how difficult it will be to hit a target.

Shoulder Stock

By attaching a shoulder stock and an extended barrel to projectile handguns, they become rifle-type weapons giving better range performance (double maximum range and use the rifle range difficulties).

Sig ID

This is a special electronic device which is fitted to the grip of a weapon and is used to identify the owner/user by using a metabolic scanner. Non-authorised users are unable to get the weapon to function without tampering with the weapon or getting the owner to authorise them.

Silencer

Silencers are designed to lower the sound created when projectile weapons are fired. This is mainly important for military snipers or assassins and hitmen of various types.

Space proofing

Most weapons have problems operating in vacuum (or hostile) conditions. They must by pressure-sealed for use. With conventional projectile weapons, self-oxygenated ammunition (See Marine section) is of significant advantage, or else effective range is limited to 20% of normal.

Speed Loader

This device is designed to quickly reload (1 action) a revolver. It holds 24 rounds of ammo internally for reloading purposes.

Stabiliser

Stabilisers are used to dampen the recoil of a weapon while it is firing in order to improve the firer's aiming ability. Stabilisers on rifle-sized weapons provide a -10 DM to hit. Lasers are already considered to be stabilised because of their minimal recoil. When a stabiliser is attached to certain heavy weapons it allows someone in servo-powered armour to use it in a similar fashion to using a rifle. However, when used like this a stabiliser provides no bonus to hit.

Starlight Imager Sight

Starlight imagers are similar to electronic sights, but are designed to amplify light to provide 'daylight'-quality images. To do this it requires some form of illumination. A starry night or a crescent moon is sufficient for illumination purposes. However, brighter illumination makes this unit ineffective. It provides a -20 DM to hit when used to hit targets over 100 m away, when it can provide a suitable image.

Telescopic Sight

Telescopic sights are less sophisticated versions of electronic sights. However, they provide the normal -20 DM to hit when used to hit targets over 100 m away. The one disadvantage with this system is that it needs to be manually focused for the range of the objects being viewed (Hard Gun or Mod Sensors, 2 actions). If it is not focused properly then the hit bonus does not apply, nor can the user see a PIN dot.

Thermographic Imager Sight

This system is similar to electronic sights but views the infrared spectrum instead. It is designed to pick up heat images of intended targets. It works best at night without the IR presence of sunlight. However, in certain conditions it can be helpful in identifying concealed targets in daytime. It provides a -20 DM to hit when used to hit targets over 100 m away if IR images of the target are available.

Waterproofing

Many conventional weapons will require special waterproofing in order to operate in a marine environment. If they are combustion-based projectile weapons they will also need oxygenated ammunition.

Archaic Missile Weapons

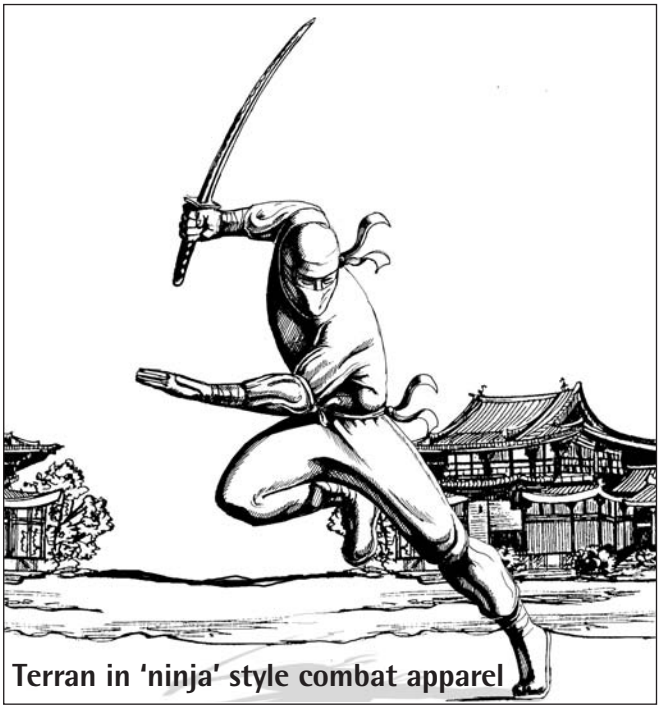
In primitive times many kinds of ranged weapons were developed as methods of technology slowly improved. These range from throwing objects through to using tensile properties in weapons such as crossbows. Crossbows take longer to reload than most weapons. Consider the action cost to reload a crossbow as being 2 actions.

Name	Class	Range	AM	DP	Stun
Throwing Knife	T	STR	1	2	I
Shuriken	T	STR	3	2	II
Thrown Spear	T	2STR	2	4	III
Slingshot	Tn	STR	0	2	I
Crossbow	Tn	2STR	3	4	III
Shortbow	Tn	2STR	1	3	II
Longbow	Tn	3STR	2	5	III

Name	Cost	Ammo Cost	Weight	Ammo Weight
Throwing Knife	50	-	0.2	-
Shuriken	80	-	0.1	-
Thrown Spear	100	-	2.0	-
Slingshot	30	-	0.5	0.1
Crossbow	300	8	3.5	0.1
Shortbow	200	5	2.0	0.1
Longbow	300	10	3.0	0.2

ARMED WEAPONRY

Close in quarters combat has in primitive times often involved the use of hand-held weapons to improve damage capabilities over normal unarmed combat, which traditionally requires a high degree of training to be effective. The stun baton works by using electricity to stun an opponent. It has 10 charges. Clips for the baton cost 20ec.



Terran in 'ninja' style combat apparel

Name	Diff	Reach	AM	DP	Stun
club	Easy	0	0	2	III
Street blade	Mod	0	0	2	I
Combat/Survival Knife	Mod	0	2	3	II
Short sword	Mod	0	1	4	II
Rapier	Mod	1	2	4	II
Long sword	Mod	1	2	5	III
Broad sword	Hard	1	3	6	IV
Katana	Mod	1	3	4	II
Spear	Mod	2	1	4	II
Pike	Mod	3	1	4	II
Battle-axe	Hard	0	2	7	IV
Sai	Hard	0	2	2	I
Flail	Hard	1	1	5	IV
Stun Baton	Mod	0	2	2	XIII

Name	Cost	Weight
club	10	1.5
Street blade	30	0.1
Combat/Survival Knife	100	0.3
Short sword	100	3.0
Rapier	150	3.0
Long sword	200	5.0
Broad sword	350	7.0
Katana	400	2.0
Spear	100	2.0
Pike	150	3.0
Battle-axe	350	7.0
Sai	200	0.2
Flail	175	3.5
Stun Baton	500	1.0

Heavy Weapons

These types of weapon are designed mainly to be mounted on vehicles. Some are designed for use against infantry while others are designed for use against other vehicles. These weapons are not the exclusive domain of vehicles; they can also be found mounted on bunkers or as stand-alone field artillery or support weapons.

Many of these weapons are designed to be crew-served. That means that for effective use more than one operator is used to reduce the action costs of operation. This is normally done by having a gunner and a loader; reloading tasks are conducted by the loader, leaving the gunner to concentrate on firing actions. In fact, some of these weapons, such as the MMG and HMG, are used as infantry support weapons.

The heavy anti-tank weapon (HAW) is similar to the lighter versions, but its range potential makes it difficult for the user to hit the target. That is why these disposable units come with an inbuilt target designator for use with the homing system built into the missile this system fires. In many respects it functions as a homing mini-missile with a Grade 4 homing system.

Heavy Weapons skill is used to fire these weapons. They have their own range difficulties, which differ from conventional firearms in giving better accuracy at range, but are typically

Aronhi honour knife

harder at point blank ranges due to the nature of their handling and operation. Other aspects of firing and damage resolution remain the same.

Type	Hard	Mod	Hard	VHard	VH2
Hvy1	0-5	6-50	51-250	251-500	501-5 km
Hvy2	0-25	26-250	251-500	501-5 km	6k-19 km

When a stabiliser is attached to certain heavy weapons it allows someone in servo-powered armour to use it in a similar fashion to using a rifle. However, when used like this a stabiliser provides no bonus to hit. This can be done with the MMG, HMG and the minigun. Normal carrying capacity and exhaustion restrictions apply. Hitting with these weapons can be used under Gun skill rather than Heavy Weapons and the Rifle range difficulties apply instead of the Heavy Weapon ones.

ARMOUR

In modern combat situations armour protection becomes very valuable. Armour comes in a variety of designs and styles. The armour set table shows a selection of complete armour sets ready to buy off the shelf with all the extras. The armour location table allows the buyer to select the desired armour protection for each hit location.

Combat armour and battle armour sets are designed for operations in hostile environments. To achieve this, these suits are fully environmentally sealed and are equipped with 48 hour life-support systems. All these suits are also equipped with CIS sensors for better visibility purposes, and have inbuilt computers equivalent to portacomps for the purposes of running specialised military-oriented programs. All suits are equipped with an AV comlink. Elite battle armour (and heavy EBA) is also equipped with neural links that allow direct linkage to the computer, communicator, CIS and a surface tactile unit (i.e. touch). Battle armour suits are equipped with joint servos and electro-responsive pseudo-muscle fibres to give greater physical strength and endurance. Consult the servo table for the modifications. Assault armour is similar but is a lot tougher and is equipped with NIS and hearing-enhancement sensors. The weight of servoed armour is ignored in the carrying capacity when it is worn and active.

Armour Set Table

Type	AR	Coverage	Cost	Weight
CA	7	Full	50,000	10.0 kg
ECA	8	Full	60,000	12.0 kg
BA	9	Full	100,000	15.0 kg
EBA	10	Full	250,000	20.0 kg
Hvy EBA	15	Full	400,000	40.0 kg
AA	20	Full	1,000,000	100.0 kg
Flk	3/5	Torso	300/500	1.0/2.0
PBSuit	5	Full*	2000	3.0 kg**

Type	Abbreviation
Combat Armour	CA
Elite Combat Armour	ECA
Battle Armour	BA
Elite Battle Armour	EBA
Heavy EBA	Hvy EBA
Assault Armour	AA
Flak Jacket	Flk
Police Body Suit	PBSuit

* except head

** counted as clothing so no CC cost

Servo Table

Type	STR	END
Battle Armour	x2	x10
EBA	x3	x20
Heavy EBA	x4	x30
Assault Armour	x8	x60

Armour Table

Location Cost/Weight

AR	Torso	Head	Leg	Arm	Type
1	100/1	60/0.5	80/1	40/1	Leather
2	200/1	120/0.5	160/1	80/1	
3	400/1	240/1	320/1	160/1	Ballistic cloth
4	600/1	360/1	480/1	240/1	
5	1000/2	600/1	800/1	400/1	Steel reinforced fibre
6	5000/4	3000/1	4000/2	2000/1	Moulded plasteel
7	10,000/6	6000/2	8000/2	4000/1	
8	20,000/8	12,000/2	16,000/2	8000/2	

SHIELDS

In ancient times the concept of shields was developed as a means of carrying around cost-effective low-weight armour for defence. Standard shields are used as a Defend manoeuvre, and if successful they provide armour protection. The concept of large shields is to cover the whole facing of an individual so that little effort was needed for protection. Modern riot shields are normally transparent for vision purposes, and thus only provide AR 1 versus laser weaponry.

Shield Table

Type	AR	Cost	Weight
Wooden shield	1	100	2.0
Steel shield	4	500	5.0
Duralloy shield	8	10,000	3.0
Large riot shield	3	500	5.0

Firearm Performance Tables

Ballistic Weapons

Name	Class	Range	AM	DP	ROF	Burst	Auto	Stun	Ammo
Revolver 5mm	H	50m	0	4	1	-	-	I	6
Revolver 7mm	H	250m	0	5	1	-	-	II	6
Revolver 9mm	H	250m	1	6	1	-	-	III	6
Magnum Revolver .44	H	250m	1	7	1	-	-	IV	6
Pistol 5mm	H	50m	0	4	1	-	-	I	6
Autopistol 7mm	H	100m	0	5	2	-	-	II	15
Autopistol 9mm	H	250m	1	6	2	-	-	III	15
Autopistol 9mm officers	H	250m	2	8	2	-	-	IV	8
Autopistol .48 Holdout	H	50m	2	10	1	-	-	V	5
Machine Pistol 9mm	H	100m	0	6	3	3	-	II	20
SMG 9mm	H	100m	1	6	3	3	15	II	30
Shotgun -solid	R	50m	3	10	1	-	-	V	10
Shotgun -shot	R	50m	0	4	1	-	-	II	10
Autoshotgun (solid)	R	60m	3	10	2	2	-	V	20
Carbine 7mm	R	500m	0	6	2	-	-	III	10
Rifle 7mm	R	500m	1	6	1	-	-	III	10
Rifle 9mm	R	500m	2	7	1	-	-	IV	10
Hunting rifle 14mm	R	250m	2	9	1	-	-	V	2
.5 Sniper Rifle	R	800m	6	10	2	-	-	V	5
Autorifle 7mm	R	500m	1	6	3	3	-	III	20
Assault rifle 5mm	R	300m	2	6	3	3	15	III	30
Assault rifle 7mm	R	400m	2	7	3	3	15	IV	30
Combat Rifle	R	500m	3	7	3	3	15	IV	60
ACR 5mm	R	500m	4	8	3	4	15	V	30
ACR 9mm	R	600m	5	9	3	4	18	V	30
LMG 7mm	R	500m	2	8	4	5	21	V	200

NOTE: Shotgun shot has a Zone of 1m

Gauss Weapons

Name	Class	Range	AM	DP	ROF	Burst	Auto	Stun	Ammo
SMG 5mm	H	200m	3	7	5	5	30	IV	80
Rifle 5mm	R	600m	6	8	4	4	18	V	60
LMG 5mm	R	600m	6	8	4	5	24	V	200
Support rifle 10mm	R	800m	8	12	3	3	15	VI	30

Grenade launchers and associated weapons

Name	Class	Range	AM	DP	ROF	Burst	AOE	Zone	Stun	Ammo
Grenadier	R	350m	mun	mun	1	-	mun	mun	mun	1
Auto Grenadier	R	300m	mun	mun	2	-	mun	mun	mun	10
M-203 'Thumper'	R	200m	mun	mun	1	-	mun	mun	mun	1
GL-20	R	350m	mun	mun	2	2	mun	mun	mun	20
MML-20	R	350m	mun	mun	2	2	mun	mun	mun	15
MML-40	R	300m	mun	mun	2	-	mun	mun	mun	10
LAW 66mm	R	400m	35	20	1	-	10	-	VII	1
MAW 88mm	R	800m	45	30	1	-	10	-	VIII	1

Other Projectile Weapons

Name	Class	Range	AM	DP	ROF	Burst	Auto	Stun	Ammo
Hypogun	H	50m	0	1	2	-	-	XIII	50
Taser	H	50m	0	2	1	-	-	XIV	1
Needler pistol	H	250m	2	6	3	4	18	III	40
Needler rifle	R	500m	5	8	4	4	18	IV	60

Laser Weapons

Name	Class	Range	AM	DP	ROF	Stun	Ammo
Beam Pistol	H	250m	4	6	1	IV	10
Phase Burner Pistol	H	500m	6	6	1	V	10
Saber Pistol	H	500m	8	6	1	VI	10
Beam Rifle	R	500m	8	10	1	V	25
Phase Burner Rifle	R	1km	10	10	1	VI	40
Saber Rifle	R	1km	12	10	1	VI	50

Energy Weapons

Name	Class	Range	AM	DP	ROF	Zone	Stun	Ammo
Plasma Holdout	H	200m	30	12	1	1	VI	1
PR-1	R	250m	20	10	1	1	VI	10
Heavy PR-2a	R	400m	35	15	1	1	VII	15

Other weapons

Name	Class	Range	AM	DP	ROF	Zone	Stun	Ammo
Sonic Stun Pistol	H	50m	2	-	1	-	XI	20
Handflamer	H	50m	4	8	1	1	IV	20
Sonic Carbine	R	100m	2	-	1	3	XII	10
Flame-thrower	R	50m	3	4	1	3	IV	5

Heavy Weapons

Name	Class	Range	AM	DP	ROF	Burst	Auto	AOE	Zone	Stun	Ammo
MMG	Hvy1	550m	4	9	4	5	21	-	-	V	200
HMG	Hvy1	600m	6	10	4	5	21	-	-	V	200
HAW	Hvy2	2km	65	35	1	-	-	10	-	X	1
Minigun	Hvy1	550m	6	10	5	6	39	-	-	V	1000
DK-C1 Snub chaingun	Hvy2	800m	15	10	5	5	30	-	-	VI	1000
Railgun	Hvy2	5km	25	20	3	3	15	-	-	VIII	1000
AVL-1 laser	Hvy2	10km	20	12	2	-	-	-	-	VI	1000
DK-P1 Plasmacannon	Hvy2	5km	45	50	1	-	-	-	1	XIV	1000
DK-P2 Plasmacannon	Hvy2	8km	70	60	1	-	-	-	1	XV	1000

Thorn Gauss SMG

Firearm Price & Weight Tables

Ballistic Weapons

Name	Cost	Ammo Cost	Weight	Ammo Weight
Revolver 5mm	100	3	0.3	0.05
Revolver 7mm	125	4	0.6	0.07
Revolver 9mm	150	5	0.9	0.1
Magnum Revolver .44	300	8	1.2	0.12
Autopistol 5mm	500	20	0.2	0.05
Autopistol 7mm	150	8	0.5	0.2
Autopistol 9mm	200	10	0.7	0.25
Autopistol 9mm officers	500	20	1.0	0.3
Autopistol .48 Holdout	800	40	1.5	0.4
Machine Pistol 9mm	500	20	0.8	0.4
SMG 9mm	500	20	2.5	0.5
Shotgun	150	10	3.7	0.75
Autoshotgun	500	25	4.0	1.5
Carbine 7mm	300	10	3.0	0.12
Rifle 7mm	500	20	4.0	0.5
Rifle 9mm	1000	40	5.0	0.8
Hunting Rifle 13mm	2000	60	6.0	1.5
.5 Sniper Rifle	3000	100	6.0	1.5
Autorifle 7m	1000	40	5.0	1.0
Assault Rifle 5mm	400	20	3.0	0.6
Assault Rifle 7mm	500	30	4.0	1.6
Combat Rifle	800	100	3.0	0.8
ACR 5mm	1000	80	3.0	1.0
ACR 9mm	1400	100	3.5	1.5
LMG 7mm	1250	200	5.5	5.0

Gauss Weapons

Name	Cost	Ammo Cost	Weight	Ammo Weight
SMG 5mm	1500	160	2.0	0.5
Rifle 5mm	1800	120	2.5	0.4
LMG 5mm	2200	400	3.5	1.4
Support rifle 10mm	2500	160	3.0	0.5

Grenade launchers and associated weapons

Name	Cost	Ammo Cost	Weight	Ammo Weight
Grenadier	600	mun	2.0	mun
Auto Grenadier	1350	mun*10	2.5	mun*10
M-203 'Thumper'	550	mun	1.0	mun
GL-20	1400	mun*20	2.5	mun*20
MML-20	1500	mun*15	2.5	mun*15
MML-40	1800	mun*10	3.0	mun*10
LAW 66mm	1000	-	3.0	-
MAW	2500	-	5.0	-

Other Projectile Weapons

Name	Cost	Ammo Cost	Weight	Ammo Weight
Hypogun	600	60	0.3	0.5
Taser	1000	-	0.95	-
Needler Pistol	2000	60	0.6	0.1
Needler Rifle	3000	80	2.0	0.5

Laser Weapons

Name	Cost	Ammo Cost	Weight	Ammo Weight
Beam Pistol	2000	500	1.0	0.4
Phase Burner Pistol	4000	1000	0.8	0.3
Saber Pistol	8000	2000	0.6	0.2
Beam rifle	3500	1000	4.0	1.5
Phase Burner Rifle	12,000	2000	3.5	1.0
Saber Rifle	25,000	5000	3.0	0.5

Energy Weapons

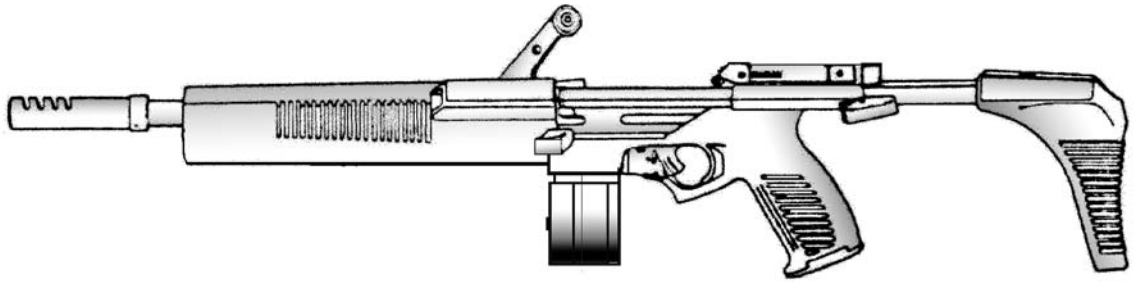
Name	Cost	Ammo Cost	Weight	Ammo Weight
Plasma Holdout	9000	100	2.0	1.0
PR-1	25,000	1000	4.0	10.0
Heavy PR-2a	55,000	1500	5.0	15.0

Other weapons

Name	Cost	Ammo Cost	Weight	Ammo Weight
Sonic Stun Pistol	2000	1000	2.0	1.0
Handflamer	2500	1000	1.0	1.0
Sonic Carbine	3500	1000	4.0	1.0
Flamethrower	700	300	2.5	0.5

Heavy Weapons

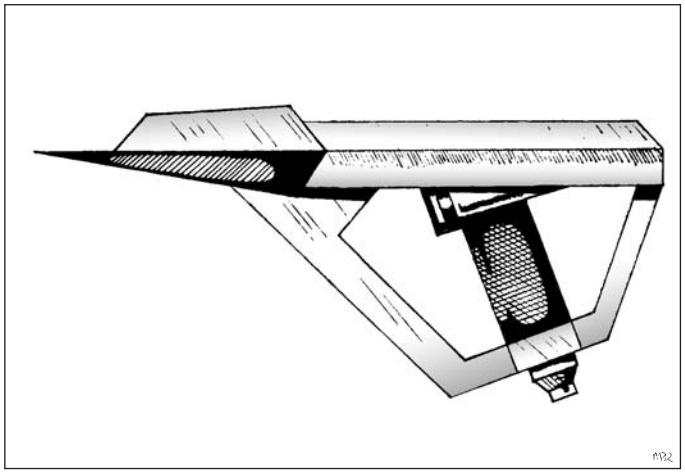
Name	Cost	Ammo Cost	Weight	Ammo Weight
MMG	2500	300	10.0	10.0
HMG	3500	500	15.0	20.0
HAW	5000	-	10.0	-
Minigun	5000	2500	10.0	100.0
DK-C1 Snub chaingun	10,000	5000	200.0	200.0
Railgun	20,000	10,000	500.0	300.0
AVL-1 laser	15,000	10,000	500.0	100.0
DK-P1 Plasmacannon	30,000	10,000	500.0	200.0
DK-P2 Plasmacannon	45,000	20,000	1 ton	500.0



Thorn Gauss 10mm Suport Rifle

LP–10

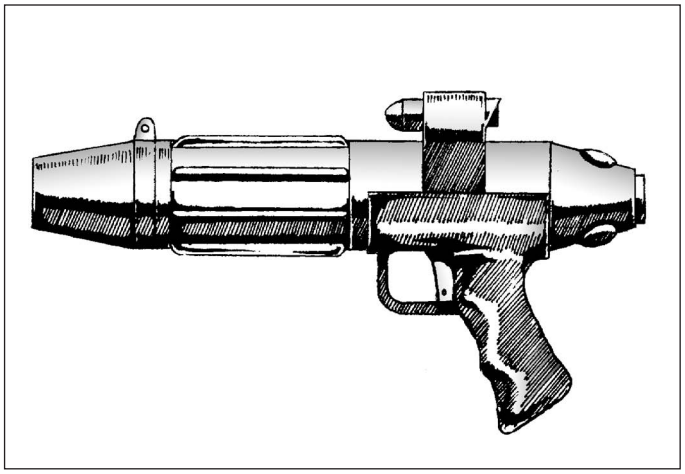
Company:	**Armington**
Cost:	**3000**
Ammo Cost:	**1000**
Weight:	**1.0**
Ammo Weight:	**0.5**
Class	**Pistol**
Range	**500 m**
AM	**4**
DP	**6**
Stun	**IV**
ROF	**1**
Ammo	**80**



The LP-10 is a pistol version of the larger LC-10. In most respects its features are the same as the LC-10. However, Armington don't usually include a sight in the package. The LP-10 uses the same powercell as the LC-10. This means that the LP-10 has a large number of shots available to it. Because of this and its other features, the LP-10 is gradually becoming the common service weapon within the Space Branch of the Royal Marines. It is widely used as a secondary sidearm within the armies of the UK, Canada, Ireland, Norway and India. It is also a common weapon for shipboard security personnel. In this role the penetration ability is greatly reduced (AM 2) to reduce hull penetration. This modification is done by a qualified technician. Armington is planning to release future LP-10s with a selector switch for this operating mode for generating additional sales.

Boltgun

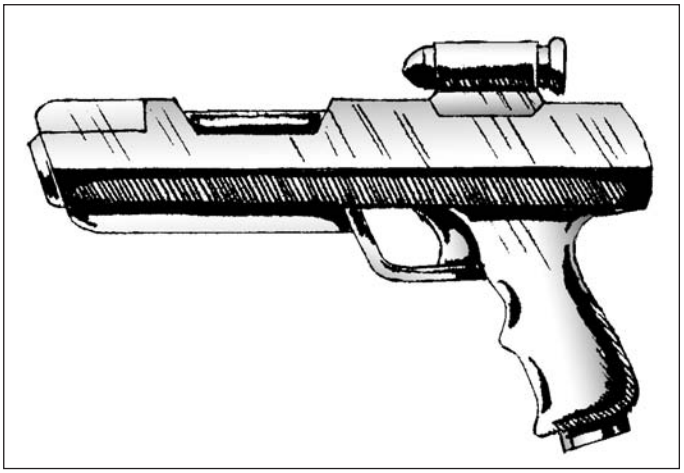
Company:	**ARES**
Cost:	**50,000**
Ammo Cost:	**15,000**
Weight:	**4.0**
Ammo Weight:	**1.0**
Class	**Pistol**
Range	**500 m**
AM	**20**
DP	**20**
Stun	**VIII**
ROF	**1**
Zone	**1**
Ammo	**10**



The Boltgun is a Martian weapon produced by the Arms Division of the ARES Development Corporation. The gun was first fielded during the Martian Wars of 2130–2134. It proved to be an effective 'beam'-style plasma gun against American personal armour. The weapon has since been upgraded to its current performance. It sees extensive use in the hands of both the Martian Rangers and corporate security forces. Limited numbers have been sold to American, French and Ukranian military forces. The weapon normally includes a range finder and PIN designator. Rifle-sized versions of this weapon are also in production, with greater range capacity and larger ammunition supply.

SPS-2

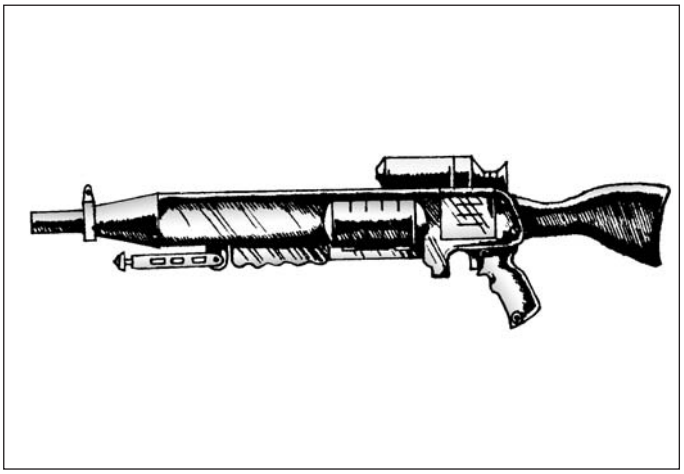
Company:	Striker Industries
Cost:	500
Ammo Cost:	100
Weight:	0.4
Ammo Weight:	0.2
Class	Pistol
Range	250 m
AM	1
DP	-
Stun	XIII
ROF	1
Ammo	20



The SPS-2 is commonly called a police issue stunner. It works by the use of radiance fields whose principle is not known to Terran scientists at present. However, Firestorm Trading is marketing them on Earth as the perfect non-lethal weapon. The weapon has become the standard service police weapon on Mars, as well as in Australia and New Zealand. The powercell can be recharged in eight hours using a mains adaptor sold with the gun. Similar weapons are being used by Striker Security personnel accompanying Firestorm trade missions. The SPS-2 is finished in the polished black metal typical of Striker Industries products. Like most SIL products it is fully environment sealed.

Pulse Rifle

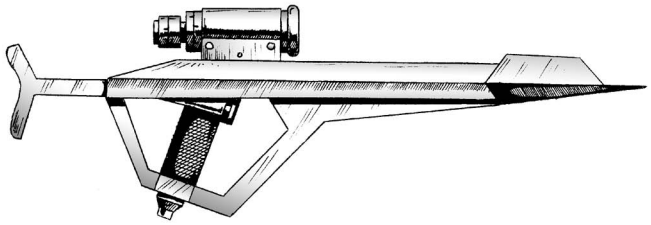
Company:	Striker Industries
Cost:	100,000
Ammo Cost:	5000
Weight:	3.0
Ammo Weight:	2.0
Class	Rifle
Range	3.1 km
AM	40
DP	20
Stun	VII
ROF	2
Ammo	100



The pulse rifle is another weapon marketed by Firestorm to Terran customers. However, Firestorm is very selective about who they sell this fusion weapon to. So far this weapon has only been sold in small quantities to USAM, the Martian Rangers, Australian and New Zealand SAS and select corporations. Its features include an inbuilt stabiliser and NIS scope. It also has a metabolic sig ID for lockout of non-authorised users. This is set for use by the buyer and his designated users. However, resetting this system requires authorisation and the services of a Firestorm technician. This beam-style fusion weapon operates by known principles, but is the result of technology far in advance of Terran science. The weapon is fully environment sealed.

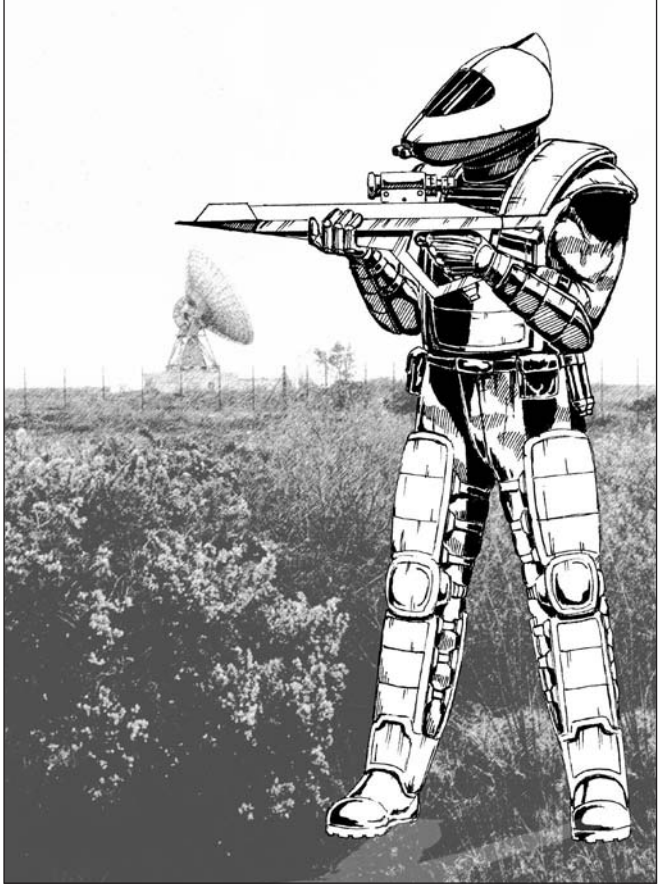
LC-10

Company:	**Armington**
Cost:	**5000**
Ammo Cost:	**1000**
Weight:	**3.0**
Ammo Weight:	**0.5**
Class	**Rifle**
Range	**1 km**
AM	**8**
DP	**10**
Stun	**V**
ROF	**1**
Ammo	**40**



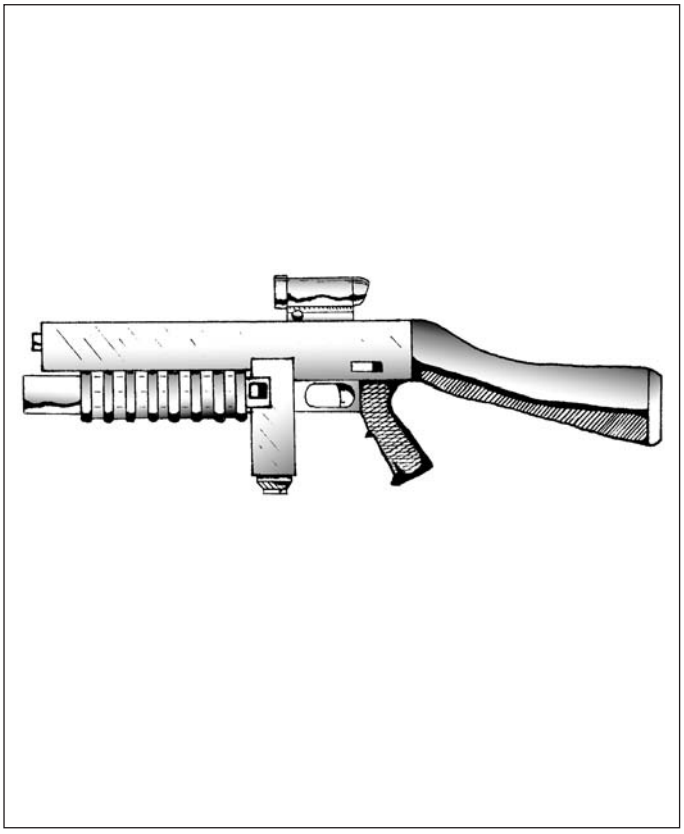
The LC-10 is a state-of-the art infantry laser weapon in use by British military forces. Armington also exports these weapons for sale to both the German and Martian military forces. The powercell is a standard high-energy superconductor cell manufactured by ARES for use in personal energy weapons. The LC-10 is a rugged and versatile weapon which is capable of being used in multiple environments. It is sealed for use in space, marine and hostile atmospheric conditions. The weapon is designed so that a qualified technician with minimal tools can alter the wavelength of the emitted laser for use in specific mediums, such as marine situations. The weapon can also do rangefinding by depressing the trigger a quarter way, and will act as a PIN designator as well if depressed halfway. A full depression emits the lethal laser pulse. Armington also include in the package a high-precision telescopic sight.

British Rifleman in light duty armour with LC-10

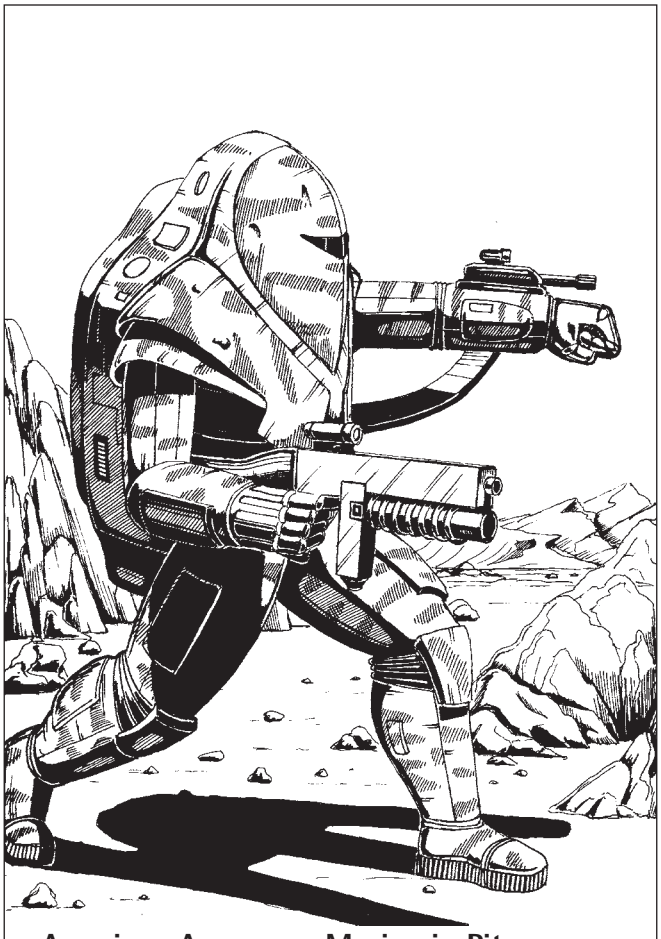


APL

Company:	Portland Gun	
Cost:	7000	
Ammo Cost:	1000/mun	
Weight:	3.0	
Ammo Weight:	0.5/mun	
Class	Rifle	
System	Laser	Thumper
Range	500m	200 m
AM	6	mun
DP	12	mun
Stun	VI	mun
ROF	2	1
AOE	-	mun
Zone	-	mun
Ammo	30	1



The anti-personnel laser, or APL as it's commonly called, is the standard service weapon used by the United States Aerospace Marines. It is a specifically designed laser for causing maximum damage to soft biological targets. It also has a higher rate of fire than most lasers, giving it better battlefield performance than normal laser weapons. Like the LC-10 it has a system for rangefinding and PIN designation. It is fully environment-proofed and is more rugged in this regard than the LC-10. It also has an integral 'Thumper' 40 mm grenade launcher for anti-armour use. A thermographic image sight is installed for low-light fighting conditions. It uses the same powercell produced by ARES that the LC-10 uses.

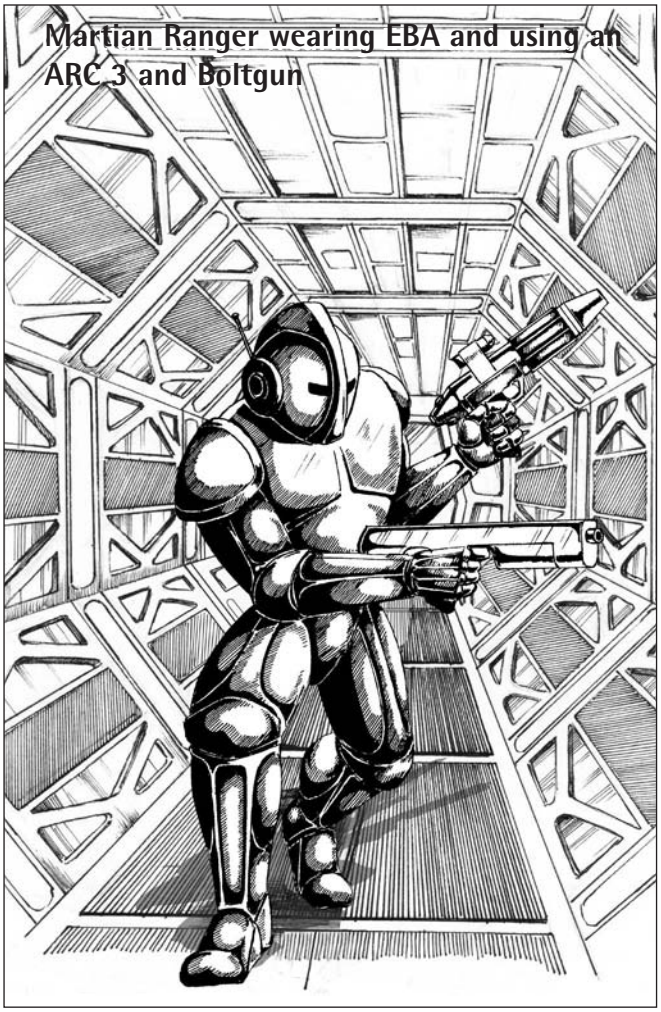


American Aerospace Marine in Pitman Assault Armour using APL

ARC 3

Company:	**Arcturus Weapon Systems**	
Cost:	**1500**	
Ammo Cost:	**40/1200**	
Weight:	**3.0**	
Ammo Weight:	**0.5**	
Class	**Rifle**	
Round	**solid**	**AHE**
Range	**100 m**	
AM	**4**	**10**
DP	**12**	**14**
Stun	**V**	**VI**
ROF	**3**	
Burst	**3**	
Auto	**15**	
AOE	**-**	**1**
Ammo	**30**	

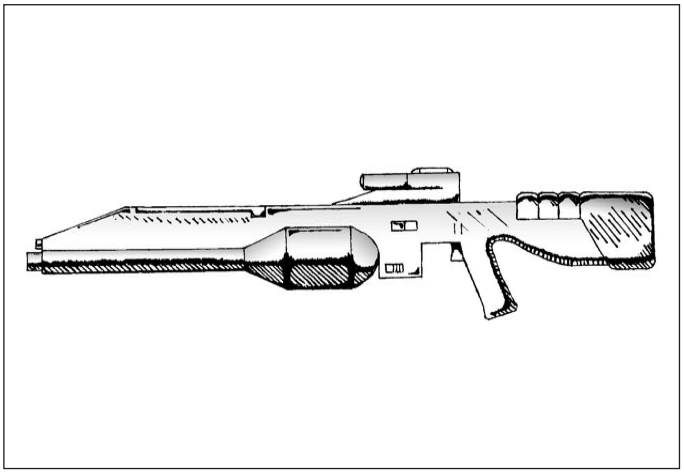
The ARC 3 is typical of weapons developed for use on Arcturus. To kill the local fauna, large-calibre automatic weapons with explosive rounds are a must. The ARC 3 is based on fully automatic shotgun systems. It also uses an explosive round specially developed by the manufacturer. Solid and other rounds are available, but these are from other munition manufacturers. The weapon is fully environmentally rated (water and atmosphere) and is designed to take virtually any conditions. The AHE ammunition is also designed for use in water or non-oxygen-containing atmospheres (and space). The weapon also contains a stabiliser, which allows the weapon to be used one-handed when in servo-powered armour. The weapon is reliable and popular enough to see standard service in the Arcturian Colonial Marines. The Martian Rangers have also procured several thousand of these weapons. The Rangers use these weapons with a backpack slug belt-feed system to fully exploit its automatic firing capacity.



Martian Ranger wearing EBA and using an ARC 3 and Boltgun

CGR

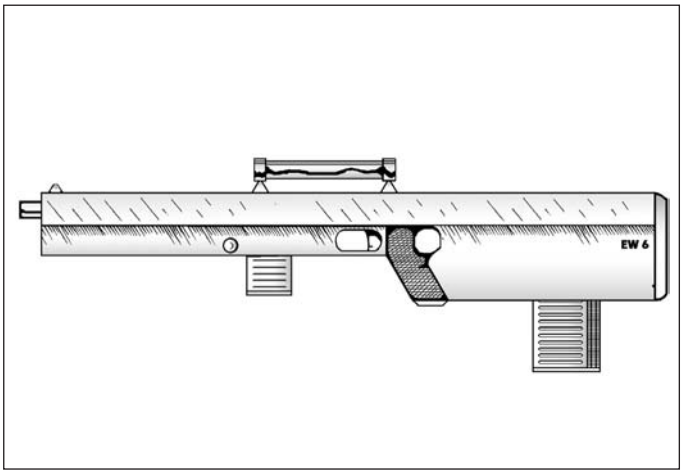
Company:	Portland Gun	
Cost:	7000	
Ammo Cost:	120/mun	
Weight:	3.5	
Ammo Weight:	0.4/mun	
Class	Rifle	
System	Gauss	20mm GL
Range	600m	200 m
AM	6	mun
DP	8	mun
Stun	V	mun
ROF	1	3
Burst	4	-
Auto	18	-
Ammo	60	30



The combined gauss rifle or CGR is a military rifle that has both a 5 mm gauss rifle and high-capacity grenade launcher based on the GL-20. The weapon is also equipped with an electronic imaging system with inbuilt PIN targetting and rangefinder. Other equipment links the rangefinder to the grenade launcher for the use of airburst ammunition. Grenades are reloaded by fitting new canisters. The weapon also features a stabiliser and waterproofing. This rifle is commonly used by the US Marine Corps, but can be found in wide use with other American services. Older models of this weapon using ACR 5 mm, combat rifle or even assault rifle 5 mm systems are found throughout the world, with military or even private owners.

EW 6

Company:	Enfield Weapon Systems	
Cost:	7000	
Ammo Cost:	120/mun	
Weight:	3.0	
Ammo Weight:	0.35/mun	
Class	Rifle	
System	Gauss	40mm GL
Range	600m	200m
AM	6	mun
DP	8	mun
Stun	V	mun
ROF	4	1
Burst	4	-
Auto	18	-
Ammo	50	5



This rifle entered service with the British Army during 2148/2149. The 40 mm launcher is now standard, and a squad auto weapon has been re-introduced based on it.

Battle tactics by 2100 gave British infantry a destructive assault pattern typified by a 40 mm “creeping barrage” on the front line. This, coupled with heavy ECW kits at battalion level, force most enemies to defend in depth, thereby reducing available firepower at a single point.

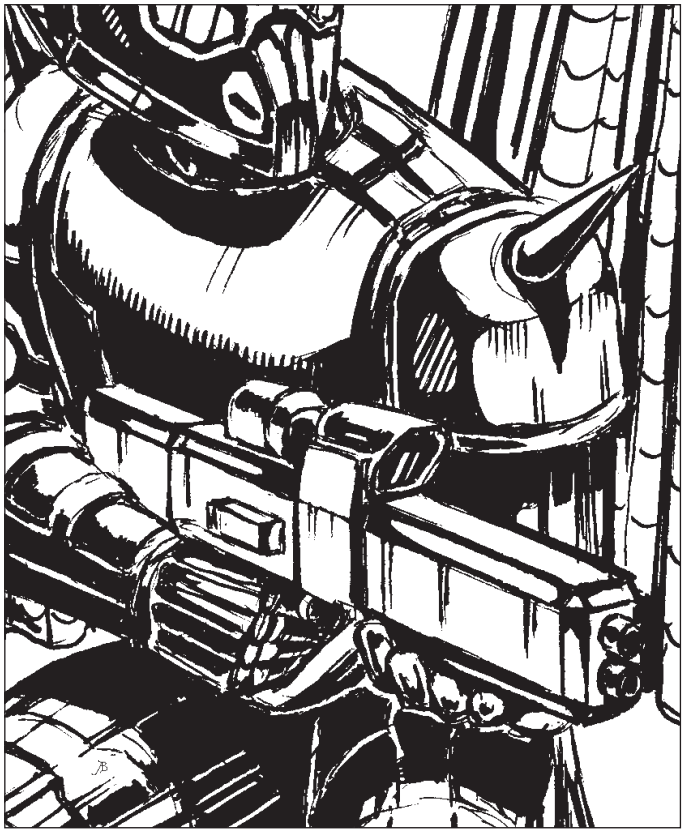
The EW 6 is fitted with an auto-focusing optical telescopic sight. This is rigged so that on aiming the first trigger pressure activates the auto-focus and the second pressure fires the weapon.

Improvements in grenade technology have kept smoke and prismatic fogs up to date against laser weapons.

Stated developments include rocket assisted munition (RAM) grenades for this weapon.

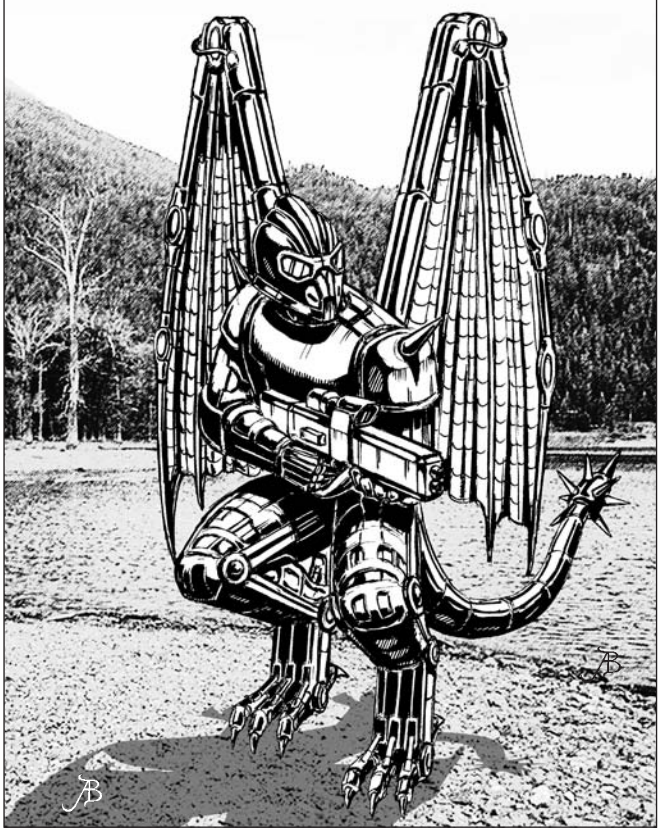
Cralar Laser Rifle

Company:	**Cralar**
Cost:	**5000**
Ammo Cost:	**1000**
Weight:	**3.0**
Ammo Weight:	**0.6**
Class	**Rifle**
System	**Laser**
Range	**2 km**
AM	**20**
DP	**10**
Stun	**VI**
ROF	**4**
Burst	**-**
Auto	**-**
Ammo	**60x2**



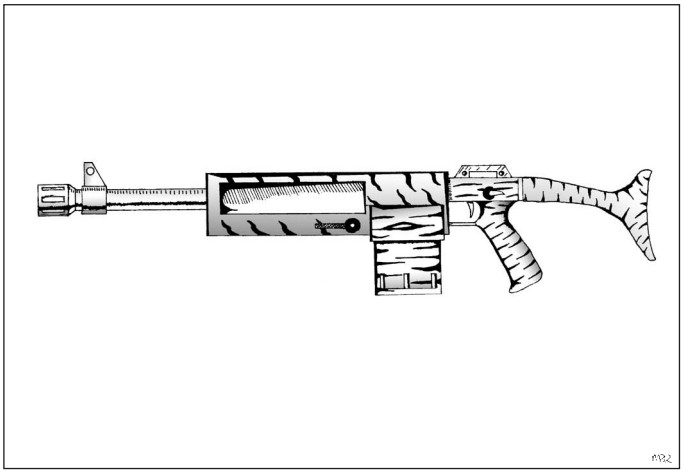
The Cralar laser rifle is the standard service rifle in use by the Coalition Army. Its design philosophy stems back to the graser rifles of Andorian design used during the Coalition War with the Mechs. The concept was to have a long-range non-ballistic weapon having sufficient armour-penetrating ability for most infantry purposes. The design revolves around two lasing rods (unlike the 3 rods in the more advanced graser) allowing a significant rate of fire for a laser rifle. The penetrating nature comes from the high-energy x-ray nature of the lasing rods. The technology behind this weapon is far more advanced than Terran technology as witnessed in the performance of Terran x-ray lasers, namely the sabre rifle.

Andorian Infantry in Elite Battle Armour with Cralar laser rifle



Aronhi Long Rifle

Company:	various
Cost:	500
Ammo Cost:	35
Weight:	4.0
Ammo Weight:	1.6
Class	Rifle
System	14mm ballistic
Range	500m
AM	6
DP	10
Stun	V
ROF	3
Burst	3
Auto	-

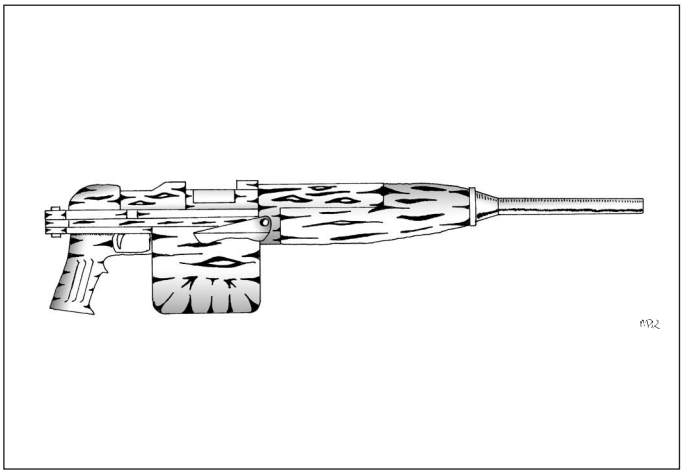


This is a semi-automatic weapon similar to an autorifle which is a derivative from common hunting rifles. The military version uses 14 mm HX ammo. It is primarily designed as an anti-armour weapon, although it is a perfect definite-kill weapon against unarmoured targets.

Commonly used for big game hunting, it typically serves as the standard service rifle of most Aronhi military units. Against the Stotatl is an admirable weapon, and gave the Aronhi firepower rivalling the higher-tech Stotatl forces. However, infantry units equipped with this gun often suffered from a lack of armour compared to their Stotatl opponents.

Aronhi Assault Rifle

Company:	various
Cost:	500
Ammo Cost:	35
Weight:	4.0
Ammo Weight:	1.6
Class	Rifle
System	8mm ballistic
Range	400m
AM	2
DP	8
Stun	IV
ROF	4
Burst	4
Auto	18
Ammo	30

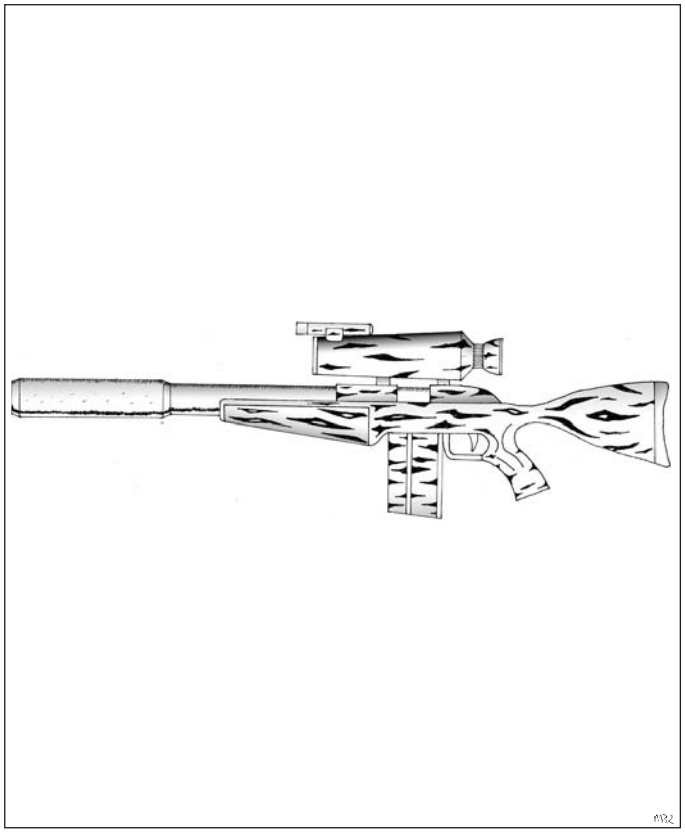


This is the traditional standard-issue rifle amongst clan warriors for close-quarters and urban pacification duties. It is designed around a light-calibre (8 mm) round for use in a high-capacity box magazine for autofiring. The weapon is used in high-volume fire fight situations, but is generally useless in heavy-armour situations.

This weapon is extremely popular with resistance cells deep in the Aronhi Empire for use against lightly armed and complacent Stotatl targets. Designed for maximum firepower in a given time, it gives resistance units the ability to strike or lay down intense cover fire. The Stotatl view the use of such tactics as the deliberate use of a terror weapon which causes a significant amount of collateral damage to structures, equipment and personnel.

Aronhi Armour Rifle

Company:	**various**
Cost:	**1200**
Ammo Cost:	**100**
Weight:	**5.0**
Ammo Weight:	**2.0**
Class	**Rifle**
System	**20mm ballistic**
Range	**400m**
AM	**10**
DP	**14**
Stun	**VI**
ROF	**4**
Burst	**-**
Auto	**-**
Ammo	**10**

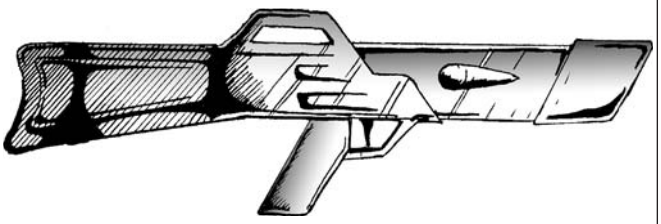


This single-action rifle uses 25 mm rounds for anti-armour purposes. Although originally developed as an anti-bunker rifle, it has found wide use against mobile Stotatl armoured targets. Aronhi prefer to use this weapon in a sniper role, often loaded with HEAP rounds designed to handle Stotatl body armour and penetrate through the window canopies of Stotatl light tanks.

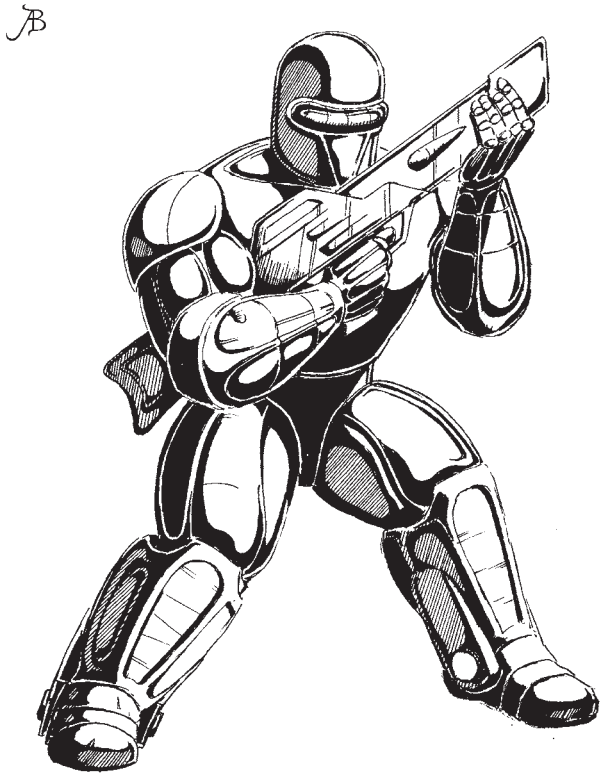
Terran military analysts believe this weapon to be the most successful Aronhi weapon fielded in the Serpenti War. It was widely adopted, and millions of these weapons are still in circulation amongst resistance forces.

Stotatl Mk I Plasma Gun

Company:	Dolitzi
Cost:	15000
Ammo Cost:	600
Weight:	4.0
Ammo Weight:	1.0
Type	plasma
Class	Rifle
Range	350m
AM	20
DP	12
Stun	VI
ROF	1
Zone	1
Ammo	100



Mk II Plasma Rifle



Stotatl Commando in Combat Armour and carrying a Mk I Plasma rifle

This large rifle is the standard service rifle of Stotatlizic (Stotatl Commandos). Unlike its Terran counterpart weapons of the 2160s and early 2170s, this weapon is a beam-style plasma gun. It has extremely good operating characteristics, and has been in service in a largely unchanged state for over three hundred years. It is designed for use in a variety of environmental conditions including vacuum, which suits the needs of the Commandos.

It is also used as squad support weapon in many traditional planetary forces. Even the Nandina and Stavira use it quite widely. The Yzzin appear to be the only exception, seeming to prefer the use of larger chain guns derived from those they invented during their conflict with the Stotatl.

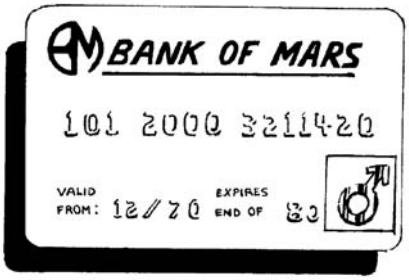
Terrans have found this weapon formidable against their own infantry forces, and have focused on developing their own weapons with similar capabilities in an attempt to match firepower with the Stotatl.

During the Serpenti War, in the face of stiff military technology developments by Terrans, the Stotatl were forced to deploy an experimental weapon still undergoing development. Dubbed the Mk II by Terran intelligence circles, this weapon is considerably more powerful thn the standard weapon design that has remained in service for almost 80 years.

The Mk II is characterised by an extra 100m range, 30% more ammunition capacity in it's fuel cell and more intense plasma discharges (AM 35, DP 18). Fortunatley the weapon often misfunctions either firing like a Mk I (20% of time), not firing (5% of time), and sometimes in very rare cases, loosing containment and injuring the user.

Aratani Army Intelligence believes the weapon is being overhauled to eliminate most of the safety problems. They believe the reliability and safety developments are being spearheaded by a Kuetques engineering team. AAI believe that Kuetques technologists are more adept at handling plasma devices than the Stotatl, and expect advances in Stotatl plasma technologies in the coming decades.

Finance



Currency

For the purposes of this rule book the equipment prices are in European credits. Although the Eurocredit is one of the highest-valued currencies on Earth at this time, it is common to use this currency to measure equity in the international money market.

Prices for goods vary according to the market in which they are purchased. In the nation of origin these goods may be up to 10% cheaper than their listed price. Similarly, on far-flung colonies Earth-manufactured goods may reach prices almost twice their listed price.

Terran Currency Examples & Exchange Rates

1 AD	= 1.5 OD
1 OD	= 0.5 EC
1 AD	= 0.75 EC
EC	European Credit
AD	American Dollar (USA, Canada, Mexico)
OD	Oceanian Dollar (Australia, New Zealand, New Guinea, Singapore)

Cash Cards

Monetary transactions are routinely carried out by the use of cards similar to 20th century ATM/EFT-POS cards. Through these cards money is transferred electronically between accounts. The cards are normally specific to their world of origin, so separate accounts must be kept on each planet that a person visits. On outposts and other remote areas a cheque book is required, since physical money is no longer issued and there may be no cash card system there.

Cash cards are quite secure, requiring several criteria to be filled before the money will be transferred. For basic security and identification, the card has both a photograph and the signature of the owner on it. It also has the antiquated four-digit PIN. Further, more complicated precautions include the use of a pressure sensor and electronic memory, which means that the card will only operate if the thumb of the owner is on the sensor. Added to this are stored memory files containing a digital voice recording of the owner speaking their name and also the retinal prints of the owner. Due to these precautions it requires extremely expensive equipment to fool an ATM.

Credit Cards

These are similar in operation to Cash Cards. However, they give access to a credit account which can give the user the equivalent of a short-term loan, much the same as 20th century credit cards. Most cards have a credit limit which determines the amount that can be borrowed. These limits are usually somewhere between 500ec and 1000ec depending on the cardholder's income.

Every transaction typically costs 2ec. At the end of every month interest charges of about 10% p.a. are applied to any outstanding borrowed money.

Income

To survive in the modern world an income is a necessity. The average income is about 26,000ec per year. If a job entails heavy responsibility, power or physical danger, then the income earned by an individual can be higher.

Tax

In order to fund government services, the local IRS/IRD (Inland Revenue Service/Department) taxes the income of the residents of their country. The typical rate of tax is about 30%.

In most countries it is common for Governments to supplement this income taxation by taxing goods sold within that nation's marketplace. This is commonly called GST (Goods & Services Tax) or VAT (Value Added Tax). The typical rate is about 10% of the value of the product. Tax exemptions are available for certain purchases, such as military purchases.

Loans

It is possible to borrow large sums of money from financial institutions for various purposes. Getting a loan is a complex process involving checks on credit history, risk and equity.

Normally the financial institution will require the individual to have at least 20% of the required sum, or equity (house, car, etc.) of at least half the loan value.

All loans must be repaid. The duration for repaying the loan will vary according to the amount borrowed. Interest charges will also be applied, typically about 10% p.a.. These loan contracts are typically constructed to return at least twice the value borrowed to the financial institution. The longer the repayment time, the higher the rate of return.

Default on the loan will result in penalty fees. Continued defaulting will result in legal action. Under some circumstances a financial institution may hire private agencies to acquire the lost capital from the debtor.

Alien Currency

Most aliens in human space are content to use human currencies. However, several alien currencies are catered for by foreign currency bureaus. The Daryne on Daryn use small red crystals called Kaxtals. They are normally valued at around 100ec. In the Coalition, gold coins of various denominations are used for inter-world transactions. Denominations range from 0.5ec to 10,000ec.

Languages

Amongst humans the most widely spoken language is English. This has developed out of the use of this language in many nations and its widespread use in commerce, science and diplomacy. However, other Terran languages are also in widespread use, including Portuguese, Spanish and Chinese.

On the interstellar scene the use of languages is less standard because of the diversity of races and differing empires. Many aliens communicate by non-vocal means that preclude the use of conventional communications. However, several vocal tongues are commonly used

The use of human languages by aliens seems quite restricted. In general the Aratani, Aronhi, Daryne and Stotatl use English while the Coalition races use German. The Forerunners are the only race notable for using the appropriate human language for the human they are talking to.

Terran Languages

English is at present the defacto universal language in use by Terrans. Most Terrans still speak languages related to their country of origin of ethnic backgrounds.

Draconian

This language is often used by interstellar merchants. It is a lyrical language which is very subtle, complex and convoluted, as befits a commercial language. It is the second most spoken language in the Coalition.

Andorian

This language is the lingua franca of the Coalition. All Coalition citizens are able to speak this language to a reasonable degree. It is a harsh, abrupt language which is logically constructed and has very few ambiguities.

Stotatl

Within the Stotatl Empire this is the only primary language present. Other languages are either non-Stotatl native languages or those used in trading with aliens. Within the Empire the Stotatl insist that Stotatl be spoken at all times in the presence of Stotatl

Translation Equipment

Device	Cost (ec)	Weight (kg)
Hand talk Translator	500	0.5
Ilkanian Translator	1000	0.3
Language cards	200	0.01
Pocket Translator	200	0.2

Hand talk Translator

This device has two screens; one displays a being, while the other shows text. This device is used to translate verbal language to body movement language (or Terran hand talk) and vice versa. Two language slots are provided. One contains a verbal language card, which the device will use to display text and interact verbally with one party. The other card is for the body language card. A screen will show the applicable being conducting the body language during interpretation, while the device will monitor the subject visually for reading the subject's body language. In another context this device could be used with a hearing-impaired person using sign language while the other person talks in English.

Ilkanian Translator

This is a specially manufactured translator for use in translating the microwave communication of the Ilkanians. It is produced by the Draconians and uses their language cards. A Terran model is sold by 'Firestorm' and uses the standard Terran-manufactured language cards. The unit has only one card slot for the verbal language translation.

Language cards

These holographic cards are similar to data cubes used for computers and other devices. Each card holds information for one language, whether it is a verbal or somatic language. The languages available would be for those in use on Earth. Terran-manufactured alien language cards include Daryne, Forerunner, Orcok and Treerats. Firestorm Trading is currently supplying alien language cards for Terran translators. They currently have available cards for Andorian, Aronhi, Draconian, Stotatl and Yzzin languages.

Pocket Translator

This pocket device is designed for virtual real-time verbal language translation between two languages. Two card slots are available for the two language cards needed for translation. Alien models are sold by Draconian traders and have a wide variety of alien language cards available for them. However, the Terran language card for these devices is only in the German language.

Communications

Fast long-range communication is part of the everyday modern world. To a starfaring civilisation, the technology being used for communication would have improved to such a degree that global audio/visual communication is as easy and inexpensive as making a local area phone call today.

Device	Cost (ec)	Weight (kg)
Audio Word processor	200	2.0
AV Answer Phone	100	2.0
AV Comlink	1000	0.1
AV Simple Receptionist Answer Phone	500	2.0
AV Recognition Answer Phone	200	2.0
Bugs	200	0.01
Comlink	100	0.1
Field Radio	500	5.0
Flare gun	50	1.0
Mobile Phone	100	0.5
Mobile Visiphone	200	0.5

Audio Word processor

This device is similar to a modern word processor except it does not have a keyboard. A large screen displays the text prior to printing. Interaction is through verbal instructions, allowing the user to dictate to the machine.

AV Answer Phone

This is similar to a conventional answerphone except it is designed to handle audio/visual (AV) input.

AV Comlink

This device is like the standard Comlink but provides for AV capability.

AV Simple Receptionist Answer Phone

This answerphone uses a semi-robotic brain in order for the answerphone unit to function as a simplified receptionist. This unit is popular with small businesses.

AV Recognition Answer Phone

Unlike its predecessor, this machine is designed to recognise the caller and, if applicable, will give a specific messages to the caller according to its instructions.

Bugs

These tiny dot-sized (3 mm) devices are small, covert listening devices designed for use by intelligence agencies and persons with similar requirements. They broadcast their audio pickup on a specific radio frequency for detection on a radio receiver.

Comlink

This pocket-sized radio communicator has an effective range of 500 km. On civilised worlds with proper facilities, these radios can be registered and allow connections into the mobile-phone cellular network for use in global communications.

Field Radio

This rugged unit is a long-range, military-style radio communicator with an effective range of 500 km using normal techniques. The unit can be used for general transmission or tight-beam transmission. With the aid of orbital communication satellites, up-link communications can occur, which can give the field radio an effective global range as long as there is a sufficiently large satellite network.

Flare gun

This one-shot flare pistol is designed to fire a fusion light flare up to 200 m into the air. An anti-gravity module keeps the flare in the air for 4 hours. This flare system is standard survival equipment used for emergency signalling by wilderness travelers. Reloads cost 40ec.

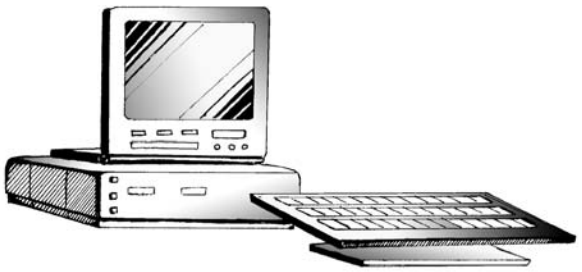
Mobile Phone

This device resembles and functions as simple cellphone. It is really only useful in populated regions of civilised world.

Mobile Visiphone

This cellphone also provides for audio/visual (AV) communication.

Computers



In the FSpace system the concept and use of computers hasn't really changed much from current conditions. Methods of interaction and the type of available power, however, have. Computers can display information onscreen using familiar methods, but now are also capable of projecting holographic 3D images. Input can be via typing, writing, verbal or spatial interaction with holographics. Other methods are available through the use of sensory or communication devices. Verbal interaction is most commonly used, often with personalised computer entities to make users feel more comfortable. Neural links are also used, especially in situations where human response time is not sufficient, such as space combat. In these situations the use of direct neural links between man and machine help improve the performance of both.

More advanced computers may actually be intelligent, perhaps even sentient. This is especially true of Aratani computers. Most other races try to avoid using sentient machines, although the Andorians do have some in the form of androids. Terrans have yet to develop sentient machines. However, they have developed very smart machines that can be called artificially intelligent.

Specialist Programs

Computer Assistance Programs

These types of programs are designed to assist people in various tasks, such as starship evasion piloting or mathematics and calculus. A programmer who has both computer skill and the relevant skill, can write these types of program themselves. As shown the greater the diff Bonus, the more difficult the program is to write, but once created the greater the assistance that the program gives to the person attempting the skill.

Program Level	Creation Diff	Diff bonus	Cost (ec)
1	Hard	-1	1000
2	VHard	-2	2500
3	VH2	-3	6000
4	VH3	-4	10000
5	VH4	-5	20000

Computer Skill Programs

These types of program are very similar to character skills. Computers are commonly used with skills such as Physics, Maths, Admin and Sensors. They can be used with other skills such as Pilot, for use as a Starship autopilot.

Cost 50ec per level

Computer Equipment

Device	Cost (ec)	Weight (kg)
Britannia Data Library	1000	0.5
Data cube	50	0.01
Data well	100	0.5
Portable Laser Printer	1000	3.0
Portacomp	1000	1.0
Workstation	20,000	10.0
Wristcomp	100	0.3

Britannia Data Library

This palm-sized machine is produced by the University of Oxford Library as an information resource for travellers. It contains as much information as several encyclopaedias, and comes complete with audiovisual displays.

Data cube

These 1 cm^3 crystalline cubes are storage devices for sound, visuals or data. They hold about a terabyte of information, usually in a compressed format.

Data well

This palm-sized machine is a less powerful portacomp, and is primarily intended for data storage and access, but without the flexibility of sophisticated programming ability. It also includes the functions of a wristcomp.

Portacomp

This small hand-sized computer is a fairly sophisticated machine. Designed to function much like any portable PC, it is quite powerful. It can run one specialist program at a time, either a level-1 assistance program or a level-10 skill program or alternatively any common application.

Workstation

This desktop computer is designed for programming, device control and other sophisticated functions. Like a portacomp it can run specialist programs, either level-1 assistance programs or level-30 skill programs. It is capable of running three of these programs at once.

Wristcomp

This wrist-worn computer is designed to be a personal PC for day-to-day computing needs, including functions such as a note book, a calendar, address book, clock, calculator, accounts and so on. With the aid of a comlink it can provide information on weather, travel details and also send and receive computer-based communications.

Cybernetics

The origins of cybernetics are in the field of medical science, specifically that area devoted to prosthetic replacements.

A number of methods are available for inserting cybernetic systems. At primitive levels, medical surgery is the standard procedure. With the advent of nanotechnology easier insertion methods became available. Nanites are capable of constructing the needed neural pathway connections for surgically implanted devices without the need for extensive and difficult operations. Simple cybernetic enhancements become almost routine with sophisticated nanotechnology.

Some people go to extremes in cybernetics, converting themselves into full cyborgs. This normally means that few organic components are left, save the brain and a few essential organs. Such full conversions are often highly expensive (millions of ec) and require special people who can remain sane afterwards. Such cyborgs have physical attributes and equipment similar to normal robots. Their mental faculties remain human, and are sometimes cyber-enhanced as well.

Amongst aliens, cybernetics do not tend to be common. In the Coalition, neural jacks have been developed for Ilkanians and Draconians, but their usage is extremely low compared to Terran standards. The Aratani have a broader range of cybernetics than Terrans, but most are not very evident, being predominantly biological constructs implanted into their host. Many Terran and Aratani implants work for Daryne (given their common genetic origin), except for all sensory enhancement implants other than eyesight (due to some genetic differences in this case).

Cybernetic Equipment

Device	Cost (ec)
Breathing Enhancement	20,000
Comlink	500
Computer	2000
Infravision	1000
Microvision	2000
Neural Jack	5000
RV work	5000
Self-Repair	10,000
Ultravision	1500
Skill jacking	2000

Breathing Enhancement

This implant actually involves symbiotic organisms that live in the lungs of the host. It allows breathing in higher CO_2 content atmospheres. The symbionts use blood sugars to crack CO2 to provide oxygen for normal use. In a virtually pure CO_2 environment it allows normal (though laboured) breathing for about half an hour before asphyxia sets in. The symbionts also filter out harmful NO_2 and CO gases, giving the host a tolerance in such gaseous environments four times the normal level. Underwater these enhancements allow the extraction of oxygen from water (if it contains oxygen gas), allowing the individual to survive like a fish, and additionally affords an enhanced pressure-change tolerance as the symbionts are also designed to flush out the gas buildup that leads to the bends.

Comlink

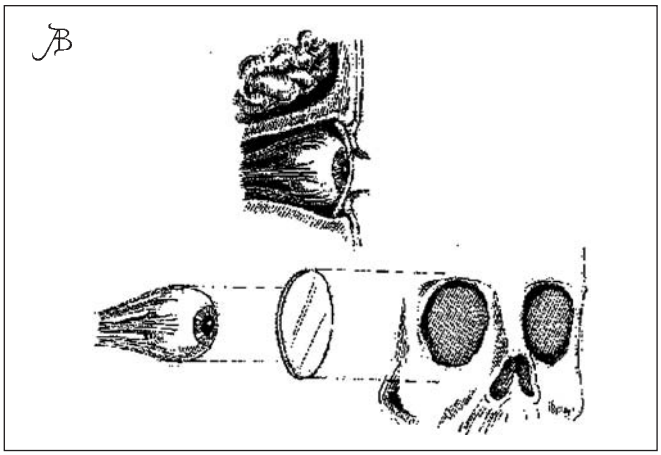
Once a neural jack is installed, a miniature comlink can be implanted. It is connected to the speech and hearing connections on the jack mounting, and functions in the same manner as a conventional comlink, but without the need for vocalised communication.

Computer

Many people often use computers as an aid in their jobs. Some get a computer implanted and connected to the neural jack connections. With a connection into a phone line or the use of a Comlink the user can access various databases very quickly. The implanted computer has the same operating characteristics as a wristcomp. More powerful versions (handcomp) are available for 10000ec.

Infravision

Additional receptors are implanted in the retina, with extra neural connections along the optic nerves. This allows the user to see further into the infrared spectrum, giving them excellent night vision.



Microvision

This enhancement consists of a set of implanted organic lenses with muscle connections. Nerve connections to the brain allow conscious control over the focusing of the lenses to allow vision of objects with 100x magnification.

Neural Jack

Connections are made to the speech, hearing and visual neural pathways in the brain of the subject, enabling many of the other cybernetic enhancements to be implanted or attached. This implant is required before many other devices can be implanted.

RV work

With the aid of additional neural connections from a standard neural jack a person can control sophisticated devices directly. This modification connects the jack to motor functions and all the sensory neural areas within the subject's brain. This technology originated from Virtual Reality (VR) remote piloting. Using simple VR gear and the enhanced neural connections, the user can actually feel themselves as part of the remote vehicle. Remote Ops skill is required to use this enhancement properly.

Self-Repair

This implant involves the use of complex nanite systems to aid in the repair of damaged body tissues. It gives a regeneration rate of 1d10 Life per hour. New nanites are constructed from food intakes. The nanites are very effective and will stop blood loss within 3 rounds.

Ultravision

Ultravision is similar to the infravision system, but allows vision further into the ultraviolet spectrum.

Skill jacking

Skill jacking is the direct implanting into a person's brain of memories containing knowledge of a particular skill. Sometimes a skill jack unit also requires nanites to make improvements to the person's physical body to enable them to perform the skill. Using conventional technology a skill-jack unit will 'connect' onto an implanted device connected to the neural jack. Additional pathways are then opened to the memory areas of the brain. The implant has a small port into which a data neuralcard can be inserted with the appropriate skill card. Specific jacked skills require nanotechnology to confer the ability and do not require an implanted neural jack.

Skill Costs

Competence	Cost (ec)
Recognised (50)	1000
Qualified (70)	2000
Expert (100)	5000
Master (200)	10000

Euro-shells

Some European countries have undertaken the development of a generic shell for full conversion cases to sustain their core biological organs. The shell gives no enhancements, but does have several advanced RV neural jacks, a simple vision system and a low-grade grav impeller. These shells are roughly 80 cm across and weigh about 85 kg (AR 8 Life 40/80). The occupant is sustained within the shell and requires power and nutrient replenishment every so often. The shell is plugged into a variety of customised robotic chassis devices depending on their occupant's needs at the time. Most either use a chassis similar to a humanoid frame, or a Mechanical RC. Some are known to be socketed into starships.

CM-20 Cyborgs

The United State military forces have developed a standardised unit to rehabilitate seriously mutilated military personnel and re-deploy them into a useful role in the Aerospace Marines as heavy assault infantry. This is a total conversion process, and is only undertaken with extreme cases, although it's rumoured that some moderate cases have volunteered for such a procedure.

The CM-20 is based on a humanoid robotic chassis which houses the minimal biological human components and its life-support system in the upper torso region. Most of the CM-20's physical abilities stem from the robotic components, but reactionability (i.e. DEX) is partly affected by the occupant's original physical-neural ability (+1/4 DEX).

The CM-20 is often deployed in hostile environments, or against aliens with superb physical advantages over human personnel, such as Chlorans and Yzzin.

The CM-20 frame has the following attributes:

STR	500
DEX	100
CON	500
AR	15
Life	400/800
Spd	14

RV neural jack

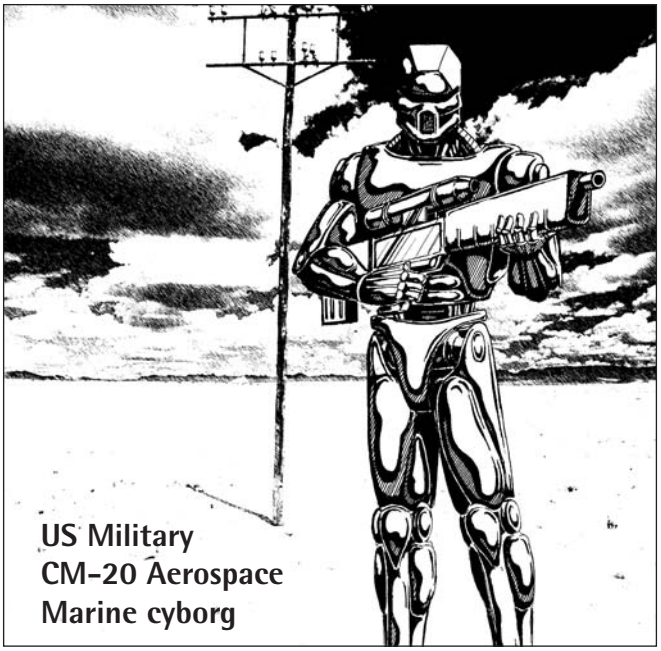
Sensors - All human at excellent, plus NIS vision system

5 slot skill jack

AV comlink

PIN targetting system

Portacomp neural interface



US Military
CM-20 Aerospace
Marine cyborg

Aratani Composites

The Aratani are rumoured to be working on composite lifeforms that truly combine the aspects of machine and biological systems. Although never formerly confirmed, several injured Aratani diplomatic security agents have shown the evidence of a machine-like endoskeleton rather than human bones, as well as a number of other machine-like attributes.

Maintenance

Tools are required to carry out maintenance or repairs on equipment. The appropriate tools are required. If inappropriate tools are being used then the difficulty should be increased by one or two levels depending on what sort of tools they are

Routine Maintenance

Any equipment in active use will require monthly servicing by someone with the appropriate skills. Such maintenance is typically a Moderate skill task. If the owner does not have the appropriate technical skill then someone must be employed to conduct the servicing; this is typically 100ec for small items or 500ec for large devices such as vehicles.

Annual Maintenance

Every year equipment requires replacement parts and servicing. This typically costs 1% of the item's purchase price if done by the owner or 2% if by a hired technician.

Repairs

The costs in new materials is dependent on the cost of the item divided by the DCP of the object. This cost per DCP is the cost of repairs if done by the owner. Hiring repairmen will add a 30% markup on this material cost.

Tools

Device	Cost (ec)	Weight (kg)
Carpentry Set	300	10.0
Chainsaw	200	6.0
Electronic Lock Tools	200	0.1
Electronic Tool Kit	500	2.0
Engineering Tool Kit	2000	10.0
Gun Cleaning Tools	20	0.5
Gunsmith Tools	1000	3.0
Jack Laser	100	0.3
Mechanical Lock Tools	100	0.05
Mechanical Tool Kit	200	5.0
Robotic Tool Kit	1000	2.0
Welding Laser	500	3.0

Carpentry Set

This kit contains hammers, saws, axes and other woodworking tools. It also contains various specialised measuring devices for use in carpentry.

Chainsaw

The chainsaw is popular tool for working with large amounts of timber. With special chains they can also be used to cut through sheet metal. Many emergency services these saws to gain entrance into structures.

Electronic Lock Tools

Rather than being a set of repair tools, this kit is designed for those wanting to bypass electronic systems. In many ways it is similar to a standard electronic tool kit.

Electronic Tool Kit

This kit contains various tools for repairing electrical and electronic equipment. A soldering iron, multimeter, and miniature oscilloscope are included.

Engineering Tool Kit

This kit contains a number of heavy-duty tools for use in engineering tasks. The kit contains power tools such as a drill and metal-cutting saw. A gas welder is also included. Structural engineers or people making metal parts for other devices usually use this kit.

Gun Cleaning Tools

These tools are used to conduct routine maintenance on personal weapons. Modern tools are designed to cater to a wide range of weapons, from projectile guns through to lasers.

Gunsmith Tools

This tool set is a mix of mechanical and electronic tools for use in maintaining and repairing firearms. With enough knowledge these tools can be used to construct crude weapons.

Jack Laser

This small, pocket-knife-sized device is a general-purpose cutting laser. It is extremely efficient, requiring little effort on the part of the user, and unlike metal or ceramic blades it can be used on most materials.

Mechanical Lock Tools

These are the classic lockpicks used by intruders to gain silent entry. These tools only work on mechanical locks that rely on the use of some form of key. They do not provide any assistance with combination locks or electronic locks.

Mechanical Tool Kit

These are the standard tools of the trade for a mechanic. The kit contains tools such as wrenches, pliers and screwdrivers and a socket set.

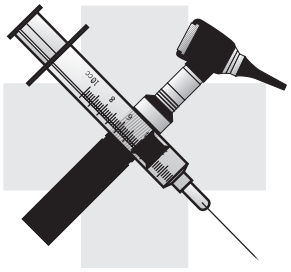
Robotic Tool Kit

This is an optimised tool set containing mechanical and electronic tools for use on conventionally built robots.

Welding Laser

Rather than using wasteful gas welding devices, a mains-powered laser device was developed for heavy-duty cutting or welding jobs. This unit comes with both a mains adapter and a portable power unit that enables about an hour of use.

Medical



During gaming a character may receive an injury, whether during a combat, as the result an animal attack or from simply falling while installing a bulb in a street light. Seeking treatment from a skilled medic or doctor is a common solution. For the medic, diagnosis of the problem is often the first step in the process. Assume in general that all diagnosis tasks are normally two difficulty levels lower than the treatment difficulty of the problem.

Treatment varies according to the nature of the damage or illness. For instance it would be a Moderate task for standard gunshot wound damage (20 to 100) while damage in excess of 100 would be a Hard task. Saving a patient from death is a Very Hard 3 medical check in surgery conditions which often take several hours.

Damage caused to the head area can have some severe effects. To treat concussion effects a Hard Task is required during a half-hour session. When these concussion effects become severe and are affecting results in other areas then the task is a Very Hard task during a half-hour session, and requires the patient to rest for two days, probably in a hospital. A severe head injury resulting in lost intelligence requires surgery and a week of hospital care. This operation is a Very Hard 4 task and involves the use of enzyme and nanite reconstruction of the lost brain matter.

Healing requires that injuries be treated first. If the damage that was inflicted was relatively minor (20 or less) then treatment would be an Easy Medical task involving simple bandaging or similar methods. Rates of healing thereafter depend on the conditions the subject is exposed to following treatment. Standard hospital charges are about 100ec per day depending on the services required during the convalescent period.

Healing Rates

1 Life per week of normal activity

1 Life per day of rest

2 Life per day in hospital

Standard Medical Costs

Hospital care	100 per day
Minor wound treatment	50
Standard wound treatment	100
Severe wound treatment	500
Life saving operation	10,000
Concussion treatment	100
Severe concussion treatment	500
Brain reconstruction operation	5000 per INT

Forensic medicine involves more advanced techniques than those in normal diagnosis procedures. Such investigation is often used to determine the exact cause of an injury, normally related to the death of a victim. In general forensic tasks are at the same difficulty level as the treatment for the particular injury or cause.

Drugs

One of the important aspects of medicine is the administering of drugs to patients. Many modern drugs are quick remedies for ailments and infections. Each drug has a Time factor which indicates the number of rounds before their properties come into effect. The Duration of the effects of these drugs is also noted.

To correctly administer a drug: Very Easy Medical

Failure indicates the drug doesn't affect the patient, and the patient takes 1d10 damage.

Anti-Pathogen

100ec

Time 10 minutes Duration 1 day

This is a broad-spectrum, active antiviral drug utilising enzymes and nanites to destroy known viral and bacterial infections. It also supplies a number of antibiotics as well.

Coagulant

50ec

Time 4 rnds Duration -

This drug is used to accelerate blood clotting while an individual is hemorrhaging.

Combat Drug

5000ec

Time 3 rnds Duration 8d10 rnds

Combat Drug is a steroid-based compound often used by combat personnel or people working in extreme high-gravity circumstances. A qualified medic usually administers it by injection, conferring on the recipient an extra 5d10 END, with corresponding alterations in StunEND, EXT and LIFE. It normally has no side effects except when more than one dose is used within an eight-hour period. These effects are cumulative per additional dose and are -10 DEX & -10 STR for 6d10 x10 minutes after receiving the additional dose.

Medical Drug

1000ec

Time 1 rnd Duration -

Injected by normal means, the generically termed 'Medical Drug' returns 2d10 life points to the subject. This product is the

result of advanced pharmaceutical processes. Field medics often use it to treat damage caused by severe injuries. It uses ultra-fast enzymes and viroids to reconstruct damaged body tissue. It provides the effects of a coagulant, painkiller and a stimulant as well.

Nanosurgeons

3000ec

Time 2 rnds Duration 24 hours

This drug uses specially engineered nanorobots to repair physical damage to an individual. It repairs damage at a rate of 1d10 points per hour. It also acts as a coagulant during its 24-hour duration.

Painkillers

50ec

Time 2 rnds Duration 2d10 rounds

These painkillers are a little more serious than soluble aspirin. They are injected by normal means and allow normal functioning of the subject for duration of effect, nullifying any pain the subject may otherwise experience from weapon damage, a graze, burns or other painful injury. If the patient is unconscious, however, painkillers will not restore consciousness.

Stimulants

100ec

Time 3 rnds Duration -

Stimulants are used to bring an individual back to consciousness. They can also be used to ease exhaustion effects by 5 points in a conscious individual.

Medical Equipment

When practicing medicine, a number of basic tools are required for medics to help their patients. Highly technical equipment can even replace a medic in most situations, although this is often very expensive.

Device	Cost (ec)	Weight (kg)
Autoinjector	1000	0.5
Auto Stun Rev Syst	350,000	1.0
Medkit	200	3.0
Pocket Medkit	100	0.5
Pocket Medscanner	500	0.1
Pocket Stun Rev Syst	250,000	0.5
Portable Autodoc	5000	3.0
Porta Medcomp	1000	2.0

Autoinjector

This device can be attached to a person for the purpose of automatically injecting drugs, either on request or through a triggering signal from a device such as a Medscanner or a medical computer.

Auto Stun Reversal System

This is very similar to the pocket version. It consists of a small box unit attached to a skin coupling by a thin cable. This device is designed to be worn by an individual to overcome the effects of neural or radiance field stunning as they occur. Similar to the pocket version, it also has ten charges. It is manufactured by the Aratani firm SIL and is not widely available, hence its expense on the open market. It uses some form of radiance fields (see description in Combat Equipment chapter) to perform its function.

Medkit

This is the standard kit for field surgeons and medics. It contains a variety of standard medical implements and supplies. It normally includes three doses of high-strength painkiller.

Pocket Medkit

This small kit is designed for first aid work with disinfectant, bandages, small splints and mild painkillers.

Pocket Medscanner

This small pocket device contains a number of small sensors specially designed for medical purposes. It helps in medical prognosis, conferring a -20 DM on the user's medical roll.

Pocket Stun-Reversal System

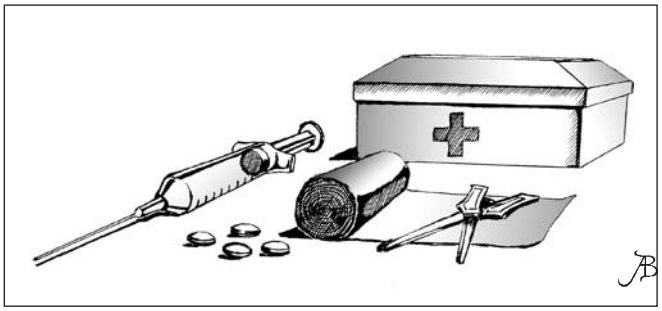
This small device is designed to reverse the neurological stunning effects caused by neural and radiance field stunners. It contains enough charges to overcome 10 stun effects. This device will only work with respect to biological beings similar to humans (i.e. Andorians, Draconians and Stotatl). It requires about four hours of recharge time via the mains to be fully charged. It is manufactured by the Aratani firm SIL and is not widely available, hence its expense on the open market. It uses some form of radiance fields (see description in Combat Equipment chapter) to perform its function.

Portable Autodoc

This portable, medical, robotic device folds up into a briefcase-sized carrying package. It is designed for field surgery when a qualified field surgeon is unavailable. It functions with a medical skill of 101. It has various medical tools and conventional drugs at its disposal. It has built-in medscanner, bioscanner, and passive IR vision as well as normal human-rating optics, touch and hearing.

Porta Medcomp

This portable medical computer is attached to a medical scanner and can be used for medical prognosis in unskilled hands at medical 50, or at one task difficulty level easier if used by a trained medic. It also can be used in skilled hands for recommended treatment and other medical knowledge for a -30 DM on medical task rolls.



Robots

Robots can range from automated factories to sentient machines. Their purposes can also vary greatly.

Technological civilization is often accelerated by the use of automated factories using computer-controlled robots. Most remote sensory probes use robotic brains which are either preprogrammed or controlled remotely.

Remote operation of robots is a common practice where Artificial Intelligence (AI) has not been developed, and can range from programmed instructions through to teleoperation control. Virtual reality or cybernetic control techniques are common methods of teleoperation.

Actual robotic intelligence is used in robots that require realtime functioning or greater precision than a human operator. Military hardware often incorporates sophisticated intelligence systems to fight in an autonomous fashion.

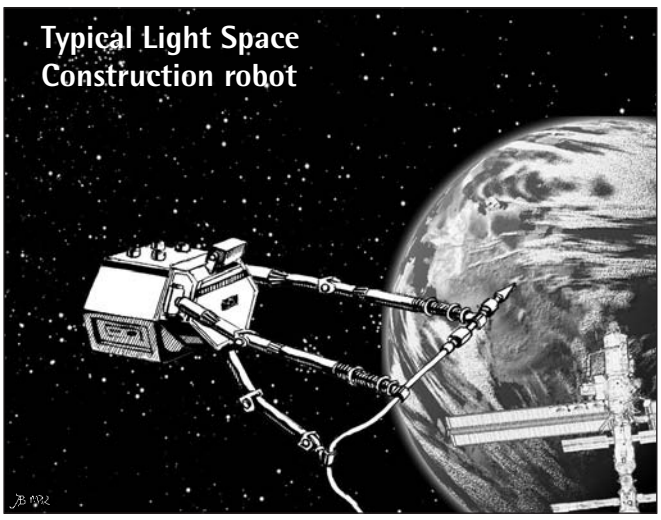
Advances in miniaturisation have led to the development of microscopic robots. These nanite robots are typically used in medical science for treatment of various internal injuries. Nanites are also becoming used in construction and repair work.

Artificial intelligence involves the ability of a robot to alter its own programming and functioning according to environmental conditions. AI will finally lead to the development of sentient machines that behave like a human.

Skills

Autonomous robots have the equivalent of human skills. They can be handled normally, but some robots have severe restrictions depending on how primitive they are. Extensive reprogramming may be required to do other tasks.

Some robots are also given human-rated STATs. This allows the robot to perform certain actions that are related specifically to STATs. STAT bases for skills cannot be used by a robot unless they are sentient. Sentient robots have this noted on the robot form.

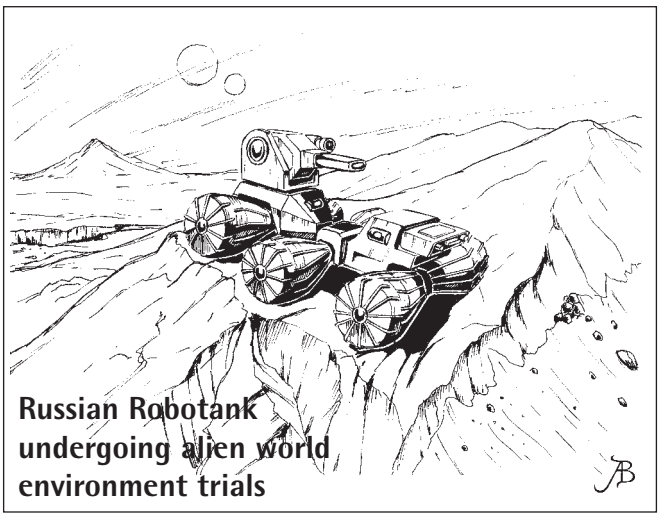


Typical Light Space Construction robot

Combat

Robots are treated much the same as characters in combat situations. They have an AR and DCP for evaluating damage done to them. Combat-oriented robots are often armed, with the details shown on the robot form. They use combat skills like normal characters. However, robots with no combat programming or self-preservation code will not conduct useful combat actions unless specifically instructed.

Normal robots will shut down after the first DCP number is exceeded in damage taken. However, a nanite self-repair system will allow a robot to continue to function (like a human) until it is destroyed.



Russian Robotank undergoing alien world environment trials

Aliens and Robots

The use of robots by alien races is quite varied. Races such as the Forerunners and Ilkanians don't really use robots at all. The Gildorph use biological robot analogues. The Aronhi and Draconians use them mainly for automated factories and remotely piloted drones. The Stotatl control their robots via psionic-sensitive interfaces. The Andorians have built advanced sentient robots; however, they have tended to avoid using robots since the Final War against the Mechs.

The Mechs are robots in most respects. They are the only known machine society operating within known space. Types range from large starships through to small nanite repair machines.

The Aratani have sentient machines, which in their culture are considered citizens. Details surrounding them and the technology they are based on is incredibly vague, as most reside in the closed city of Cydonia.

Robo Gun System

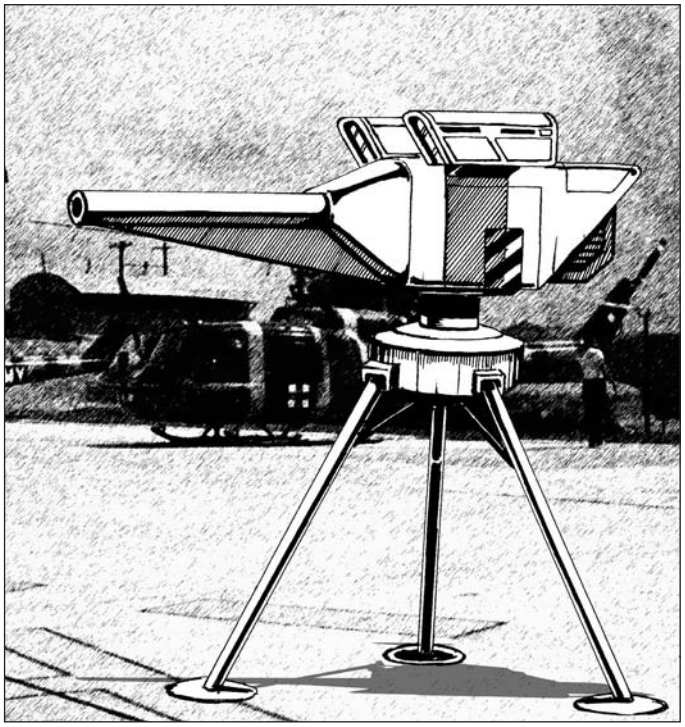
Company	**Colonial Military Systems**
Cost	**2000ec**
AR	**6**
DCP	**30/60**
StunEND	**30**
Spd	**none**

Skills
Gun **80**

Sensors
Visual & IR Motion

Weaponry
Fitting for two rifle-sized weapons

Devices
Coded AV Comlink



This system works by the attachment of one or two rifle-sized weapons such as light machine guns. With these weapons, when activated it will fire at any targets which it detects via its sensors, up to 500 m away (selectable up to this range). It will continue to fire until there are no more moving targets, and has a firing arc of up to 360° which can be minimised down to a straight line. By using a portacomp and an AV Comlink, these guns can be monitored, activated, deactivated, reset (range, firing arc & firing mode) or used as remote cameras.

Robo Mines

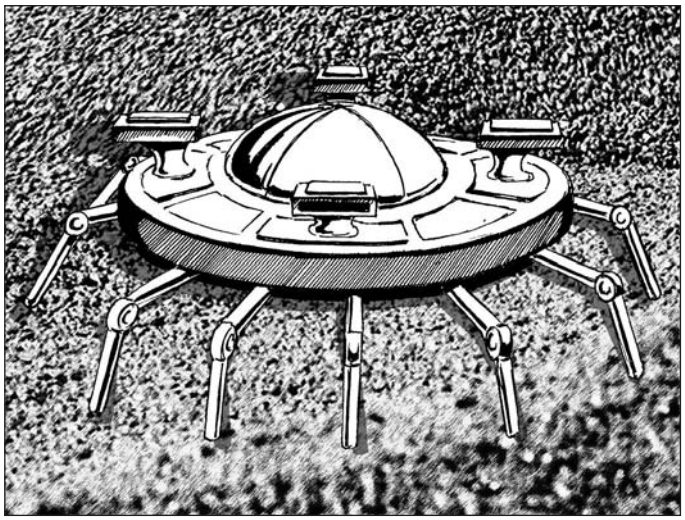
Company	**Colonial Military Systems**
Cost	**500ec**
AR	**5**
DCP	**10/20**
StunEND	**10**
Spd	**6m**

Skills
Sensors **80**

Sensors
Seismic
Pressure
Simple Visual

Weaponry
Fitting for one standard hand grenade

Devices
Coded Comlink



The Robo Mine is a cheap deployable mine system which utilises a hand grenade for its explosive. These mines resemble multiple-legged standard mines that are given a target locality to move themselves to and from the deployment point. They can be relocated, activated, deactivated or command detonated by code via a scrambled Comlink. Their sensors can detonate the warhead according to selectable weight criteria by pressure or seismic detection within one metre. The Sensor skill indicates the chance of recognising criteria properly if they are met. A tactical portacomp attached to a scrambled Comlink could control a large number of mines at once for use as a flexible configurable minefield.

Security Robodog

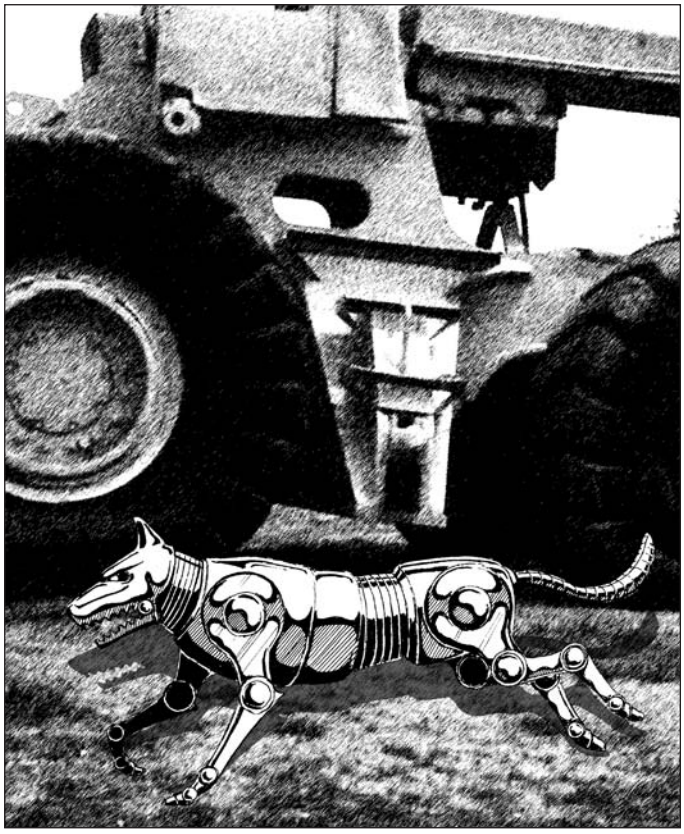
Company	Blackstone Research
Cost	200,000ec
STR	100
DEX	100
CON	100
INT	50
AR	6
DCP	100/200
StunEND	100
Spd	15m
Skills	
Combat	100
Security	100
Stealth	100
Hunting	100

Sensors
NIS vision
Exc Hearing
Exc Smell
Std Touch
Std Taste

Weaponry

NAME	DIFF	REACH	AM	DP	STUN
Bite	Hard	0	3	5	IV/XIV
Claw	Mod	1	3	3	IV/XII
Leap	Hard	0	4	7	V
Charge	+1 DP per 5 m/s				

Devices
AV Comlink
Climbing claws
Internal Storage unit – 5 kg limit
Retractable Internal manipulator – Can be used to handle objects like human hand
Radiance Field Unit – Second Stun number indicates figure when this is being used



This robot was the inspirational design of Jonathan Wolf, the founding Director of Blackstone Research. He incorporated modern hardware into a unit similar to a standard Robodog. Rather than functioning as a watchdog come automated pet, the Security Robodog was meant as a mobile security system capable of actually dealing with intruders and pursuing them if necessary. This unit helped spearhead Blackstone into the commercial robotics market. This unit is also sometimes used by Police units as an armed canine partner. Ralph, as its commonly known, resembles a silvery metallic automated canine similar in appearance to an Alsatian.

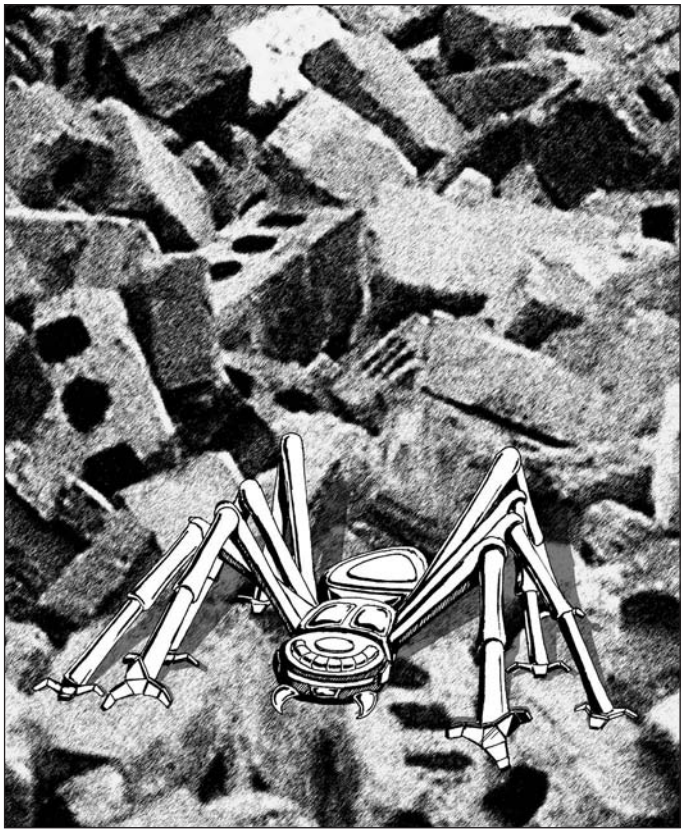
Recon Spider

Company	**ARES**
Cost	**10,000ec**
STR	**10**
DEX	**100**
CON	**20**
INT	**10**
AR	**8**
DCP	**20/40**
StunEND	**50**
Spd	**10 m**
Skills	
Recon	**50**
Sensors	**50**
Stealth	**200**
Surveillance	**50**

Sensors
NIS vision
Exc Hearing
Exc Smell
Exc Touch

Weaponry
None

Devices
scrambled AV Comlink



This small robot resembles a rather large mechanical spider, and is mistaken for one most of the time in dark areas. It folds up into a small roundish package about the size of a hand grenade. It is normally used by security, criminal and intelligence organisations for reconnaissance and surveillance work. It maintains contact via a scrambled AV Comlink.

Although this robot might appear to be a stunning piece of work from ARES, who have a strictly limited range of consumer robots, it must be noted that it seems to be an inferior copy of the Recon Spider marketed by Striker Industries. The development of this unit may have been a counter-demand by American Military procurement agencies to develop a similar unit with some of the characteristics of the more sophisticated military robotics fielded by SIL following the Martian Wars.

VR RV Kit

Cost	**30,000ec**
Weight	**5.0 kg**

This system is similar to that of the Neural RV kit, but uses an advanced virtual reality system to allow the operator to control the robot, rather than an RV neural jack. The VR system is used by the operator to feed sensory information in a form that is easily comprehensible. However, the system is not as dynamic as one based on a neural jack.

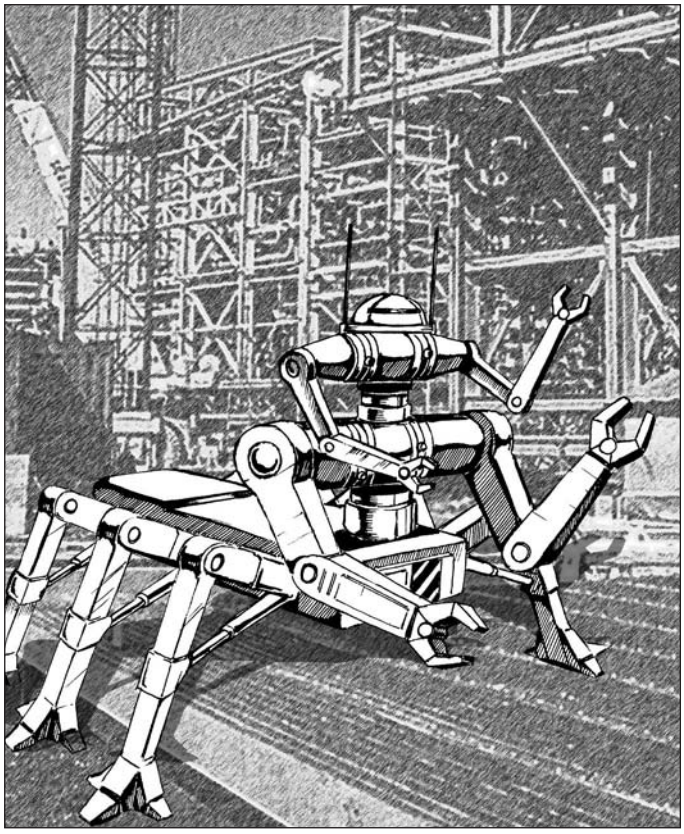
Mechanical RC

Company	**Serious Cybernetics**
Cost	**100,000ec**
STR	**200**
DEX	**100**
CON	**400**
INT	**10**
AR	**10**
DCP	**400/800**
StunEND	**500**
Spd	**1 m**
Skills	
Programming Space	**50**

Sensors
NIS vision
Exc Hearing
Std Smell
Std Touch

Weaponry
None

Devices
Special neuralised AV Comlink



The Mechanical RC is designed for a neural-connected teleoperator. The connection is close to actually being there. The RC has six legs for stability, and is equipped with two heavy lifting arms and two light work arms. The RC is capable of lifting up to 10 tonnes, or carrying 1 tonne of gear. It has autoadjusting hardware for different gravity environments and is therefore unaffected by such differences. The RC can also have autonomous programming up to its limit (50).

These robots are a popular design and can be found working on all kinds of construction sites throughout human space. Many altered versions have equipped these robots with built-in tools and more programming capacity to cope with site-specific technical

Neural RV Kit

Cost	**50,000ec**
Weight	**3.0 kg**

Robots can be directly linked to a person with an RV-style neural jack. This allows the operator to directly control the robot's activities. It also means the operator can directly supplement the robot in areas that its programming doesn't cover.

The kit involves installing a specially modified AV Comlink to the motor and brain functions of the robot in question. The cost includes this installation. The operator's unit includes another AV Comlink unit with processing units to handle the data input/output

Security Systems

It is often the case that some organization or individual has something valuable that they want to protect. Sometimes it becomes impractical to carry valuables around. Instead a building is used to house valuables. Advanced electronic gear is often used to resist attempts by intruders to gain possession of valuables.

Complex security systems often involve the use of sensory systems either to trigger alarms or as part of a surveillance system. Large security systems will be run from a central computer and will often be manned by a trained security guard. Modern systems may also include robots as mobile surveillance devices.

Many banks offer the services of safety deposit boxes. These can be used to house whatever the client wishes to store in them. Costs vary according to box size. However, it is typical to charge $100 per month for a standard 10 litre box.

Security Devices

Device	Cost (ec)	Weight (kg)
Auto Lock Opener	250	0.25
Computer Lock	100	0.5
Computer Lock Hacker	1000	0.5
Micro Security Camera	1000	0.05
Motion Alarm	50	0.4
Padlock	10	0.05
Small Safe	10,000	50
Surveillance scanner	2000	0.3

Auto Lock Opener

This device is designed to aid in opening various mechanical locks. It mounts a variety of lockpick tools. The device resembles a box with a pistol grip and control trigger mechanism. It gives an effective reduction in difficulty equal to one task difficulty in the hands of a skilled user. Normally these units aren't publicly available. They are typically used by Police, Detectives and Security Consultants, although criminal elements also get hold of them.

Computer Lock

This is an electronic lock device that uses both electronic security cards and a number combination to gain entry. Additionally such locks can be linked to a central computer system. The use of a co-linked AV camera can help verify identities.

Computer Lock Hacker

This small device is an optimised computer with code-breaking software installed. It is inserted in the keyboard jacks of most computers. Alternatively, with networked systems it can be plugged into a network jack.

Micro Security Camera

This is a small camera designed for discrete surveillance purposes. It is designed to take full-colour visual images as well as audio input. This information is normally transmitted via fibre-optic cable within a building complex. The unit can also be fitted with a coded AV Comlink with a range of 3 km for the transmission of its data. This device can be easily detected in Comlink mode and therefore is not used much by espionage groups. Police stakeouts often involve remote monitoring using such devices.

Motion Alarm

This palm-sized unit is a motion sensor for installation in buildings. If it is triggered it emits a high-pitched alarm until it is deactivated by way of its numeric keypad. It is powered by mains or internal battery depending on mains power availability.

Padlock

The conventional padlock has not changed much in hundreds of years. Nevertheless, advances in materials have seen modern locks being constructed of advanced composites that are more resistant to damage. The mechanical locks have become harder to bypass (Very Hard task), but cheaper metal locks are still sold using standard locking techniques (Very Easy through to Hard tasks).

Small Safe

This is a typical safe with a mechanical dial combination lock. It is designed for small businesses or for household use. It can hold about 40 litres of goods.

Surveillance Scanner

This pocket device is used to scan a 3 m area for signs of transmissions from bugs or surveillance micro-cameras. It also picks up electrical emissions and magnetic fields, allowing the user to quickly identify other hidden devices using electrical power. This electromagnetic feature is displayed as a 3D schematic on a small LCD screen. The device can also be linked to other sensors or analysis equipment as desired. The scanner provides a -1 DIFF benefit in finding surveillance devices.

Sensors

Sensors are rather important for many operations, and the combat section mentions a number of the uses of sensory devices. The purpose of sensors is to make environmental information more accessible to the user.

Sensors such as thermographic imagers can be used (conditions permitting) to view objects which cannot normally be seen because of obstructions. Such sensor systems can negate the hidden location modifier and the cover modifier that occur in combat.

Since sight is the primary sense used in most situations by humans, reduced visibility can increase the difficulty of seeing detail at range. Reduced visibility can be from a lack of light or from too much illumination. Various vision sights are capable of counteracting visibility problems, depending on the target object and the reason for the visibility difficulties. It is normally an Easy task to see detail using vision devices. The task difficulty increases in the table below are for those with image-enhancement electronics. Double these difficulties for normal vision systems. A light-amplification system improves visibility by one level, except in complete darkness. Illumination devices are also used to improve visibility, and are often combined with vision systems.

Visibility Table

Visibility	Example	Difficulty
Normal	Normal	normal
Dim	Misty	+1 diff
Partial	Nighttime with moonlight	+2 diff
None	Moonless night	+3 diff

Sensor Equipment

Device	Cost (ec)	Weight (kg)
Artificial Nose	100	0.1
AV Camera	300	1.0
Beacon Tracker	200	1.0
Binocs	100	1.0
Biosampler	2000	2.0
Bioscanner	1000	1.0
Cam Flash Module	50	0.3
Cam Imaging System	100	0.4
Combination Imaging System (CIS)	2000	2.0
Illumination Flaregun	50	0.5
Imager	400	1.0
IR or UV spotlight	150	3.0
IR or UV torch	50	0.5
Monocular Thermo Imager	2000	0.2
Monocular Ultravision System	3000	0.2
Normal Imaging System (NIS)	5000	2.0
Pocket Locator/Scrambler	400	0.5
Small Radio Beacons	10	0.01
Thermo Imager	600	2.0
Torch	20	0.2
UV Camera	800	2.0
Visicam	180	0.1

Artificial Nose

This small device is designed to capture smells and odours in the air. A particular sample can then be analysed using a chemical laboratory.

AV Camera

An AV Camera is commonly known as a camcorder. Recordings are made to use datacubes (see Computer section) and can be viewed and edited on any portacomp or better computer, or on any other AV playing equipment. Most good-quality AV Cameras have a low light setting which extends their sensitivity into the lower range of the infrared spectrum between 720 and 900 nanometres wavelength. This allows the camera to operate in moonlight conditions, rendering a grainy low-contrast image, or with the aid of an IR illumination source the camera can see in monochrome as though in broad daylight. IR imaging is not to be confused with thermal imaging, which operates much higher – above 900 nm into the microwave region of the spectrum.

Beacon Tracker

This specially designed radio receiver is used to track a radio beacon. It will indicate the direction and range of the beacon that is being monitored.

Binoculars

The principle behind the operation of binoculars hasn't changed much. Current binoculars provide magnification of up to 50 times and have an auto-focus system, rangefinder and possibly a built in AV camera.

Biosampler

This device is designed to test whether biological material such as plants or meat is suitable for human consumption. It will indicate what is safe and what is toxic.

Bioscanner

This self-contained device has some of the features of the chemistry minilab. However, it is designed to help identify biological specimens. It requires a reference datacube on biology to be obtained and inserted into its data port. A skilled biologist can use this device to determine some of the biological features of an unknown lifeform.

Cam Flash Module

This is the conventional illumination device for overcoming low light conditions when using a camera. It can act either as a high-power flash unit or as a bright normal illumination system.

Cam Imaging System

This device is designed to fit onto the end of the lens of a camera. It allows long-distance zoom and provides computer image enhancement for low light conditions.

Combination Imaging System (CIS)

The CIS is an electronic imaging system combining all of the features of an imager, thermal imager and an ultravision system into a single unit.

Illumination Flaregun

This is a standard flaregun for firing an illumination flare 100 m into the air. The flares normally stay aloft for about five minutes and provide illumination for ten minutes. They illuminate a 100 m radius area, increasing visibility by two levels. For a further 200 m radius the visibility is increased by one level. Illumination flares cost 40ec each.

Imager

An imager is the electronic equivalent of binoculars. It provides the same functions but also includes a digital image-enhancement system to provide greater clarity of image at range. The enhancement system is also capable of light amplification, improving visibility by one stage if light conditions are extremely low. Light amplification won't work in complete darkness. The imager also comes with a data port for connection to a recording device.

IR or UV spotlight

Spotlights operate in a similar fashion to their counterpart torches, but provide a much greater illumination at range using a tighter beam of light rather than a wide-angle cone of light.

IR or UV torch

These devices are similar to normal torches. However, they illuminate in either the IR or UV spectrum. They are designed to provide illumination for use with ultravision or with an extended IR vision system.

Monocular Thermal Imager

This is a miniaturised thermal imager worn over one eye. It allows the user constant vision in the IR spectrum. It also comes with a data port for connection to a recording device.

Monocular Ultravision System

This is a miniaturised ultravision system to be worn by the user over one eye, allowing constant vision in UV. It also comes with a data port for connection to a recording device.

Normal Imaging System (NIS)

The NIS is a more advanced version of the CIS. It also includes a range finder, a polariser for flash protection and a built in IR/UV illumination system.

Pocket Locator/Scrambler

This device is used to find radio bugs or beacons within about 5 metres. It can also send out white noise interference on the same frequencies as the detected bugs, effectively jamming their signals.

Small Radio Beacons

These peanut-size radio transmitters are designed for use in tracking objects such as animals or vehicles. By attaching them to the object of interest and turning them on, they can be tracked using a beacon tracker.

Thermal Imager

This operates on a similar principle to an imager. However, it picks up infrared radiation (heat, IR) given off by objects. This is mainly used during night conditions, where heat signatures from animals and people are more obvious. It also comes with a data port for connection to a recording device.

Torch

This is a standard electric-powered illumination device. However, the use of an advanced powercell means that this device can function for several days before requiring a recharge.

UV Camera

Similar to a AV camera in almost all respects, except that its optical sensor is designed to operate in the UV spectrum below normal vision. Typically it requires a UV illumination source in order to create a reasonable image. However, it will also quite easily detect objects which fluoresce, such as deep-sea creatures, glow-worms, and certain radioactive isotopes.

Visicam

This is a single-frame image camera used in much the same way as conventional cameras, but employing digital methods to take very high resolution images that are stored on a datacube.

Vehicles

Since the invention of self-propelled vehicles, modes of transport on planets have been dominated by such vehicles. As technology advances new methods of propulsion enable faster speeds and operations in other environments such as water and air. Some developments have involved amphibious or triphibian vehicles.

Vehicle Collisions

Sometimes collisions involving vehicles and the like occur, causing damage to all involved.

Damage Potential (DP) is 1 per 10 km/h for car-sized mass
Armour Modifier (AM) 1 +1 per 30 km/h for car-sized mass

The rammed object takes full damage,
while the rammer takes only half the damage.

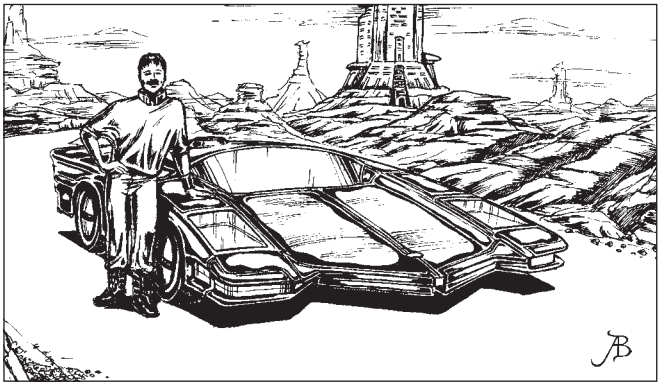
Passengers not wearing seatbelts take half the damage that the vehicle they are in is taking. They can save themselves on a Hard check of STR or DEX, and only take half the damage they were going to receive otherwise.

If a vehicle is destroyed, excess damage is distributed amongst the occupants and the contents. The rammer can never take more damage than it has done to the rammed object.

For ramming, hitting and evasion will use vehicle skill or DEX checks. A driver or pilot can always attempt a Very Hard skill check to reduce the damage suffered during the collision.

Vehicle Combat

General combat involving vehicles is fairly simple. Passengers receive the full AR of the vehicle if they are being fired at. Firing from a vehicle moving at more than 50 km/h imposes a difficulty increase of +1 level. Impose another +1 level per 200 km/h over 300 km/h. Firing at a moving vehicle imposes a +1 level increase per 200 km/h motion of the vehicle target. Aiming at passengers is a normal difficulty, while firing at the vehicle in general is one difficulty easier.



Movement

Vehicle movement is handled in a different manner to that for people. Most vehicles take some time to reach their full speed. The A/D entry represents the acceleration and deceleration of the vehicle. This entry is given in metres per second.

Turning and avoiding obstacles at speed results in a driving task to complete successfully. Only excellent drivers are able to take corners without slowing down when going at high speed.

Turn Type	Base Difficulty
Slight (<45°)	Very Easy
Moderate (45°-90°)	Easy
Significant (90°+)	Mod

Speed Turning Difficulties

Ground vehicle	+1 per 50 km/h
Grav vehicles	+1 per 100 km/h

Powercells

The vehicles on the table above are fitted with electric motors which run on powercells. One set of cells will last for 1000 kilometres. These cells cost 1000ec each, and can be recharged at a cost of 50ec each. Civilisations do not always use electric motors; for example, 20th century Earth used hydrocarbon-burning combustion-type engines for most vehicle transport. At higher technologies, small-scale nuclear or fusion reactors may power many vehicles.

Autopilots

On many crowded worlds with mass travel by individual or family vehicles, computer-controlled autopilot systems may have been developed to make transport more efficient and less hazardous.

Autopilot Table

Type	Skill	Cost (ec)
Central Traffic		
Computer Controlled	-	1000
Self Contained	50%	2500
Complex 'Chauffeur'	70%	5000
Advanced	100%	20,000
Deluxe	150%	60,000

Vehicle Table

Air Vehicles

Type	Cost	Speed	A/D	AR	DCP	People	Cargo	Cells	Skill
Grav Cycle	40,000	1000	20/40	5*	110/220	2	100kg	6	Aircar
Light Aircar	10,000	110	3/6	5	100/200	4	400kg	4	Aircar
Light Plane	65,000	400	10/10	4	200/400	5	1000kg	5	Aircraft
Standard Aircar	100,000	1000	15/35	7	250/500	4	100kg	8	Aircar
Paraglider	1500	90	1/1	2#	40/80	1	50kg	-	Aircraft

Ground Vehicles

Type	Cost	Speed	A/D	AR	DCP	People	Cargo	Cells	Skill
Bicycle	200	40	1/3	5#	35/70	1	20kg	-	DEX
Cyclone Street Cycle	561,500	500	10/20	8*	1000/2000	1	200kg	8	Groundcar
Normal Groundcar	5000	100	2/4	3	100/200	6	500kg	1	Groundcar
Robosteed	10,000	100	2/4	4*	120/240	2	100kg	2	Ride
Snow cat	24,000	100	1/4	6	200/400	6	800kg	6	Groundcar
Snow mobile	2000	200	4/8	4*	100/200	2	50kg	2	Groundcar
Sports Groundcar	10,000	300	4/8	4	150/300	4	200kg	4	Groundcar
Streetcycle	4000	300	5/7	4*	100/200	2	100kg	2	Groundcar
Supremo Sportscar	121,450	500	5/9	6	200/400	4	200kg	8	Groundcar
Utility Van	8000	150	2/4	5	200/400	12	3000kg	2	Groundcar

Marine Vehicles

Type	Cost	Speed	A/D	AR	DCP	People	Cargo	Cells	Skill
Aerosub	12,000	150	2/4	8	50/100	1	10kg	4	Marinecraft
Diving Sled	6000	45	1/1	3	65/130	1	150kg	1	Marinecraft
Pleasure Launch	20,000	50	1/1	4	200/400	10	500kg	10	Marinecraft

Note

Cost is in european credits (ec)
Speed is in kilometers per hour (kph)
A/D is in meters per second (m/s)

\# AR for vehicle only
* AR for vehicle and person hiding behind such a vehicle

Terran History

The history of space expansion of the nations of Earth plays an important part in the present configuration of nations and their current status and relations. The details of conflict and politics on Earth, especially during the early twenty-first century have been kept deliberately vague in order to fit with current developments on Earth during the twentieth century.

The GM should develop an Earthbound history that best fits with the data supplied in this section on history and nations and the current developments in international politics. The expansion into space before Mech contact is kept slow because of current trends in the space sector and the way countries are allocating funds to space applications.

Forerunner Contact 1945-2012

The Forerunners began covert contact operations with the United States Air Force (USAF) following the conclusion of World War II. Although the Forerunners didn't provide any real technical assistance to the Americans, they did provide information that helped America retain its technological might against its competitors. The Americans also learnt that the Forerunners were here to protect fledgling Earth from attack from some hostile civilisation at large in the Galaxy.

Eomer Expedition 2005

In 2003 this 1-km-diameter asteroid was detected. Since it had a cometary orbit and would approach within easy reach of Earth, plans were drawn up for an international manned expedition. America, Europe and Russia with the launching aid of China, Japan and Kazakhstan were to conduct the mission. Upon arrival, the mission geologists discovered the mineral riches of this nearly pure cosmic lump of metal. With the impending sun dive, the expedition left with only large samples. However, the Americans couldn't pass up the opportunity, and a joint NASA/USAF mission returned in 2006 after the sun dive to use high-yield thermonuclear tamped weapons as a crude motor to steer Eomer into an eccentric Earth orbit.

Eomerian Conflict 2007

When America claimed the rights to Eomer, the other nations involved in the Eomer Expedition contested this heavily. Europe and Russia were determined to place mining teams on the 'roid as a protest. China's claim was rejected with indifference by America. Kazakhstan entered into armed conflict with Russia, while Japan remained content following American promises of Japanese involvement.

Seizures and personnel conflicts on Eomer between American, European and Russian camps resulted in the launching of troops to Eomer. The conflict escalated as some other nations used terrorist attacks to hinder supply and troop launches. Political debate was rife. Eventually some nations used converted ICBMs to destroy orbiting strategic satellites to inhibit the space powers for their own interests. China was so outraged that it used a full squadron of interceptor aircraft to shoot down Japanese rockets launched with supplies for the Americans.

The conflict was eventually resolved by an accord between America, Europe and Russia to claim equal rights to the resources of Eomer. Following the accord, these nations turned their attentions to Earth-based tensions, and the conflict finally died down with the combined efforts of these powers and their other allies. However, China continued to harbour extreme resentment until monetary reparations were made in 2014.

Strategic Defence Initiative 2012 onwards

With the withdrawal of the Forerunners due to continuing decline, the American military complex began to implement the plans laid down under the Strategic Defence Initiative of 1983. However, it was a cover to develop planetary defence weapons against attack from hostile extraterrestrial forces.

Mars Mission 2015

An international effort was finally conducted to land men on Mars and begin a sustained exploration programme. The initial mission established a small ground base and an orbital satellite network. Subsequent missions established further ground bases and an orbital depot on Phobos.

Mech Scout Encounter 2050-2051

An archaic Mech class II vessel entered the Sol system and attempted to bombard Earth with nuclear weapons. However, forewarning from deep-space probes (Oort Expedition probes)1000 AU out gave Earth enough time to prepare. The United States, with even earlier warning from the Forerunners, had 'Star Wars' configured for planetary defence. With the full space assets of Earth, the Mech vessel was driven off for several months. Various space weapons were constructed including three Orion-type destroyers. With supreme self-sacrifice, Terran forces managed to destroy the Mech vessel while only receiving minimal damage to Earth from nuclear weapons.

Following this, many nations on the planet expanded rapidly into space and developed space-based industries to support a greater space-based military capable of defending Earth against a larger Enemy force.

Aratani Contact 2052

General Harry Carter in command of USS American Vengeance discovered the ruins of a civilisation on Mars. However, almost a million individuals had survived in cold storage since the ruin of this civilisation. The world was stunned when the leader of these people addressed the United Nations upon the return of USS American Vengeance to Earth with representatives from Mars. These survivors were humans from Earth who had a space-faring civilisation 12,500 years ago which had been destroyed by an attacking Mech force. Some of these Aratani humans managed to survive since then in storage on Mars.

Martian Settlement 2053

Following contact with the Aratani the American Orion was used to establish a military presence on Mars. Shortly afterwards, colonists were shipped there to establish an industrial base. The government established the ARES Development Corporation to develop the infrastructure required for a stable colony. Later ARES became an arms manufacturer. After that the planet was claimed by America until independence in 2144.

Space Industrialisation 2052 onwards

The UN treaties concerning space were discarded as nations expanded into space. Military complexes and territorial claims sprang up throughout the solar system. Many nations harnessed solar power from satellites to reduce environmental pollution on Earth. Many polluting industries were shifted into space closer to resources obtained from space.

Unmanned Stellar Exploration Begins 2095

Unmanned probes to other stars were finally launched, beginning with ESA's Daedalus 1 which was launched towards Alpha Centauri in 2095 and passed through the system in 2140. Sensor telemetry revealed in 2145 that Alpha Centauri had a well developed planetary system and what appeared to be a habitable planet.

The Americans, however, went one better by launching a laser-propelled solar sail probe called Starwisp towards Barnard. Although launched in 2120, it arrived in Barnard in 2150 in less time than the ESA Daedalus took to travel a shorter distance.

Following these missions plans were drawn up for manned missions using new propulsion technologies developed in the intervening decades. However, the development of hyperdrive occurred before any of these missions could be implemented, although many of them were nearing completion in construction.

Martian Wars 2140-2144

The settlers of Mars began to view themselves as Martians. They felt they were being oppressed, since there was no recognised civilian government on the planet. Refusal by the stateside administration for a civilian democratic government finally forced the settlers to establish the Martian Confederation and declared their independence from America in 2140. America was outraged at the possibility of losing their prime space asset. The 1st Aerospace Battalion of the United States Aerospace Marines, led by the distinguished Colonel Bryan Dexter, was launched immediately to take firm control of the rebellious colony. However, resistance to American domination was fierce and resulted in an armed conflict. Within a short space of time the 1st was defeated in a ground action of unknown details.

America launched a full-scale war effort involving USAN and USAM space forces and other assets for use on Mars. Full-scale war in space and on ground lasted from 2141 to 2144. This period saw America resort to nuclear weapons for orbital bombardment and for use against hardened space localities. The bombardment of the Aratani city of Cydonia heralded a turning point in the war. The Aratani revealed their military technology by surviving the bombardment intact and annihilating the bombardment fleet with an unknown energy weapon of awesome destructive power. The fate of the 1st was not discovered until 2143 when the 2nd Battalion was ambushed by an unknown Martian unit. Later conflicts with this unit identified that it was using American-derived tactics and equipment. Finally a trap was sprung on the mystery unit. After a pitched battle, the hostile battalion destroyed two divisions of American forces before it was routed. Amongst the enemy casualties, most were ex-American marines of the 1st Aerospace Battalion. One of the bodies proved to be that of Colonel Dexter himself. Stateside reaction to his defection was violent.

The war was finally ended in the Battle of Deimos in 2144 where the Martian Navy with the aid of Aratani forces destroyed the USAN fleet in a decisive victory.

This crushing defeat led to the ousting of the current administration in America. The new president promptly took measures to ease diplomatic tensions by signing a peace treaty with the Martian spokesman. President William Gordon went further by getting the Confederation of Mars recognised as a member of the UN. This swift action has seen most of the damage healed between the two states.

Initial Hyperdrive Missions 2155-2156

America was the first nation to mount a hyperdrive mission to another star system. The mission of USS New Horizons to Proxima Centauri revealed a star system that had undergone significant planetary-scale engineering. The mission returned under a veil of secrecy.

Shortly thereafter several NATO missions were launched to investigate other nearby systems. These missions were extremely costly, using multiple hyperdrives to cross the distances involved. NS Independency discovered a wrecked alien vessel at Ross 128 (later identified as a Stotatl frigate), while an ESA mission to Wolf 359 found the debris of huge Mech force.

Outposts were quickly established in the explored systems, some of which became military bases, such as Wolf 359 for Europe (i.e. France, Germany and the UK) and Barnard for the Americans.

Interstellar Expansion 2160 onwards

With the release of the improved hyperdrive by Doctor Anderson, the viability of interstellar expansion became realistic. Settlement of the habitable world around Alpha Centauri was begun in 2161, while American exploratory fleets discovered a number of habitable worlds, including those they later colonised at Tau Ceti and Arcturus. The Americans made contact with the Forerunners at Zeta 1 Reticuli and the Daryne and Orcoks at Zeta 2 Reticuli in 2161. Tentative contact was made with the Coalition by Lieutenant John Dorn of USAN and his survey team on Daryn when they met Keldar while supplying aid to the Daryne in destroying the Mech war machine Arsarot.

Real contact with the Coalition was not begun until Draconian traders made contact with the fledgling German colony in the Omicron 2 Eridani system during 2162.

Serpenti War Begins 2170

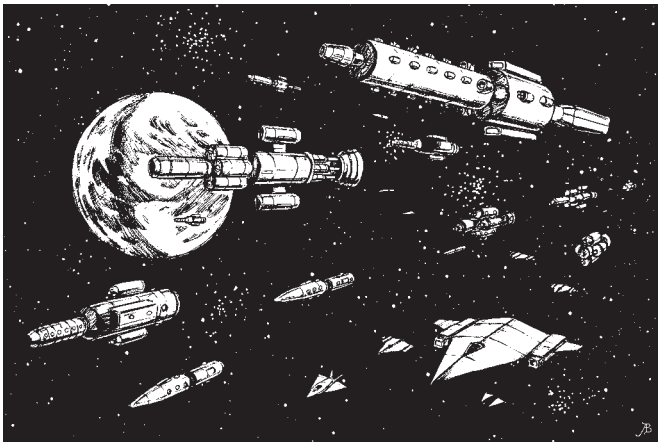
Within the volume of space called the Serpenti Quadrant beyond Arcturus, several expanding Empires share borders. Conflict began over possession of a number of mutually habitable worlds between Terrans, the Stotatl empire and the Aronhi Empire. The war soon became one-sided as the Stotatl Empire put pressure on all its opposition. Initial hostilities between Terran nations and Aronhi clans were forgotten, and some co-operation began.

Aronhi Surrender 2175

To prevent further death and destruction at Stotatl hands, the Aronhi Patriarch surrendered Aronhi space to the Stotatl Empire. Shortly afterwards the Aronhi rebelled against Stotatl control. Guerrilla warfare and resistance broke out all over Aronhi space, keeping Stotatl forces from reinforcing their efforts against Terran space.

The Battle of Arcturus 2176

The Stotatl Empire engaged NATO forces formed up at Arcturus in a bid to break through the bulk of their forces for a full-scale assault on Earth. In a battle lasting almost 2 months, Terran forces finally came out victorious, but only through a well co-ordinated and well supplied defensive action. Some Stotatl assault forces managed to get into the Sol system but were quickly dispatched by reserve NATO forces and other Terran forces.



The Terran Alliance 2177 (present)

Conflict with the Stotatl did not end with the Battle of Arcturus. Intelligence information has revealed that the Stotatl are regrouping and waiting for reinforcements from the heart of their empire. Out of consideration for future efforts the United Nations has voted to establish to form the Terran Alliance, a council attached to the United Nations to co-ordinate military activities with allied alien races.

Timeline

1967	Space Treaty signed
2005	Eomer Expedition
2007	Eomerian Conflict
2015	First expedition to Mars
2020	Oort Expedition probes
2050	Arrival of Mech vessel ship in Earth orbit
2051	Defeat of Mech vessel by NATO ORION's
2095	Launch of ESA Daedalus #1 to Alpha Centauri
2120	Americans Launch Starwisp probe to Barnard's Star
2140	Martian War begins
	Daedalus #1 arrives at Alpha Centauri
2144	Martian War ends
2150	Starwisp arrives at Barnard's Star
2151	Dr.G.McCarrison builds primitive agrav unit
2153	Beginning of Project Agrav
2155	Von Hault Hyperdrive completed
	First Hyperdrive Expedition by USS New Horizons
	Follow up mission to Barnard's
	Joint American British Russian mission to Ross 128
	Alien vessel found at Ross 128
2156	Joint American Russian Base Established on Proxima 3
	ESA missions to Wolf 359 & Alpha Centauri
	Battle ground of destroyed Mech fleet found at Wolf 359
2157	Anderson Hyperdrive governor released
2159	Martian Hyperdrive Experimentation
	Interstellar Survey Bureau (ISB) formed
2160	Anderson releases improved Hyperdrive
2161	British settlement of Victoria begins
	Contact with Forerunners at Zeta 1 Reticuli
2163	Discovery of Boristov
2164	Settlement of Boristov begins
2170	Beginning of Serpenti War
	Anderson releases Grade 3 hyperdrive
2173	First Stargate built between Earth and Victoria
2175	Aronhi Empire surrender to the Stotatl
2176	The Battle of Arcturus
	Aratani corporates release Grade 6 hyperdrive
2177	The Terran Alliance is formed

22nd Century Earth

Humanity still remains a splintered race, with hundreds of nations existing on Earth. The nations themselves have remained fairly similar in configuration to those of the late twentieth century. Many nations such as the republics of the former Soviet Union have joined the European Community. Large economic power blocks have formed in the northern hemisphere following the Mech attack of 2050. With the expansion into space, it is these new 'super powers' that have been best able to exploit space resources and colonise habitable planets around other stars.

Earth has had a turbulent history during the 21st and 22nd centuries, which has kept tensions high and stalled the processes of world unification that had been born in the 20th century and earlier. The later half of the 21st century has seen many major wars break out across Earth for various reasons. These wars have involved the use of nuclear weapons in parts of South America, Africa and the Middle East.

Resolution to these disputes are far from complete, but the slow march of progress in science and medicine has healed many wounds relating to poverty, hunger and disease.

The Earth's population has swollen to an enormous level, 40 billion, but Earth is no longer suffering the environmental ravages associated with such a high population

Earth in the late 22nd century is relatively liberal, with all of its inhabitants enjoying a standard of living at least matching that of working class citizens of western countries in the late 20th century.

With the huge burst of interstellar colonisation, unemployment is virtually negligible as people are departing for new colonies to take up the frontier challenge, even as simple labourers. Many nations are exporting their populations to new colonies to ease their population pressures, and to aid in raising the standard of living. Some countries such as China and India are undertaking forced relocations, which have raised violent tensions.

Crime – violence and corruption – is still major problems in human society, and no suitable solutions have arisen, although many have been tried. For the average citizen the streets of Earth are still almost as dangerous as they were at the close of the 20th century. The United States has found a suitable solution to dealing with violent offenders without resorting to the death penalty. It exports such criminals to its colony at Arcturus, where they serve their sentences within the Colonial Marines. Completing the sentence in the Marines without yielding to a horrible death at the hands of the local fauna entitles the criminal to become a citizen of Arcturus (deportation means loss of US citizenship permanently) and a small land grant. Some less violent criminals take this option voluntarily to get a new beginning away from their sordid pasts on Earth.

Nations

America

The United States became less important in world affairs as other nations developed strong industrial economies that rival the USA. America has tighter economic relations with its neighbours Canada and Mexico, and its economic partner Japan. In the industrialisation of space, America's power has slipped as other nations have gained manned space technologies. With the Eomerian Conflict in 2007 America was forced to make compromises.

However, with the Mech conflict in 2050 it became evident where America had spent its money and why it suffered economically. Following the defeat of the Mech vessel, America rapidly expanded into space for resources and industrial and military purposes.

Today America maintains a strong presence in space with the Aerospace Marines and the battle wagons of the Aerospace Navy. With its aggressive colonisation campaign and single-minded determination to have the greatest military force amongst Terran nations, the United States is becoming a power to be reckoning with, far eclipsing its historic place in world affairs. The US has made overtures to both Canada and Mexico for unification into a much larger United States of North America.

Arabic States

With the drying up of oil reserves, these countries have invested heavily in space-based corporations. Local industries have also geared themselves up for supporting the use of space-developed products. Part of this area was once called the fertile crescent, but was largely ruined by human usage. The Arab nations along this zone have now begun 'greening' this area to reduce the effects of desertification and thus strengthen their agricultural base. Internal fighting between groups has continued, while Jewish/Arabic relations have remained stable without any major conflicts during this century, although sporadic violence continues.

Australia

This nation began to participate more in international commerce and affairs in order to establish an identity for itself. With the opening up of lunar mineral exploration, a number of local mining developers formed Selene Mining, a lunar mining company, with South African developers. Australia's Cape York launch facilities have used as Selene Mining's gateway to Earth markets. The country's association with space exploitation and its regional importance in the South Pacific have made this country a significant factor in world politics. It has strong economic ties and alliances with South Africa, New Guinea, New Zealand and other South Pacific countries forming a southern hemisphere

economic power block. This block has about half the economic clout of the American or Russian economic blocks.

Australia maintains a large military force to counter any expansionist movements by nations in the South East Asia area, such as Indonesia. Military forces have been expanded into interstellar space with agreements in 2171 with the United Kingdom. Australia and its Oceanian partners are rapidly expanded their interstellar holdings with the backing of government-owned enterprises such as Selene Mining and Armco.

Brazil

This nation has slowly risen to become a world power, but only after a long history of struggle with western countries over its resource exploitation and internal social policies. In many ways it still has these problems, but has offset them by gaining access to space resources with the help of Chinese-developed space hardware. Early agreements between the two countries saw China use Brazil as a launch site during the early 21st century. At the same time Brazil used Chinese rockets to establish a manned presence in space shortly before the arrival of the Mech vessel in 2050.

Today Brazil is the most powerful nation in the South American region. It has expansionist designs on its neighbours, and harbours a deep resentment towards the United States.

China

With the reintegration of Hong Kong and Macau in the late 90s, this nation pursued industrial interests using its vast natural resources. China's conquest of space was aided by the USA in the Long March rocket programme. The Eomer expedition in 2005 saw Chinese participation and eventual involvement in the Eomerian Conflict, which resulted in no gains and a huge expenditure in capital. With the peaceful reintegration of Taiwan in 2020, communist idealism had been tempered. China pushed for a manned presence in space exploitation following Eomer and has established facilities in orbit, on the Moon and Mercury, and in orbit around Venus. It is not a member of NATO, but is affiliated with it. They have interstellar capability and have established one colony to which they are shipping a significant proportion of their population.

Europe

The evolution of the EEC has come a long way with the united combined efforts of member nations in the conquest of space, especially with the aid of ESA. With an intensive presence in Earthspace, an O'Neill colony, lunar settlements and outposts throughout explored space, they have a more coherent economic presence in space than any other space power block. Tensions are running high within Europe because of the imperialist expansions of the UK, France, and Germany to create interstellar colonies.

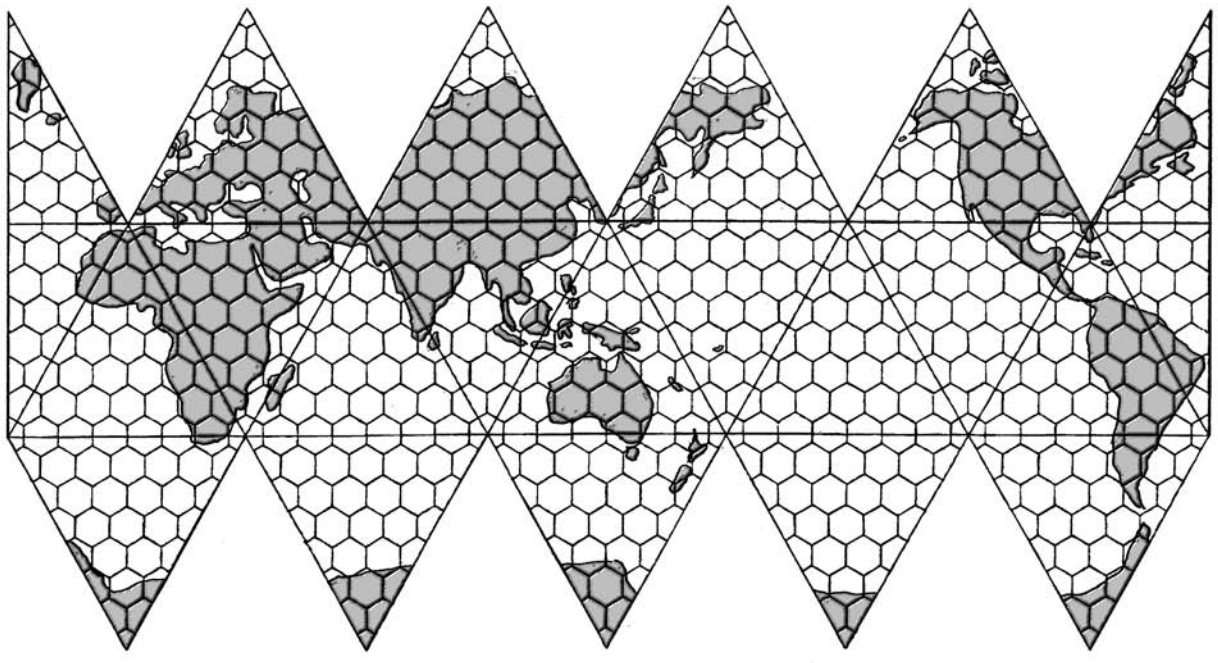
India

This country has slowly developed into a Earthbound super power, although it still has a lot of internal difficulties to resolve. Its space capabilities are still limited, but they have nevertheless managed to establish a small lunar base and a number of orbital stations. In the 2140s India slowly absorbed Bangladesh and turned the area into a more stable environment for commercial development and removed the vast bulk of the populace out of the flood-prone areas to reduce damage costs.

India is facing a population crisis that it has found hard to handle. Even with birth restrictions of one child per family it seems the country is headed to financial ruin. The Indian Government is currently petitioning the United Kingdom for hyperdrive technology. They hope to find a suitable colony to export their excess population to.

Israel

The Jewish state has managed to survive into the 22nd century in spite a lot of external pressure placed on it from bordering states. With space launch capabilities and nuclear weapons, Israel took an active part in the Mech conflict in 2050. Since then it has taken steps to participate in using the high frontier for industrial development. Although Israel has gained the hyperdrive from America, it has no designs for colonisation projects. Instead it is using a small number of ships for scientific work. Plans have been drawn up for some industrial plants in other systems, but this is likely to take a few years.



Mars

Mars is the only sovereign human nation that is not located on Earth. It won its independence during the Martian Wars of 2140–2144. The population of Mars work mainly for the large corporations that are present on the red planet. The government functions of this nation are run by the corporations. Many employees own shares in the public companies, giving them some measure of control over the government. The other method of control for the populace is through the trade unions that most workers belong to.

A council exists to carry out the administrative functions of government. For bills and laws to be passed, the citizens vote on the issue. Once 60% are in favour of a bill it is passed. This system is similar to visions of a participating democracy. An organisation cannot hold more than one seat even if it qualifies for more than one. Such an organisation gets the seat appropriate to its highest characteristic.

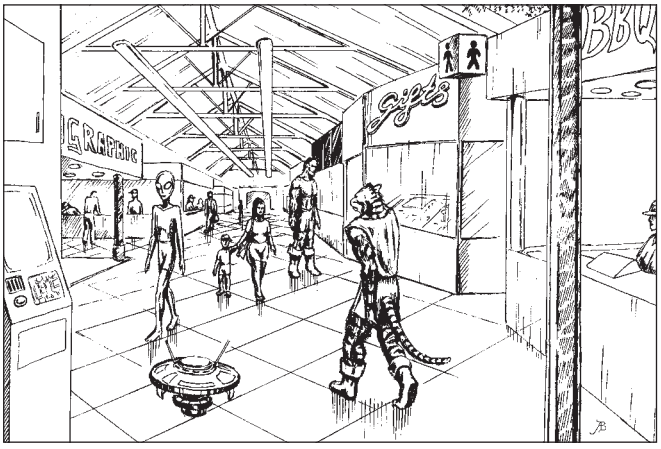
Council membership:

5 - largest employers
5 - largest equity corporations
2 - military (Ranger & Patrol)
5 - largest trade unions
3 - academic (Science, Education & Health)

The Martian Confederation contains within it the Aratani population centres that provide the dominant backbone of Martian industry. In many respects the Aratani are separatists, and strongly opposed America's treatment of the Martian colonists prior to the Martian Wars. Since the Aratani cities of Cydonia and Elysium were amongst the communities that founded the Martian Confederation, they are generally thought of as part of the United Nations under the Martian Confederation banner.

However, many Terran analysts note that the cities of Cydonia and Elysium remain closed to outsiders, and are run according to their own agendas. Since they haven't yet conflicted with Confederation laws, and do proactively participate in Martian government, no internal conflict on Mars has yet arisen, although some analysts believe such a confrontation will occur at some point in the future.

Mars is currently on good terms with America. Many of the Martian companies rely on military contracts with the US Military for their economic survival. Mars also maintains close economic ties with Australia, Canada, the United Kingdom and China.



New Zealand

This small country has always had some significant presence in world politics since the late twentieth century. Its association with Australia has seen it reach the high frontier through its part ownership of Selene Mining. New Zealand scientists are found throughout human space working as part of European or American research teams. New Zealand biotechnology is at the cutting edge and sought after by other nations and corporations. New Zealand is on good terms with all human nations because of its external political policies of relative neutrality.

Russia

The economic crash after the end of communist rule caused many problems for Russia. However, foreign investment and aid from America and Europe eventually solved the problem. The advanced state of Russian space knowledge helped them participate in an active role in the Eomer Expedition. With the outcome of the Eomerian Conflict, Russia benefitted from the mineral wealth. The Russian Commonwealth collapsed in the 21st century due to independence movements throughout the region. Many of the western republics joined Europe.

Russia has only Ukraine, Kazakhstan and Mongolia within its sphere of influence. Kazakhstan has remained important due to its space launch facilities and its mineral wealth. Ukraine has remained important because of its agriculture and its military strength. Following the Mech arrival both of these countries have followed Russia in its expansion into space.

With interstellar expansion Russia has relied heavily on Ukrainian and Kazakhstani help. Both of these allied nations retain small fleets of starships which service a number of small outposts. Only Russia has managed to establish a colony on a habitable world, although Ukrainians and Kazakhstanis have settled the world as well.

South Africa

After solving its internal social and cultural problems, this nation began to participate more in international commerce and affairs. When lunar mining became feasible, a number of local mining developers formed a lunar mining company in league with a number of Australian developers. With the aid of Australia's Cape York launch facilities, Selene Mining was established and became a successful enterprise. The country's association with space exploitation and its regional importance in Africa have made this country a significant participant in world politics. It has strong economic ties and alliances with Australia, New Guinea, New Zealand and other South Pacific countries forming a southern hemisphere economic power block. This block has about half the economic clout of the American or Russian economic blocks.

Power Blocks

The various nations of Earth are grouped into various power blocks which dominate affairs in their region. These power blocks mostly revolve around the former super-power blocks from the 20th century. However, some of the blocks involve first-world westernised countries that have allied in order to have a bigger economic, political and military impact on world affairs.

CIS (Commonwealth of Independent States)

This power block, centred around Russia, has been in steady decline since the late 20th century. Most of the former states have become part of Europe, and the power block now only includes Russia, Ukraine and Kazakhstan and Mongolia. It is rather solid, since these nations rely highly on each other for various goods and services which only one of the members can supply in sufficient quantity. Otherwise the political and military objectives of its members are fairly autonomous.

European Union

The European Union has expanded since its creation in the 20th century. It now includes all of eastern Europe, including most of the states of the former Soviet Union. This power block is very cohesive and functions as virtually one nation. However, France, Germany and the UK are putting severe strains on internal politics by their continued restrictions on sharing hyperdrive technology with their fellow nations.

NATO (Northern Alliance Treaty Organisation)

This is a military alliance based on the older North Atlantic Treaty Organisation. It was founded from the alliances that co-operated in 2050–51 to defend Earth against the Mech threat. Since then the alliance has coalesced into a formal cohesive military alliance. Its members include the various nations making up the power blocks of CIS, Europe and NorPac. China is affiliated with NATO for world defence but pursues its own policies with respect to Earth-based nations. This power block has so far kept the other Earth-based powers in check to prevent serious conflicts that would weaken Earth's defence against hostile alien forces.

During the Martian Wars, the United States acted on its own without NATO support. In fact many NATO nations actively opposed American actions by recognising Martian sovereignty and politically opposing America within NATO or the UN.

NorPac (Northern Pacific Economic Sphere)

This power block revolves around traditional ties involving the United States and its various partners in the Northern Pacific region. The ties are predominantly various economic agreements along with some military agrrements. Of the big power blocks its members are the most independent with respect to their activities. Members include Canada, Japan, Mexico and the United States.

SATO (Southern Alliance Treaty Organisation) - Oceania

This power block comprises some fairly minor nations in the southern hemisphere. However, careful agreements and concentrations of resources combined with the amalgamation of corporations have made this block shine as the foremost economic power in the southern hemisphere. The block is held together primarily on economic terms, although the military agreements are important. This group is considered one of the most progressive on Earth. Its members include Australia, South Africa, Singapore, New Guinea, New Zealand and most of the South Pacific island states. This block is often referred to as Oceania, although South Africa does not share the same currency as the Asia/Pacific states.

UN (United Nations)

This is not a power block as such. It remains much the same as before, except that it has been invested with more powers and control than it had in the late 20th century. Fortunately for humanity all Human nations are members of the UN. This has made diplomatic relations with various alien races easier to maintain. The UN represents the closest thing to a World Government that Humanity has at the present time, although it is more a representative democracy made up of national representatives.

With the recent formation of the Terran Alliance, the United Nations has had several of its councils and agencies expanded to cater for Alliance business at an interstellar level.

The UN Security Council is now the formal military council for the Terran Alliance. Apart from Terran nations sitting on this council, the Martian Confederation, the Forerunners and the Daryn Kingdom all sit on this council for sessions involving Alliance affairs.

United Nations Emblem

Military Orientation

America

The USA acts very independently, often at odds with its allies. It uses its allies as tools to aid its own military endeavours.

France

France is a loner and pursues its own military agenda. However, it participates fully in European matter concerning the planetary defence of Earth

Britain

The UK relies on careful diplomacy with America, Europe and Commonwealth countries to achieve its military aims. I's own military is small but designed for high quality.

Germany

FRG purposes a military policy that doesn't hinder its economic agenda. The military is used as a means of defence rather than an implement of aggression, although it can act aggressively when required.

The Solar System

Planets

Mercury
Type R **Pop 20,000 (on planet)**

The four major spacefaring powers (America, China, Europe, Russia) maintain major research facilities on this planet. Mining of various ferric metals and alloys, including iron and nickel, is conducted by a consortium owned by these powers. They are co-operating here because of the adverse conditions and the need to pool expertise and hardware in order to succeed.

The command complex for the nearby solar pumped laser stations of the United States is located at the north pole of Mercury. These laser stations were once used to launch the Starwisp probe to Barnard. Since then they have been adapted into extreme-range system defence weapons.

Moon
Type R **Pop 3 million**

The moon has the heaviest concentration of human activity outside of Earth and Mars. Many of the nations on Earth maintain some sort of presence on this planet, whether they have the capability to get here themselves or not. Most maintain their own bases on separate sites with clearly defined territory markers. Corporations such as Selene Mining also have their own base zones. Most of the zoning agreements are sorted out by the UN Lunar Council.

Selene Base is the headquarters of Selene Mining. It is an underground facility with surface domes for storage, recreation and vehicle facilities. It has a 10-km-diameter mass driver for launching processed metals to an Earth-orbiting facility for transfer to the surface via Cape York Spaceport in Australia. The base's processing facilities not only refine metals but also provide oxygen as well as a limited supply of hydrogen for use in the water-production plant. The base is situated in the Sea of Clouds near Alphonsus crater. It has a population of about 10,000, most of whom are permanent residents with the rest being company employees on three-month shifts.

Farside astronomical observatory is located in the Sea of Moscow on the farside of the Moon. The observatory is equipped with a huge array of astronomical devices such as visual telescopes. Because of the low gravity, the size and the related power of these instruments is far higher than on Earth because larger structures can be built. Being on the farside of the Moon provides a shield from any Earth-based interference.

This facility is a joint American/Russian venture. It was established in the early days of man's return to the Moon. SETI also use this facility for their purposes. It houses about 200 personnel.

Mars
Type D **Pop 20 million**

Since the initial expedition in 2015 this world has been extensively settled with the aid of corporate backing. In 2140 the corporations formed a confederation and declared their independence from American rule. This resulted in the protracted Martian Wars until 2144, when USAN and USAM forces were finally defeated by the Martian Military. The UN does recognise the corporations' bureaucratic confederation as a formal government. Most business with them is carried out from various orbital facilities.

However, the world is also inhabited by the Aratani people, who largely keep to themselves in major cities at Cydonia, Elysium and Hellas. Although Mars is classified as a desert world, the Aratani have begun extensive terraforming activities, forming ice-covered northern oceans, thickening the atmosphere and introducing plants and animals into the biosphere. Although it is still not habitable by Man, the Aratani seem confident of success within a short space of time.

Asteroids
Type A **Pop 5 million (in region)**

The belt is dominated mainly by operations of the main four powers and operations from Mars. Harvesting asteroids for raw materials is the primary industry in this region. America also maintains several listening posts on the inner edge of the belt for monitoring Martian activities.

Jupiter
Type G

Most of the Jupiter system has remained unihabited except for mining outposts, because of the intense magnetic fields and the associated radiation belts of Jupiter itself. Callisto is the primary facility used in the Jupiter region. One of the smaller asteroidal moons of Jupiter is being used as the research centre for project Agrav by an international group of scientists under the auspices of Allied Aerospace.

Pluto
Type I **Pop 30,000**

The first manned mission to this remote world was in 2061. An enormous radio telescope array was built in orbit here by remote probes from NASA in the last 21st century to find interstellar civilisations. Its data was to be crossmatched with the planet-finder array at Jupiter.

The Aerospace Navy subsequently built a huge base in the L1 locality between Pluto and Charon. The NASA facility is now being run co-operatively with Aerospace personnel.

Colonies

This section details some of the key outposts and colonies of humanity. In the last decade significant expansion has been undertaken by Terrans as hyperdrive was reclassified for distribution to other nations. This was largely due to the Serpenti War conflict, and the pressure put on NATO nations to seek as many hyperdrive equiped space naval forces as possible.

Humanity have colonies spread throughout their sphere os influence, and in the last decade the growth in colonial sites has been phenomenal. The following is a selection of some of the earliest founded colonies.

United States of America

The USA has changed its colonial policies since the disaster of the Martian Wars. American colonies now have colonial governments that resemble the state governments of the United States itself. This local democratic system gives local residents control over normal government procedures. The Colonial Military is also funded and controlled by the local government, unless Federal Authorities dictate otherwise.

The other feature of American colonisation is the government-owned Development Corporations (DCs). Like ARES on Mars (originally Mars Development Corporation) the Federal government establishes a corporation to develop the needed infrastructure of a colony. The main areas these corporations operate in are agriculture, construction, mining and transportation. The DCs are also a way for the Federal government to keep a different measure of control over local colonial affairs.

The company remains government-owned until the colony is well established, at which point shares are sold to the colonial government and private partners. Current development corporations include Arcturus, Arlington and Luna. The Luna Development Corporation is the only DC to have privately owned shares. The others have yet to establish firm colonies.

Arcturus

Locality: Arcturus (-28/-18.4/11.7)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 5 million

This is a rough world which is unlikely to be tamed for generations. Its dinosauroid life forms compete with vicious mammalian lifeforms in a ecosystem that more resembles a war zone. Locals form small agricultural and industrial communities in defendable areas like small valleys. The Arcturian Colonial Marines are often called in to rescue a community from some rampaging beast that the locals can't handle.

The main city is located on a peninsula in the southern hemisphere temperate region and is heavily fortified against native predators. Arcturus is undergoing a massive military buildup as full-scale war occurs between the Aronhi and Stotatl empires. The American government fears the war may spill over into human space. Arcturus is considered the gateway into human space from the Serpenti Quadrant in which the war is being fought. So far twenty Constellation class Battlecruisers have been moved into the system, along with a full division of Aerospace Marines.

Arlington

Locality: Tau Ceti (10.3/4.9/-3.3)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 25 million

This is by far the most settled world amongst the American interstellar colonies. It is primarily an agricultural colony, with the local biology being extremely compatible with Terran biology. A huge boom has occurred in the pharmaceutical industry because of many recent discoveries. The psionic-enhancing drug called Psiothene is synthesised here from local biota. Local military development has progressed smoothly here. The Aerospace Navy is in the process of establishing an orbital network of laser battle-satellites for planetary defense. Twelve are currently in operation. Kinmont is the capital city, which contains roughly 10% of the planetary population.

United Kingdom

Falicin

Territory: UK
Locality: BK+00 2334 (-21.2/-37.3/7.1)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 2 million

This is deep in the Serpenti Quadrant. It is the furthest Human outpost to date. The world is fully habitable, and the British government has began colonisation following it's recapture from Stotatl occupation. However, this world is lying on edge of a war zone between the Aronhi and Stotatl empires. Given the continued escalation of this war, the outpost will be in danger as the scope of the war increases. Thr UK has given terrotorial rights for colonies to Oceania (Australia, New Zealand, South Africa) and India in return for military defence arrangements. The USA was also granted a large area of land for building a forward military base of operations in the Quadrant.

Victoria

Locality: Alpha Centauri (-1.7/-1.4/-3.8)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 23 million

The establishment of this colony came after much debate amongst the European interstellar partners (France, Germany and UK). The status of this world is a sticking point in UK politics. It is still being debated whether Victoria is part of the UK or a dependant Commonwealth state or a territory of a new British Empire. This colony is fully established and supports a growing and vibrant economy which is both industrial and agricultural. The world is a popular destination for interstellar tourists because of its proximity to the Solar System. The military forces stationed here are normal British units of the Army, RAF, RN and RSN. Almost half of the UK's space force is stationed in this system. Avon is the capital city with about five million residents.

Germany

Abenstein

Locality: Omicron 2 Eridani (7.0/14.0/-2.2)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 5 million

This world is the prime contact site between humanity and the Coalition. Draconian traders contacted the colonists in 2164 after receiving reports of humans contacting the Forerunners and Daryne at the Zeta Reticuli stars. The German Colonial government has been quick to industrialise this world for a stable economy. The local population is involved in producing many fine examples of art in various forms that are now high in demand in the Coalition. Locals are more likely to buy alien products because of their relative lower cost than goods shipped from Earth.

France

Nouvelle Quebec

Locality: Epsilon Indi (5.2/-3.1/-9.4)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 4 million

The French government has stopped shipping colonists to this world because of local insurrection by radicals who tried to declare independence in 2169. The local provincial government was ill-equipped to handle the situation. Military rule has been imposed by recently landed troops of the Foreign Legion. The remaining radicals have fled into the local hinterlands to escape capture.

Apgouecan

Locality: DM-26 12026 (K1V: -3.3/-15.6/-8)
Planet Type: T
Environment: normal-g, thin oxygen atmos
Population: 4 million

Although surveyed early during expansion of Terrans this habitable world was overlooked in favour of the more Earthlike worlds further along the 7.7 light year trace towards the Zeta Reticulli stars. It's fate as a colony was left undecided until 2171 when France expressed an interest in a prime colony closer to Earth, and prior to being claimed by the multitude of nations gaining hyperdrive through the Commonwealth agreements that were in progress during that year.

Apgouecan is the second interstellar colony established by France. It's abundant oceans have suited it to the development of aquaculture and truly isolated island holiday resorts. This water world has also yielded up abundant mineral resources in the form of metal alloys accumulating on volcanic islands due to the actions of colonial organisms similar to coral. The French colonial government have so far contracted out most mining licences to Selene Mining, while retaining the rest exclusively for smaller French owned operations.

Given this system has a Stargate linked to the core worlds, and is the closest colony to the Vega region, it has formed an impressive orbital way station complex dedicated to the numerious civilian exploration missions going into the region and the various operations mounted by both the French, Chinese and American military forces.

Russia

Boristov

Locality: Beta Comae Berenices (-22.9/-7.2/12.8)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 30 million

This colony has run into extreme problems in establishing a viable agricultural base for its colonists. A whole host of micro-organisms and parasites are openly hostile to Terran food plants. So far food supplies are strictly limited and supplied by hydroponic stations in sealed environments. Russian industrial developers are taking advantage of the situation by shipping in huge orbital hydroponic stations. The Ukrainian colonists have been the most affected, since most were farmers seeking their own land. Currently most of them are employees of hydroponic companies or are unemployed. This unemployment base is growing with the increasing arrival of Ukrainian emigrants. A true lower class is being developed which is generating more crime than has been seen by Russians for more than almost a hundred years.

China

Hujiang

Locality: Delta Pavonis (3.8/-6.5/-17.1)
Planet Type: T
Environment: normal-g, standard oxygen atmosphere
Population: 210 million

This is the most populated human world other than Earth itself. China is conducting full-scale population transportation to alleviate population pressure back on Earth. Transportation schedules indicate the Chinese government wants to ship at least another 200 million people to this world. The transported population includes many bright young specialists as well as families of subsistence farmers. The Chinese provincial government is run like the old communist-style government common in the twentieth century. Democratic and capitalistic

aspects of modern China are unlikely to appear for at least a decade, when the colony should be autonomous. A large garrison of Army personnel numbering almost quarter of a million men is stationed on planet. The government is currently in a dispute with Selene Mining over mining rights in the local asteroid belt and on several other worlds in the system.

Outposts

Altair IVa

Locality: Altair (A7V: 7.4/-14.5/2.4)
Planet Type: P
Environment: low-g, vaccuum atmos
Population: 50

RSN are currently sponsoring a BIS (British Interplanetary Society) research project in the Altair system on gravimetric pulse engine technology. The Altair system is currently considered interdicted to foreign traffic, and is known to be patrolled by the 3rd Cruiser squadron (6xCounty class cruisers, 18xF class frigates).

Barnards

Territory: USA
Locality: Barnards Star (-0.1/-5.9/0.5)
Planet Type: R
Environment: low-g, vacuum atmosphere
Population: 160,000

This outpost is the principle American naval base outside the Solar system. Mining activities conducted in the system support military construction operations. The base is also used as a waystation for American vessels travelling towards the colony at Tau Ceti.

Proxima 3

Territory: Russia/USA
Locality: Proxima Centauri (-1.6/-1.2/-3.8)
Planet Type: M
Environment: normal-g, tainted thin oxygen atmosphere
Population: 200 humans, 100,000 Treerats

This outpost was established in 2156 to study the strange alien artifacts found in this system, namely the gravity focusing lens and the alien base (later identified as Coalition). Scientists from many disciplines study here. More importance was placed on studying the Treerats in 2159 when the Treerats were discovered to be sentient by an ARES scientist, Doctor Vladimir Klostov. The status of the Treerats is still a matter of debate in the UN. However, the Coalition has taken an interest in the Treerats, claiming that they were not sentient when their base was operational 300,000 years ago. The Coalition have reopened their base and are shipping in science personnel. The Russian and American governments have yet to make a decision concerning the Coalition presence next to their outpost.

Sirius

Territory: Martian Confederation
Locality: Sirius (-1.6/8.2/-2.5)
Planet Type: A
Environment: zero-g, vacuum atmosphere
Population: 50,000

This Martian interstellar outpost was established to conduct scientific studies on solar system dynamics and stellar processes in another solar system. However, several Martian firms have moved their production facilities to this system to take advantage of the local mineral resources in the local asteroids. The local rock jacks are subsidised by ARES to counteract expansion of Selene Mining operations into this system.

Vega II

Locality: Vega (A0V: 3.1/-20.3/16.4)
Planet Type: I
Environment: low-g, exiguous nitrogen atmos
Population: 500

The American outpost at Vega is currently maintained by NASA as a research station to carry our studies of a proto planetary disk that is in orbit around Vega. As yet no real planetary system has formed around Vega, but NASA scientists hope to understand more about planetary formation. Several coporate interests, including Selene Mining USA Inc. are sponsoring this project in hopes of finding new methods of identifying mineral deposits worth mining in other star systems.

A small independant iceteroidal mining operation for volatiles based off Vega IV is proving to yield anough fuel and gasses to support Vega as a possible advance waystation for American military forces in the region. The directors Vegan Volitiles are hoping the potential of the system will attract USAN to build a permanent military base in the system.

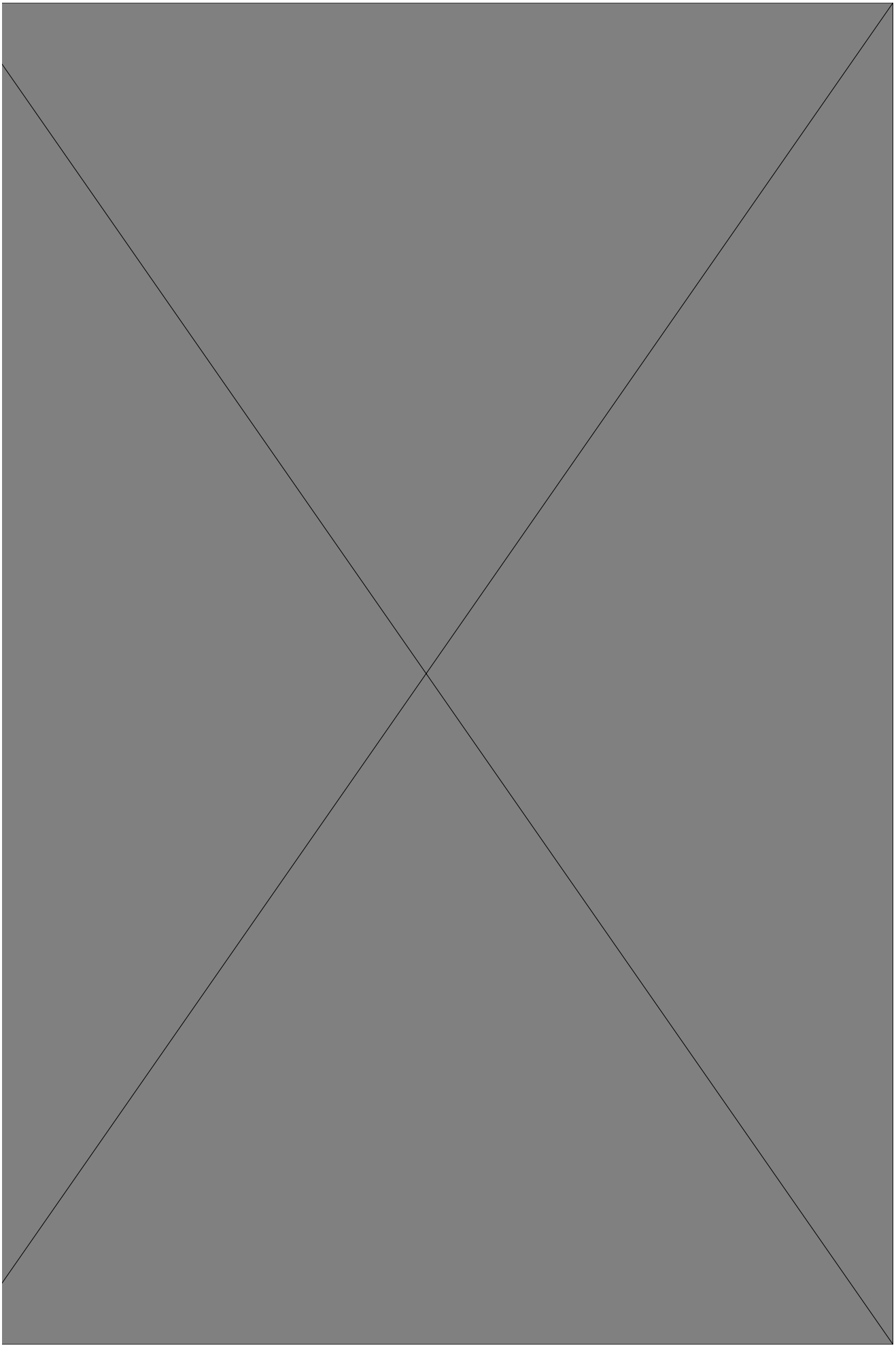
Wolf 359

Territory: Europe
Locality: Wolf 359 (-7.2/2.1/1.0)
Planet Type: R
Environment: normal-g, vacuum atmosphere
Population: 1.5 million

This outpost was established as the command post for study of the ruined Mech armada found in this system during an ESA exploration mission in 2156.

The system is under military jurisdiction, with most of the system being off limits to civil traffic. A service depot on a moon in the outer system around the Columbus gas giant is the civil service centre for the system.

This system has almost as much population as some interstellar colonies, although most of the residents are military personnel. The system includes extensive military facilities for British, French and German military forces. European-derived RDF units are also stationed in this system, giving other European nations a military presence in this system. The rest of the personnel are scientists, engineers and support staff from throughout Europe.



Military Forces

Martian Military

The Martian Army is comprises several diverse groups which are brought together under war conditions. Every large citizen corporation maintains a security force. In a time of war these security forces are mobilised as elements of the Army. The Martian police are also mobilised as a military unit. The Rangers, security forces, police and other volunteer organisations make up the components of the Army.

The Martian Navy is a more formal organisation. It has a full academy for recruit training and is involved in personnel exchange programs with the United States, United Kingdom and Russia. The navy is normally involved in escort duty for Martian vessels in interstellar space. This doesn't mean that the Martian Navy is not a real fighting force, having a proven war record during the Martian War of Independence against the United States.

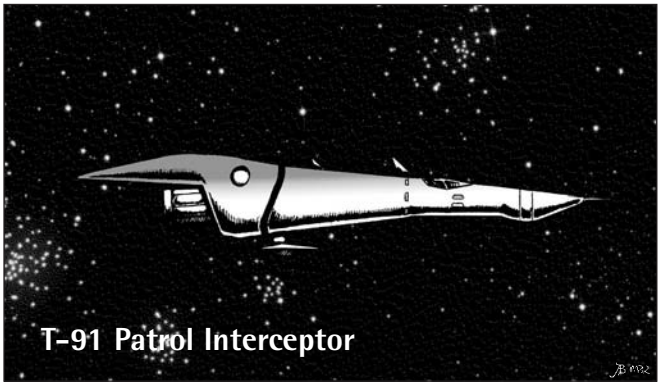
The Aratani are known to have an extremely large military force, as seen in the Martian Wars. In the closing stages of the Wars they fielded several hundred thousand professional troops, numerous armoured brigades, and almost 30,000 space fighters. All these forces are seconded to the Martian military in times of war.

Martian Rangers

This is the only full-time ground military service on Mars. It is a specialist unit focused on survival and commando-style activities. It also offers its services in a mercenary fashion to the UN Security Council. The Martian Government wants this organisation to become profit-making within the next ten years. It is the equivalent of a special forces unit and has a strength equivalent to a regiment. It is made up of functional units ranging from platoon to battalion strength.

Patrol Service

This is the core of the Martian Navy. It operates a Naval Academy to train ship crews. Its vessels fill a number of specific roles during peacetime. These roles are patrol, customs, escort and rescue duties. The main vessels in use are either the T-90c customs cutter, T-91 patrol interceptor or the 20,000 ton corvette.



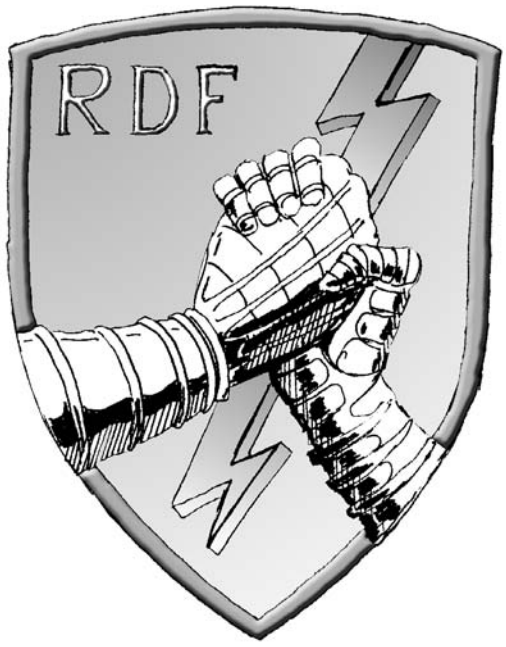
T-91 Patrol Interceptor

Martian Rank Structure

	Army	Navy
O5	General	Admiral
O4	Colonel	Commodore
O3	Major	Captain
O2	Captain	Commander
O1	Lieutenant	Lieutenant
E5	Top Sergeant	Chief
E4	Sergeant	Senior Petty Officer
E3	Half Sergeant	Petty Officer
E2	Trooper	Spacehand
E1	Recruit	Rating

NATO

The Northern Alliance Treaty Organisation functions in a similar fashion to its predecessor. However, many of the RDF (Rapid Deployment Force) units have been transformed into multinational special forces groups. The 'Black Tigers' are a prime example of a small elite RDF unit. Such units, derived from European nations, are space-mobile for quick deployment throughout European interstellar territories. Typically, units like the 'Black Tigers' are equipped with an Anvil-class vessel for deployment purposes.



RDF Shield Logo

Black Tigers Shield Logo

United Kingdom

Royal Space Navy

With the expansion of the UK's military into space, the Royal Navy took the honours of controlling the high frontier. However, the service won its freedom from Royal Navy control in 2135 following a bitter dispute over the ability of Royal Navy Command to control space forces effectively. Nevertheless, the Royal Space Navy retains a proud tradition in its Royal Navy roots.

Royal Marines - Space

The Royal Marine force established for space work did not gain the same release as their naval counterparts. Their command structure is now normally part of the Royal Space Navy. When operating on planetary surfaces with normal Royal Marines, the 'space marines' fall under the jurisdiction of Royal Marine Command.

United States of America

Colonial Marines

With the founding of interstellar colonies, America created a new marine force composed of locals. This force would fulfil all of the functions of the national guard, army and marines on their respective colony worlds. This was partially as a cost-saving measures, but also out of the need for a versatile multi-terrain local force. The Colonial Marines are intended to be backed up by the Aerospace Marines in wartime.

United States Space Force

With the end of the Mech attack of 2050 the USA foresaw that the military expansion into space would not be fulfilled by differing services who had specific planetary-based duties. So the Space Force was formed. It was based on the dominant Air Force organisation and thinking of the time. However, in 2070 the Force was restructured for operational purposes and the fighting division was renamed the United States Aerospace Navy.

With the increasing growth of the American presence in space, a demand for space-mobile troops became a necessity. The Aerospace Navy also needed shipboard troops. In 2072 the Aerospace Marines were formed as part of the larger Space Force framework. They are modelled on the United States Marine Corp. However, they are treated as an armoured marine force because of their extensive use of Richmond Grav APCs, Battle Hawk Power Armour units and Drake Combat Walkers. Units of all sizes are found on USAN ships, bases and stations, and are divided into Battalions for combat purposes. The main battalions are deployed on Washington-class Battleships for interstellar deployment. The most famous is the 1st Aerospace Battalion which serves on the USS Arizona under the command of Colonel Richard Dexter.

Military Skills

In general military personnel require a higher degree of training in specialist areas than civilians. To reflect this, a number of skills should become inclusive. Firstly, gun training will include experience in throwing grenades. Secondly, unarmed training will include the training in the use of combat knives and bayonets. Recon training will also include stealth, or else it would be pointless to conduct such operations. Surveillance work in the modern military includes an extensive background in the sensors used in this work. Military personnel are also able to conduct routine maintenance operations on the equipment in which they are trained.

Cybernetics

The military forces of the world treat the use of cybernetics by their personnel in a variety of ways. In Japan, cybernetic enhancements of various kinds are mandatory for all personnel. In the American Space Force all engineers, computer techs and electronic techs must have neural jacks, while all naval pilots must have neural jacks fitted for RV work. Cybernetics are quite common in other national military forces such as in Australia, Britain, Canada, France, Germany, Mars and Russia. However, the Chinese have regulations against using any form of cybernetics except in a few specialised units.

Psionics

The Chinese and Japanese military forces actively encourage the enlistment of psionic individuals into their various services. In the USA, not only do the forces encourage enlistment, but they also concentrate these individuals into specialist and elite units to utilise them to a greater extent. In Germany the military actively discourages psionic individuals from enlisting, although many are present. However, the German Command have put regulations in place that keep psionics out of elite units. Other countries treat psionics with indifference as far as the military goes, neither encouraging or discouraging them from enlistment.

Forerunners near one of the few remaining cities on their homeworld of Pheldane

Empires

During the expansion into interstellar space many races have established multi-world interstellar states similar to empires. Interstellar politics often revolve around internal empire politics between worlds and races or external politics between the empires themselves.

Humanity is currently aware of a limited number of interstellar empires within 'known space'. It seems that other empires do exist because of the existence of a limited number of aliens who have no connection to known empires.

Aronhi

This hierarchical empire works on the principal of survival of the fittest by a method of testing by combat. This empire is young, dynamic and turbulent according to who controls the reigns of power. They are currently in turmoil with the Stotatl Empire over territory in the Serpenti Quadrant near Arcturus. Their empire is ruled by a council of clan leaders. The council is preside over by the Patriarch, who is the leader of the strongest clan. The Patriarch has presidential-scale powers within the empire. However, the Patriarch can be thrown out of office at any time if a sufficiently strong clan alliance can assert itself over the current Patriarch's power base.

At present the Aronhi no longer rule their own space, as it is occupied by the Stotatl, and are fighting a resistance war to liberate themselves. Only the disputed territory near Terran space remains free, as are a few far-flung outposts on other frontiers.

Aronhi logo

Coalition

This empire is of an informal nature, with the three member races pursuing their own objectives. They co-operate over issues of defence and regional politics. The Coalition has remained politically neutral concerning conflicts between the races of known space. Its military is designed for the defence of the Coalition and for striking against Mech forces. They have often acted as mediators at peace talks between other races. This is mainly due to Ilkanian internal pressures through the Coalition Diplomatic Corp (CDC).

The Coalition dates back to about 300,000 years ago when it was established by its member races as a military pact to aid in the defence of their worlds against Mech invasions of the period. With the end of the conflict and many worlds laid to ruin, and those that survived being knocked back to pre-stellar technologies, the Coalition was disbanded. However, 50,000 years ago it was re-established as the various races clawed their way back into space. Since then the pact has taken on civilian objectives to help various worlds recover from the destruction of the Mechs. With the more recent explosion of races in the stellar neighbourhood in the last few centuries, the Coalition members have had to restructure their operations to take into account diplomacy as a major function.

Coalition logo

Chlorans

The Chlorans do not have an empire as such. They only have a number of mining outposts. Since chlorine-atmosphere worlds are highly unusual, Chlorus is the only world known to be habitable to this race. However, the Chlorans show a tendency for empire building by enslaving races to do their manual work such as mining on terrestrial-style worlds. This often brings them into direct conflict with other races. The Chloran government is a Meritocratic Hierarchy. The Chlorans have not entered into any diplomatic agreements with any race in known space, bar the Stotatl. However, they do seem to be making an effort to keep conflicts with the Coalition to the minimum.

During the Serpenti conflict the Chlorans suffered badly in contests of power against American capital-class warships. Half their fleet was destroyed. The Stotatl have threatened them with invasion unless they ceased hostilities towards them, and entered into an agreement making them an autonomous zone of the Empire. For now the Chlorans have agreed and are biding their time while rebuilding their fleet.

Gildorph

This group entity now resides in a dense stellar region of the spiral arm near known space. They have spread over a number

of systems to obtain their necessary resources. They have very little to do with the races of known space but are fairly open to trade and discussion. They only harbour a hatred for the Mechs since they were responsible for driving them out of the coreward regions of the galaxy where they once had a mighty civilisation covering thousands of worlds. The Gildorph seem interested in current Mech activity in this corner of the galaxy and co-operate with any race acting against them.

At the present time the Gildorph in known space is located in Coalition space, and are considered part of that interstellar group for most purposes. However, the Gildorph has been close-mouthed concerning its whereabouts or its extent throughout the galaxy and why it seems to have left the Core region.

Mech

The machine civilisation of the galaxy is well established, probably along some hierarchical order over manageable areas. It is probably a more autonomous situation, with programming and function dictated according to the overall aim of the machines, which is currently unknown. However, recent activity in known space seems to indicate that they have established some form of resource/supply depot within the region. It seems only a matter of time before the Mechs try another major assault in the known space region.

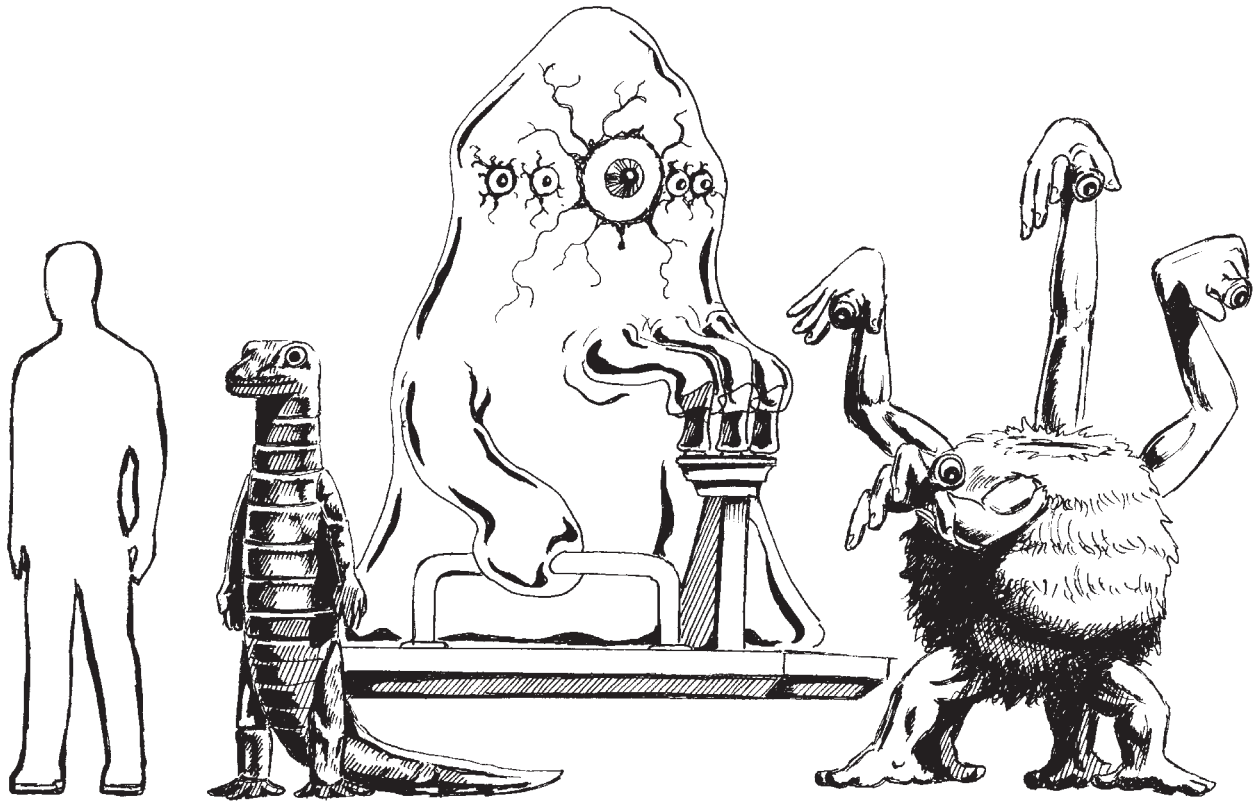
Stotatl Empire

This Empire is virtually monocultural with the exception of the Yzzin. The Empire is a militaristic hierarchy with little variance in the form of local government structures. The Stotatl are expansionistic, with a desire to absorb most races. However, unlike most of the hostile expansionistic empires, the Stotatl are not totalitarian. The Stotatl are currently trying to put down a rebellion over the recently seized Aronhi planetary assets throughout that race's former empire territories. The Stotatl are technically hostile to humanity, although actual relations are neutral at present. The Stotatl seem to have plans to absorb the Daryn system to gain the Daryne and Orcoks as subject races. However, human space is in the way at present. The Stotatl are keeping their relations with the Coalition at a cordial level to avoid overextending themselves in conflicts.

Terran Alliance

The region of space in which Terrans have expanded had originally been under the jurisdiction of those Terran nations involved in interstellar expansion. With the beginning of the Serpenti War with the Stotatl, many nations opened hyperdrive technology to others. With such an interstellar presence the United Nations was used as a forum for debate and control of interstellar affairs. However, many low-technology races fell within the influence of Terran nations. With the Serpenti War, a formal council of allies was established for aliens within the human sphere of influence to voice their concerns to the United Nations. To the surprise of most, the Forerunners joined this council, which was seen as odd given their technical abilities and their calm neutrality up to that point with most races in known space.

The Terran Alliance council also contains a representative of the Aratani, even though they are already represented in the United Nations via the Martian Confederation. The Aronhi Free Clan acts as the voice of the Aronhi people to their new Alliance allies in the war against the Stotatl Empire.



Chloran Empire Racial Comparison Chart
from left – human for scale, Calamander, Chloran, Subject Race No.2

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FSpaceRPG Character Sheet

Name			
Race		Sex	
Hair		Height	
Eyes		Weight	
Planet			
Nation		Age	
City		DOB	
Career			
Position			

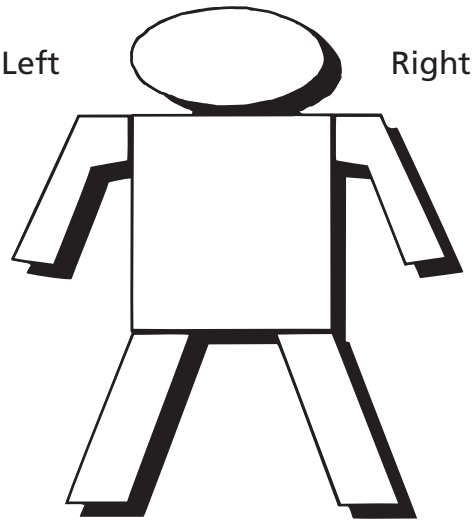
STATS

	Normal	Modified		
			LIFE	
STR			STUN END	
DEX			END	
CON			Initiative modifier	
INT			STR DP bonus	
PSI			Carrying Capacity	

INT Based Skills	INT Base	DEX Based Skills	DEX Base

STR Based Skills	STR Base	CON Based Skills	CON Base

Armour



Sex

Height

Weight

Age

DOB

Weaponry

Name	Class	Range	AM	DP	Stun	ROF	Burst	Auto	AOE	ZONE	Ammo

Equipment carried	Weight	Other Equipment	Weight

Notes