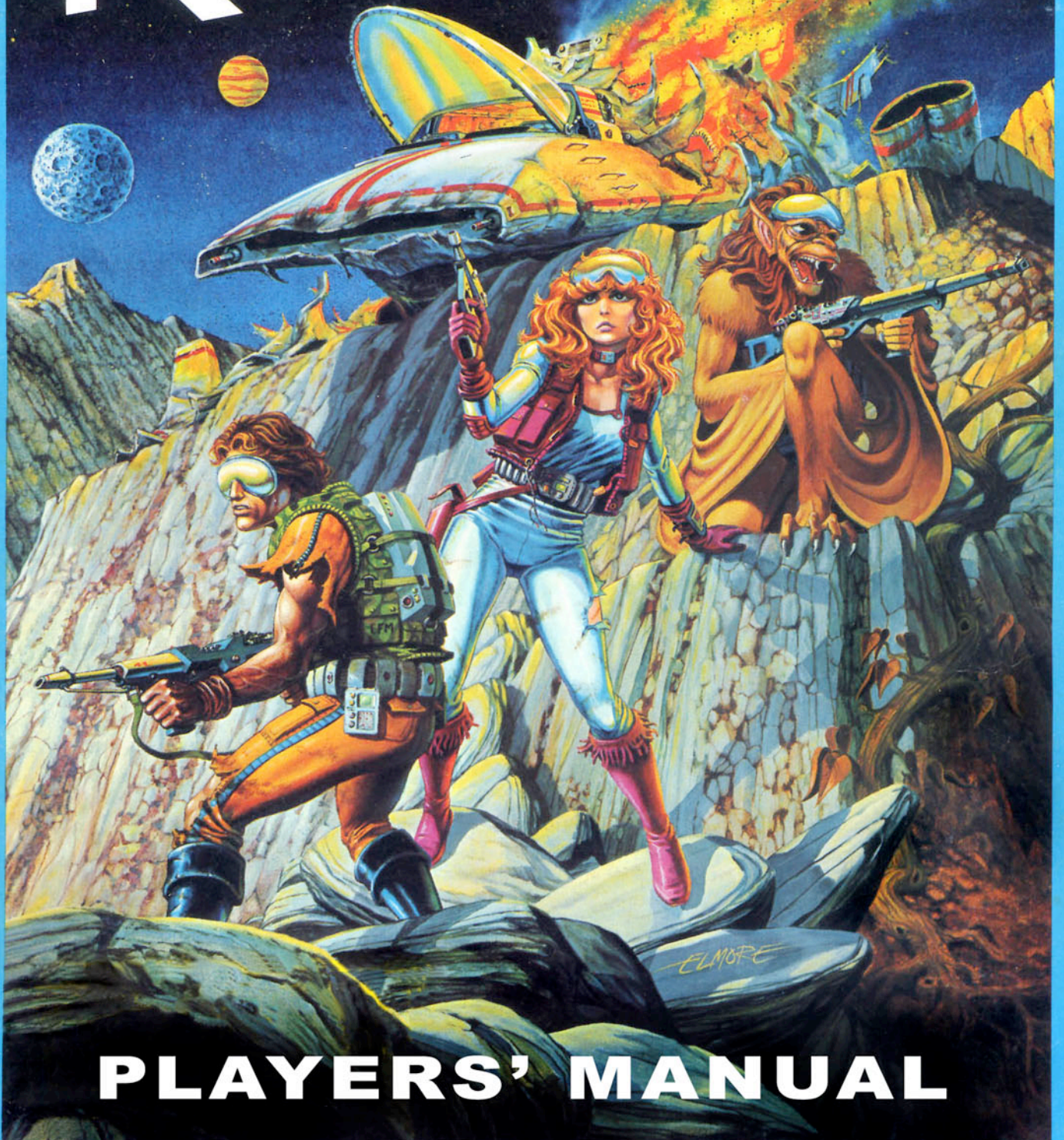


SAVAGE WORLDS

STAR FRONTIERS

GAME



PLAYERS' MANUAL

Forward and Acknowledgments

This conversion is an attempt to bring the original Star Frontiers game, published in 1980 by TSR, to the Savage Worlds system. The first printing was released in a single box set and went under the name Star Frontiers. The original box set was later titled Star Frontiers Alpha Dawn after the release of the expansion set Star Frontiers Knight Hawks, so as to not cause confusion between the two. Alpha Dawn was based primarily on the players' characters and their adventures on alien worlds. Knight Hawks expanded the game by introducing space ships and ship to ship combat. This conversion is focused on the Alpha Dawn set only. Vehicles, both ground and air borne within a planet's atmosphere, are included. Characters are shuttled around the galaxy, but no rules are included for the characters owning, piloting or being crew members of star ships.

The following were sources of inspiration in the development of this text:

www.StarFrontiersman.com : This website has the original Star Frontiers game "digitally re-mastered" in PDF along with many fan created articles and adventures. I STRONGLY recommend this site for any Star Frontiers fan.

Savage Star Frontiers by John Parker: Another Star Frontiers to Savage Worlds conversion whose weapons charts helped me "flesh-out" my charts.

Science Fiction World Builder and **Science Fiction Gear Toolkits** by Paul "Wiggy" Wade-Williams, who in my opinion is THE guru and best writer for Savage Worlds products.

Original Star Frontiers game design: TSR staff

Cover Art : Larry Elmore

Savage Worlds Conversion: Greg Bruni

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HISTORY

Near the center of a great spiral galaxy, where stars are much closer together than Earth's sun and its neighbors, a Human race developed. They were not identical to the Humans of Earth, but they were not very different, either. When these Humans discovered that waves of sub-space pi-tachyon particles could cross interstellar space faster than light, they realized they had found a link to the stars. A radio message that would have taken years to travel between stars could be sent with subspace communicators in months or even weeks. The Humans started broadcasting news of themselves to the neighboring stars, and soon found they weren't alone.

The Humans made contact with an inventive race of insect-like creatures called Vrusk, who had developed limited space travel decades earlier. One of the Vrusks' mining colonies had already contacted another race, the shape-changing Dralasites. The two races had been exchanging information for several years. The Vrusk and Dralasites were pleased to learn of another race. They sent a wealth of scientific information to the Humans. Using this new knowledge, the industrious Humans quickly developed interstellar spaceships.

The three races met in a large area of space known as the Frontier. There they also discovered the Yazirians, a race of tall, maned humanoid. Soon settled, worlds in the Frontier became melting pots for the four races, with dazzling mixtures of architecture and alien cultures.

To supply the needs of these worlds, the first interstellar company, the Pan-Galactic Corporation, was formed. It developed interests everywhere, from scientific research to farming to spaceship building. PGC even created its own language, Pan-Galactic, which soon became the most common language of all races on Frontier worlds. Many large companies which started later were modeled on PGC, but none approach the size or power of the Pan-Galactic Corporation.

Then the Sathar appeared. No one knows where they came from or why. They attacked and destroyed lonely systems on the edges of explored space, moving slowly inward. Survivors described Sathars as wormlike creatures 3 to 4 meters long. That was all that was known about them, because they would rather kill themselves than be captured. As the danger increased, the Humans, Dralasites, Vrusk and Yazirians formed the United Planetary Federation (UPF) to defend their worlds. The mysterious Sathar were forced back, but before long they returned in a more sinister form.

The Sathar had learned that they could not beat the UPF in battle. Instead, they began hiring Yazirian, Human, Dralasite and Vrusk agents to sabotage interstellar trade and interfere with local governments. The UPF created the Star Law Rangers, an interstellar police force, to track the Sathar's agents from planet to planet and fight them on their own terms. But despite the efforts of the Rangers, the sly Sathar agents have become the most dangerous threat ever to face the United Planetary Federation and the frontier corporations.

TODAY'S FRONTIER

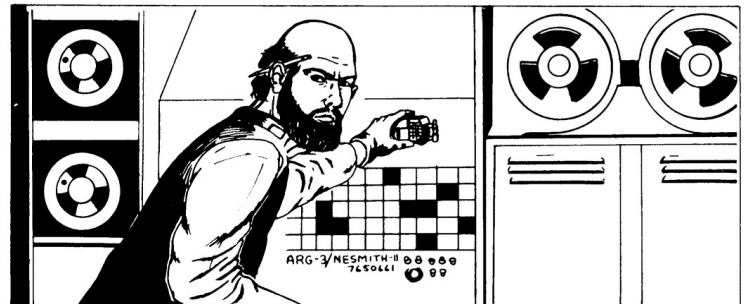
STAR FRONTIERS adventures take place in an area of space called the Frontier Sector, or simply the Frontier. The Frontier contains 17 inhabited star systems, with a total of 23 colonized planets.

Some of these planets have been claimed and settled by only one of the four races, while others were set up in cooperation and have mixed populations.

Besides these settled areas, the sector contains 21 unexplored star systems that could have habitable (or inhabited) planets. No one has explored the routes to these stars for navigational hazards, so no one knows whether these stars even have planets. Even the settled systems are not fully explored. There are many moons, asteroid belts and uninhabited planets that are largely ignored in the day-to-day business of earning a living in the Frontier. These areas could hold lost alien treasures or rich deposits of precious metals and gems. Because they are isolated, these spots quickly become hiding places for outlaws and space pirates. Many of the settled planets themselves are not fully explored. Most have been mapped by spaceships and satellites that take pictures from orbit. Very few have been explored on the ground. When adventurers travel more than a few hundred kilometers from a settlement, they are entering an area where very few people have ever been. They could be the first people ever to cross that land, or they could be walking in the footprints of a race that built a civilization and then collapsed, leaving its relics to be discovered centuries later. It's a frontier waiting for discovery and adventure.

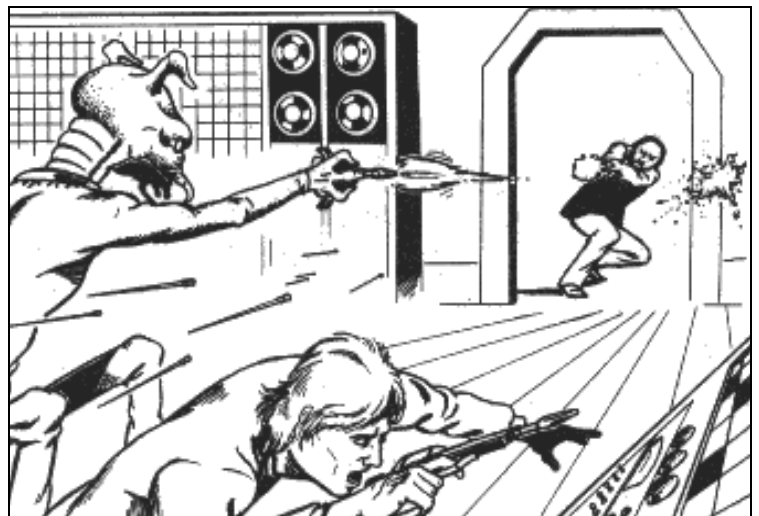
PICTURE STORY

The treacherous double agent aimed his needler pistol at me as he prepared to escape. I didn't think he could kill me with one shot from



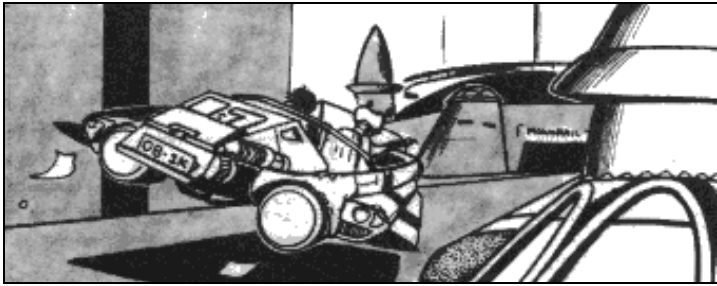
the small weapon, but I didn't want to find out. Dalmor was working for the Sathar, that mysterious, evil race of intelligent worms who were trying to conquer and destroy peaceful worlds.

I knew he was ruthless. Out of the corner of my eye I could see my Vrusk partner, C'hting. The eightlegged insect man had faster reflexes than I, and I knew he was calculating whether he could draw his blaster and fire before Dalmor could shoot.



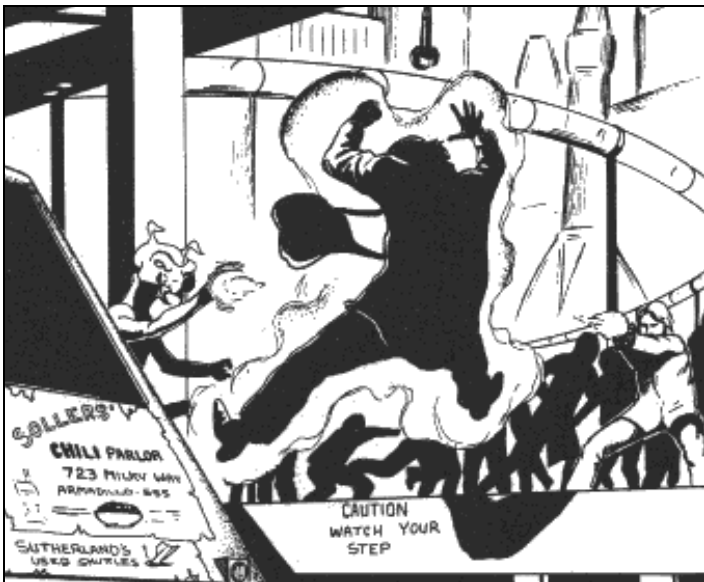
The thought was still in my mind when one of C'hting's arms flashed in a lightning-swift draw. I dived to the floor as Dalmor swung his pistol, but the needles whizzed harmlessly past C'hting and me. C'hting's laser beam only grazed Dalmor as he dashed out the door. We charged after him, but my curse was echoed by C'hting as we watched Dalmor leap aboard the monorail.

We jumped into my waiting skimmer and maneuvered into traffic, gliding smoothly above the road. "It is fortunate Bakchu the Yazirian is guarding the spaceport," C'hting rasped. "If that big monkey can't handle Dalmor, no one can," I replied. "That's only if Dalmor's going to the spaceport, though," I added. "There are two other monorail terminals on the way. Maybe we can get to one of them before his car does."



The skimmer was running at top speed, but I clenched the controls in frustration at every corner as the magnetic control fields slowed us to a safe speed. We arrived at the terminal just as Dalmor's car was pulling in.

Leaping from the skimmer, we ran to the exit ramp. Both C'hting and I crouched behind the polycrystalline wall and aimed our weapons at a very surprised Dalmor as he stepped from the car barely 10 meters away. "You are under arrest, Dalmor. Do not move," clicked C'hting. With a desperate cry, Dalmor drew the needler from his coat. C'hting and I fired before he could aim. Both shots hit Dalmor and he sprawled across the platform, unconscious but still alive.



After filing our reports with our contact at the Pan-Galactic Corporation, C'hting, Bakchu and I drove to the Spacer's Rest to celebrate over a few mugs of thick Yazirian ale. We were discussing what we would do with the 100 credits each of us had earned for the mission when all three of our communicators signaled incoming calls at once. Bakchu snarled in dismay when the face of Beren Tiu, our contact at PGC, appeared on the tiny screens. "Ah, I'm glad I've got all of you together," he smiled. "Nice job on Dalmor, though it's a shame you

had to shoot him in public. I called to tell you that while we were interrogating him we got a lead on a lime job you might..."

"Hold it, Beren," I growled. "You promised us we could take a week off after this mission and, by the stars, I'm going to take a week off!" C'hting and Bakchu rumbled in agreement, and Tiu looked disappointed.



"All right," he said, "if you're not interested in 200 credits apiece, I'm not going to force you to..." Two hundred credits! The three of us looked at each other, and Bakchu curled his lips in a knowing smile.

"What's the job?" I asked.

INTRODUCTION

Welcome to the Savage Worlds edition of Star Frontiers. A game of science fiction adventure in which each player in the game plays a character either as a Human or alien living in the far future. Players use the same rules for making characters as given in the Savage Worlds Explorer's Edition book with the following changes and additions as shown below.

There are four playable races for players to choose from and more to come in optional additions to the game. These four races make up the most predominant races which have mastered faster than light travel and communications and thus populate the majority of the developed worlds.

Humans are similar to Earthmen, but these Humans developed on another planet closer to the center of the galaxy. Humans are considered the average characters in Star Frontiers games, so their abilities are not modified when the character is created.

Dralasites are rubbery, elastic aliens sometimes called "blobs." They can change their shape at will, creating as many artificial arms and legs (pseudopods) as they need at the moment. They are stronger than Humans, but are also slower. They enjoy philosophical debates and have a very strange sense of humor; they love telling old jokes and puns they hear from Humans.

Vrusk look like large insects, and are sometimes called "bugs." They are quicker than Humans, but are not as strong. Vrusk are excellent businessmen and merchants. They love art, beauty and music.

Yazirians are tall, light-boned humanoids with furry manes around their necks. Humans nicknamed them "monkeys" because they look a little like chimpanzees. Thin membranes that stretch between their arms, torso and legs allowed Yazirians to glide between the trees on their native planet. They are generally smarter and quicker than the other races, but are not as strong. Their eyes are very sensitive to light, so they usually wear dark goggles during the day. Yazirians were very warlike in the past, and are still considered pushy and aggressive by other races.

CREATING CHARACTERS

Players choose from one of the four races given. The full description and Special abilities for each race are given on the following pages.

ATTRIBUTES

Unless stated specifically in a race's description, each Attribute starts at a d4. As with normal Savage Worlds character creation, each player has 5 points to distribute amongst their five Attributes; **Agility**, **Smarts**, **Spirit**, **Strength** and **Vigor**. The point cost to raise an attribute is 1 point per die type, which may be modified by one's chosen race. No Attribute may be raised higher than a d12.

LANGUAGES

All of the four major races speak a common language known as Pan Galactic, or common. Other races and creatures may have their own language which will be given in their description. Players may choose to speak one or more of these languages as a separate skill for each. The GM will have to let the players know if a race or creature will be common in their campaign and what language that being speaks.

Characters may also purchase a device known as a Poly-vox, which translates spoken languages into another language form. This device is further explained in the equipment section.

SECONDARY STATISTICS

A character's secondary statistics; **Charisma**, **Parry**, **Toughness** and **Pace**, are determined as per original Savage Worlds rules. Some races such as the Dralasite and Vrusk have modifiers to their Pace. The Yazirian also has the Glide ability for movement which is explained in their race description.

HINDRANCES

Players may choose one Major Hindrance and up to two Minor Hindrances as per original Savage Worlds rules. All Hindrances from the Explorer's Edition book are used in **Star Frontiers** except Doubting Thomas.

NEW HINDRANCES

Xenophobe (Minor/Major)

The character has an intolerance of other races. This intolerance is for sentient races and not towards alien "creatures". As a Minor Hindrance the character suffers a -2 Charisma modifier when dealing with other races, or to initial reactions if that character's intolerance is known by others. As a Major Hindrance the modifier is -4.

Space Sickness (Minor or Major)

Your character becomes ill and disorientated when in zero gravity environments. Whenever your character enters 0- gravity (free fall) he/she must make a Vigor roll or become Shaken. Each round after, the character must make a Vigor roll to become unshaken. On subsequent rounds, once the character is unshaken, they suffer a -2 to their Agility rolls during combat for the sake of losing control (as per Weightless combat). In campaigns where zero gravity environments for the characters will be uncommon, Space Sickness is considered a Minor hindrance.

EDGES

Players may purchase Edges as per the original Savage Worlds rules. The following is a list of Edges from the Explorer's Edition book which most closely fit the **Star Frontiers** universe. The Explorer's Edition book page number is given next to each Edge. Humans receive one free Edge as per original Savage Worlds rules.

Ace	p.28	Level Headed,	p.24
Acrobat	p.28	Imp. Level Headed	
Alertness	p.20	Luck,	p.21
Ambidextrous	p.20	Great Luck	
Attractive,	p.21	Marksmanship	p.24
Very Attractive		McGyver	p.30
Berserk	p.21	Mighty Blow	p.34
Block,	p.23	Mr. Fix It*	p.30
Improved Block		Natural Leader	p.26
Brawny	p.21	Nerves of Steel,	p.24
Charismatic	p.31	Imp. Nerves of Steel	
Combat Reflexes	p.23	Noble	p.21
Command	p.26	No Mercy	p.25
Common Bond	p.31	Professional,	p.35
Connections	p.32	Expert,	
Danger Sense	p.33	Master	
Dead Shot	p.34	Quick	p.22
Dodge,	p.23	Quick Draw	p.25
Improved Dodge		Rich,	p.22
Fast Healer	p.21	Filthy Rich	
Fervor	p.26	Rock and Roll	p.25
First Strike,	p.23	Scholar	p.30
Improved First Strike		Slidekick	p.35
Fleet Footed	p.23	Steady Hands	p.25
Florentine	p.23	Strong will	p.32
Followers	p.34	Sweep,	p.25
Frenzy,	p.23	Improved Sweep	
Improved Frenzy		Thief	p.31
Giant Killer	p.24	Tough as Nails,	p.35
Hard to Kill,	p.24	Imp. Tough as Nails	
Harder to Kill		Trademark Weapon,	p.25
Healer	p.33	Imp. Tr. Weapon	
Hold the Line	p.26	Two-fisted	p.26
Inspire	p.26	Weapon Master,	p.35
Investigator	p.29	Master of Arms	
Jack-of-all-Trades	p.30	Woodsmanship	p.31

NEW EDGES

Martial Arts (Novice, Fighting d6, Military PSA)

Through military training your character has been trained to use his/her body as a weapon. Your character does Str+ d4 damage with his/her hands and feet and when fighting unarmed your character is considered armed. In addition, opponents do not receive a gang up bonus against you. Shock gloves may be used with this edge doing the damage listed under the Shock gloves themselves.

Secondary Skill Area (Novice, Smarts d8)

Your character is adept at learning skills. You may choose another Skill Area as being your Secondary Skill Area. All skills in this Secondary Area are purchased as if they were skills in one's Primary Skill Area, thus they do not suffer the cost penalty as they would for learning skills outside your Primary Skill Area. The cost for learning or increasing a skill higher than the skill's linked attribute still applies.

Zero-G Tolerance (Seasoned, Agility d8)

Your character has become accustomed to functioning in zero gravity environments. Whenever your character makes an Agility roll during combat to maintain control in zero gravity, your character receives a +2 to his or her roll.

SKILLS

Skills in **Star Frontiers** works the same as the original *Savage Worlds* rules, with some slight differences. Starting characters receive 16 points to distribute amongst their skills, with Humans receiving 2 bonus points.

SKILL POINTS AND PSA'S

In **Star Frontiers** players take on the roles of Galactic peace keepers, agents, explorers or mercenaries. Each character either has, or had, a career within the Pan-Galactic Rangers and as such was trained in an area of expertise. The skill list is categorized into three areas called Primary Skill Areas or PSAs, and one list called common skills. PSA's reflect the specialized training the character received in their career.

When a player creates a character they choose a PSA that their character was trained in. With the 16 points that a character is given for skills, the player may distribute 12 of these points on skills in the list of their chosen PSA. These are called **PSA Points**. The cost is a 1 point for one die ratio up to the skill's linked Attribute, and then 2 points for each die increase beyond the skill's linked Attribute as per original *Savage Worlds* rules. Skills chosen outside one's PSA with these 12 **PSA Points** cost one extra point per die type purchased.

Of the initial 16 skill points, 4 may be spent outside of one's PSA on skills either from another PSA list, or from the skills listed on the **Common skills** list at no cost penalty. These 4 points reflect personal interests or training outside one's career. Humans receive 2 skill points as a racial bonus. These skill points are added to their personal interest points.

Example: Steve plans to make a character with the Technician PSA. From his 12 PSA points, he spends 2 points in Knowledge Computers (which is within his PSA) and thus starts out with a d6 in that skill. However he also wants his character to have Stealth (which is outside his PSA). He spends 2 points in Stealth only acquiring it at a d4 because of the extra point cost for Stealth not being within his PSA. If he uses 2 points from the 4 points which reflect personal interests to acquire the Stealth skill, he could avoid the cost penalty and his Stealth would be at a d6 for only 2 points.

RAISING AND LEARNING SKILLS

When players earn an advance, and want their characters to learn a new skill, or raise existing skills, they may do so in the following manner;

Each Advance one may:

- Raise two skills within their PSA, that are below their linked attributes one die type each.
- Raise one skill within their PSA that is above its linked attribute one die type.
- Raise only one skill outside their PSA (which is either above or below its linked attribute) one die type.
- Learn a new skill either within or outside of one's PSA.

When characters learn new skills or increase a skill they must be trained somehow. Three methods are described below.

HYPNO-TRAINING Hypno-training is a teaching system that involves hypnotism, memorization and the use of drugs that improve the mind's ability to learn. A character with enough experience for an advance may learn a new skill or increase a skill level at a hypno-training center in five days (100 hours) for 100 Cr.

TEACHERS A character with enough experience points for an advance may learn a new skill or skill level from another character. The teacher's skill level must be at least 1 level higher than the student's.

A character can learn a new skill or skill level from a teacher in two weeks.

PRACTICE Characters with enough experience points for an advance may learn new skills or skill levels simply by practicing. This is not always possible, however, especially with skills that require special equipment. The amount of time required is up to the GM.

All three of these methods are optional. Some referees may want to ignore this rule, and simply allow players to pick new skills when their characters have earned enough experience points. Training is more realistic, but also more complicated.

PSA SKILLS

Military	Technological	Bio-Social
Climbing	Investigation	Climbing
Fighting	Know. , Computers	Healing
Intimidation	Know. , Machinery	Investigation
Know. , Demolitions	Knowledge, Robotics	Know. , Science
Shooting	Lockpicking	Persuasion
Stealth	Repair, Computers	Stealth
Survival	Repair, Machinery	Streetwise
Throwing	Repair, Robots	Survival
	Piloting	Tracking

COMMON SKILLS

Boating	Notice
Driving	Riding
Gambling	Swimming
Guts	Taunt

Most skills follow the original *Savage Worlds* rules descriptions, a few are explained below as to how they function within the **Star Frontiers** universe.

Computers, Knowledge (Smarts)

Computer programs have levels ranging from 1 through 5, depending on their complexity. Each level is interpreted as a die level, for example: a level 1 program would be a d4, level 2 a d6 etc. Computers also have levels from 1 through 5, depending on what programs they hold. These levels are explained in the descriptions of computers in the Equipment section.

Each time a specialist tries to perform a task, a skill roll is required. This roll is an opposed roll based on the specialist's skill die type versus the Program's level die type. Computer specialists get only one chance to try a skill roll on a computer per task. If the roll fails, they may not make further attempts at that task. If the computer was built by aliens (not Dralasites, Humans, Vrusk or Yazirians) the success rate for the skill roll is modified by -2.

The various tasks a computer specialist may perform are; defeating or by-passing security, displaying information, manipulating programs, interfacing computers and writing programs.

Defeating/ By-passing Security

If a computer has a Computer Security program, characters must break or bypass this program before they can perform any other skill task except repair. Defeating a security program involves a decoding process that can take a long time. Characters trying to break security must spend 1-4 hours working at the computer. The specialist may try to reduce this time by half, but there is a -1 to their skill roll.

A computer specialist can bypass a security program manually by rewiring the computer. This takes only 1d10 minutes, but has several disadvantages: the chance for success is lower (-2 to skill roll), it requires a robcomkit, and failing the roll will set off every alarm the computer has.

Displaying Information

A specialist can use this skill to display any information in the computer's memory. It is especially useful for getting lists of programs that are stored in the computer, personal records, and raw, unprocessed data that is loaded and waiting to be fed into a program. A specialist gets a +2 modifier if he is trying to display information about a program he knows. He can display information about programs he wrote in the computer with no skill roll required. If a specialist displays an item successfully, he never needs to roll to display it again.

Manipulating Programs

A computer specialist has a chance to successfully run a program, change it or purge it from the computer. This is a normal skill roll versus the program's level as explained above. If the program is one that the character has learned, he gets a +2 bonus to his roll. A specialist can run a program automatically if it is one he programmed into the computer himself, or if he has run it successfully in this computer before. Also a character can purge a program automatically if he wrote it in the computer.

Interfacing Computers

This task lets a character try to link two computers together, either by connecting them with wires, communication lines or radio link. Once the two computers are linked, the computer specialist can perform all tasks (except bypass security and repair) from either computer. The skill test is resolved using the highest level of the two computers.

Writing Programs

Computer specialists learn to write their own programs. For every skill level the specialist gains, he learns how to write two computer programs. The player should pick a program from the list of programs in the Equipment section. When a specialist writes a program, its level is the same as his current level, no matter when he learned the program. For example, a computer specialist that learned the Installation Security program at d4 Computers skill level, can write a 4th level (d10) Installation Security program when he reaches d10 in his Computers skill.

A specialist that knows how to write a particular type of program can buy that type of program, (regardless of level) at half-price for his own computer. He also gains a +2 bonus when trying to manipulate that type of program or detect security on it in any computer.

Computers, Repair (Smarts)

When computers break down or are damaged, they can be repaired only by a computer specialist. The level of the computer does not affect the specialist's chance to repair it. Computers are repaired according to the original Savage Worlds repair rules.

Demolitions, Knowledge (Smarts)

There are two tasks to the demolitions skill: set charge and defuse charge. Only a character with demolitions skill can legally buy or use explosives or detonators. Tornadium D-19, sometimes called kaboomite, is the standard explosive.

Setting Charges

Only characters with demolitions skill can set charges. The number of Rounds needed to set a charge is as follows:

Skill Level	Number of Rounds
d4	5
d6	4
d8	3
d10	2
d12+	1

If a character fails the skill check to set and detonate the charge, the charge has not exploded and must be re-set. The referee should feel free to have the charge explode prematurely or late. A critical failure on the character's skill roll results in the charge exploding **during** the setting of the charge.

Charges can be detonated by timer, radio signal or weapon fire. A timer lets the character set a time when the charge will explode. The timer can be adjusted to delay from 1 second to 60 hours. If a chronocom or subspace radio is available, charges can be set to explode when a particular signal is beamed at them. The chance to explode a charge with a radio beam incurs a -1 to the skill roll.

Diffusing Charges

A demolitions expert can try to defuse a charge that was set by another expert. Defusing a charge takes one round no matter what level the expert is. The expert's chance to succeed is an opposed roll based on the skill level of the one who set the charge. A character can defuse one of his own charges automatically.

Healing (Smarts)

The following rules make some slight changes to the standard healing rules in Savage worlds. A character that has the Healing skill is called a medic. Medics need a medkit to use their skill. If a medic does not have a medkit then there is a -2 to their Healing skill rolls. Standard Savage Worlds rules for wound modifiers also apply. If the patient is an animal or an unfamiliar alien, all skill rolls to heal the patient suffers a -2 modifier.

Administering Stimdose

A medic can use one dose of Stimdose to revive an incapacitated or shaken character, or to restore the immediate negative affects to a character that was poisoned or contracted a disease or infection. Some poisons or diseases that have recurring effects may require the medic to make a Healing roll to cure the poison or disease, as described below. Stimdose can only be given by a medic. If more than one dose is given in a 20-hour period, the second dose has no effect.

Administering Staydose

A medic can use one dose of Staydose to place an individual in a state of arrested animation if the character has suffered up to five wounds (but no more than 5) and died. The Staydose must be administered within 1 minute after death. The character immediately stabilizes but remains unconscious and must seek medical attention in a hospital (or facility with supplies beyond a field medkit) within 24 hours. Any effects from poisons, diseases or infections within the character also halt for the 24 hour time while in this state.

First Aid

A medic can heal 1 wound level automatically (no skill roll is needed) by using one dose of Biocort plus any appropriate items from the medkit (local anesthetics, plastiflesh spray, etc.) Only one shot of Biocort can be given to a character in a 20-hour period. If a second shot is given within 20 hours, it has no effect. Biocort has no effect on poisons, infections or diseases.



Surgery

A medic may perform surgery on a character who has suffered one or more wound levels. A success heals up to two wounds and three wounds on a raise. Normal modifiers for wounds for the patient and/or medic apply to the skill roll. One dose of Biocort and anesthetic per wound level are used during the surgery. This use of Biocort is in addition to any that may have been used with first aid. If the skill roll fails, the Biocort and anesthetic are still used.

Activating Freeze Fields

A freeze field is a device that places a body in stasis and preserves it until it can be revived. Only a medic can activate a freeze field correctly by making a Healing roll. No modifiers for the wounded patient apply to the medic's roll, but any wounds the medic has does. A freeze field must be activated within two minutes after death, or the body can not be revived. Activating the field takes five Rounds. The process can be interrupted, as long as the field is completely activated within the two-minute time limit. If the medic does not pass his Healing roll to activate the field and there is at least one minute left in the time limit, he has two options: he can make a second attempt to activate the field, or he can inject the body with Staydose. If the second attempt to activate the field fails, the body can not be revived. Freeze fields are further described in the equipment section

Curing Infection, Diseases and Toxins

Controlling infection requires a dose of **Omnimycin** and a successful Healing roll. If the attempt fails, the Omnimycin is used up and the infection is out of control. The effects and/or damage caused by the infection varies for each infection.

Curing a disease requires a dose of **Antibody plus** and a successful Healing roll. If the attempt fails, the antibody plus has been used up and the disease has not been cured. A 24 hour period must pass before the medic can make another attempt.

Neutralizing a poison inside a victim's body requires a dose of **Antitox** and a successful Healing roll. Poisons have varying strengths and effects. Most cause temporary or permanent Ability loss. Neutralizing a poison stops the poison from causing any more damage, but does not heal damage the poison already caused. Ability loss usually heals over time from over several hours to several days.

Lockpicking (Agility)

Lockpicking is used for both mechanical and electronic locks and defenses. Below is a list of some examples as to what may be found in the **Star Frontiers** universe:

- Simple Mechanical and Electrical locks
- Motion and Pressure Sensitive alarms or defenses
- Infra-red Beams and Sound Sensitive alarms
- Video surveillance
- Heat Sensitive alarms
- Personalized Recognition Devices (fingerprints, voice patterns, etc.)

Machinery, Knowledge (Smarts)

This skill gives the technician working knowledge of any machinery not covered by the Computers or Robotics skills. Devices including weapons, Para-batteries, power plants, heavy weapons batteries, generators, vehicles etc. If the device is of alien origin the technician's skill roll suffers a -2 modifier.

Repair (Smarts)

The repair skill has been split into three separate skills; Computers, Machinery and Robots. In **Star Frontiers**, skill at repairing one of these types of devices does not grant the character skill with the others. If a computer, robot or type of machinery is of alien design, the technician has a -2 to his repair skill roll. Computers and Robotics repair require the use of a Robcom kit while Machinery repair requires a Techkit. Both of these kits are further detailed in the equipment section.

Robotics, Knowledge (Smarts)

A robotics expert specializes in robots. Robots are complex, mobile machines that are designed to perform specific jobs. Each robot has a level ranging from 1 through 6. Several types of robots and further explanation of their levels and missions are discussed in the equipment section. If the robot is of alien design, then the robotics specialist has a -2 modifier on his Robotics knowledge and repair skill rolls. A character must have a robcom kit to work on a robot.

Adding Equipment

A robotics specialist can install new equipment on a robot himself with a successful Robotics Knowledge skill roll. Adding equipment requires both the Robotics Knowledge and Robotics Repair skills.

Activate / Deactivate

A robotics specialist can deactivate (turn off) a robot regardless of its level by making an opposed Robotics Knowledge roll versus the robot's Smarts. The expert also can activate robots that have been deactivated with no roll necessary. However, before a robotics specialist can deactivate the robot, list its programs, or alter its programs or mission, he must get at the robot's internal circuitry. This requires removing a protective plate. The plate can be removed in one round even if the robot is fighting the character. The character must make a successful Grapple attack against the robot. On the following round (assuming the character maintains the "grapple") the character removes the protective plate on the internal circuitry. Once the plate is off, the robot can be deactivated in one round.

Listing Programs / Missions

A robotics specialist can learn a robot's exact mission and programs. This is an opposed Robotics Knowledge roll versus the robot's

Smarts. Once a character has successfully listed the robot's program's or mission, he can always list them in the future with no roll required.

Adding /Altering Programs or Missions

Adding programs or missions to a robot must be done one at a time. It takes 1d10 minutes per added program or mission and the character must make a Robotics Knowledge roll separately for each program or mission added.

A robotics specialist can try to alter a robot's mission. This takes 1d10 minutes plus the robot's level and requires an opposed Robotics Knowledge roll versus the robot's Smarts. Once a mission has been changed, changing it back to the original mission requires another roll. If the new mission requires programs the robot does not have, the robot will still try to follow its new mission however it can.

Robot Malfunctions

If a character rolls a 1 on both the skill die and Wild die while trying to add or alter a robot's mission, or add a program, the robot can malfunction. When this happens, the referee should roll d100 on the Malfunction Table.

Robot Malfunction Table

01- 25	No Malfunction
26- 50	Program Destroyed
51- 75	Short Circuit
76- 90	Haywire
91- 100	Explosion

No Malfunction - The robot continues to function normally.

Program Destroyed - One of the robot's programs (picked randomly by the referee) has been destroyed. If the program was an Edge this may alter some of the robot's skills or Secondary Characteristics. If all the programs in a robot are destroyed, the robot shuts itself off.

Short Circuit - The robot is still operating, but has been damaged. For example, a robot with a short circuit might stop suddenly every other turn, or rattle and spark while it works. The referee chooses an appropriate Hindrance or effect for the robot.

Haywire - The robot is completely out of control. It might attack at random, spin in circles, recite the Gettysburg Address, or do anything else the referee thinks fits the situation.

Explosion - The robot's parabattery explodes, causing 2d6 points of damage multiplied by the parabattery's type to the robotics specialist and robot.

Science, Knowledge (Smarts)

The Science skill is a "catch-all" skill for all of the general scientific fields, such as Geology, Biology, Astronomy, Physics, Archaeology etc. Rather than have a player choose each skill separately, (and thus spend all their skill points) they are all summed up in the "Science" skill.



DRALASITES

PHYSICAL APPEARANCE AND STRUCTURE

Dralasites are short, rubbery aliens that have no bones or hard body parts. Their skin is a flexible membrane that is very tough and scratchy. It generally is dull grey and lined with dark veins that meet at the Dralosite's two eyespots.

The internal structure of a Dralosite is very different from the other races. The Dralosite's central nerve bundle (brain), numerous small hearts and other internal organs float in a pudding-like mixture of protein and organic fluids. Dralasites breathe by absorbing oxygen directly through their skin, so they have no lungs. They are omnivores, but eat by surrounding their food and absorbing it, so they also have no digestive tract or intestines.

All Dralasites go through male, female and neutral stages during their lives (these phases can be controlled with medicines). Males release spores into the air, which drift until they become attached to a female. A young Dralastie then "sprouts" from its mother, eventually maturing and dropping off.

SENSES

The most important sense of a Dralosite is smell. They breathe directly through their skin, and the entire membrane is sensitive to odors. Their sense of smell is so keen they can identify persons by smell alone and can recognize familiar smells on objects or persons. The membrane also is sensitive to touch and to vibrations, allowing Dralasites to hear and feel.

SPEECH

Dralasites have a voice box, but it works like a bellows because they have no lungs. A Dralosite's voice can vary from a soft whisper to a thundering roar and from a bass rumble to a piercing screech. Among themselves, they also use shapes, odors and touch to communicate.

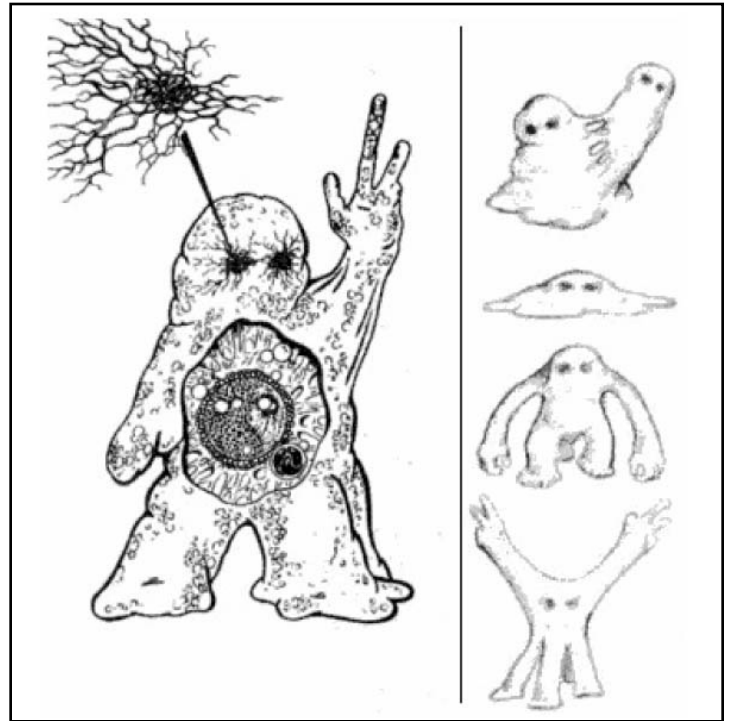
SOCIETY AND CUSTOMS

Dralasites are philosophical and thoughtful. Their communities are small, and many Dralasites prefer to live alone. Dralasites do not care about wealth, power or status symbols. They judge themselves by the quality ideas and their ability to discuss important ideas wisely. Dralasites often hold large public meetings to discuss new ideas. Discussions and debates are among their favorite ways to relax.

Steam baths are another favorite Dralosite recreation. They mix perfumes and intoxicants with the steam. These effects Dralasites the same way alcohol does a Human or Yazirian.

Dralasites are widely known for their strange sense of humor. They love old jokes and puns that make Humans groan. Many Human comedians who could not find work in Human cities have become rich performing on Dralosite worlds.

Dralasites do not normally wear clothing, because it makes breathing difficult and interferes with their sense of smell. They usually carry their equipment on web belts. When they must wear clothing to protect themselves, they use special materials that let air reach their skin.



average size:	1.3 m tall, 1 m wide
average mass:	65 kg
average life span:	250 years
reproduction:	hermaphroditic, budding
body temperature:	30 C

ATTITUDES

Dralasites are very fond of Vrusk, because they think Vrusk have funny shapes. They get along well with Humans but are careful not to upset Yazirians, who they consider too violent.

SPECIAL ABILITIES

Dralasites start with a d6 in Strength instead of a d4. Dralasites are slower than most races, Pace -2

Elasticity (Novice): Multiple arms and legs at will. They may have only as many pseudo-pods' equal to their Agility die in any combination. It takes about 5 minutes to grow or absorb a limb. Only one limb may be grown at a time and they may only be up to 1/2" (1 meter) long and 10 cm thick (about 4 inches). They are not automatically ambidextrous. Even though a Dralosite can have many arms, it can not fire more than two weapons at once. For every "leg" beyond 2, (to a maximum of 4) that a Dralosite has, they increase their Pace by 1. When a Dralosite player creates limbs, he must state which is the dominant limb unless the character possess the Ambidextrous Edge.

Keen Smell (Novice) Dralasites add +2 to Notice rolls based on smell.

Lie Detection (Novice): All Dralasites can make a Notice roll at -2 to determine if they are being lied to.

Enhanced Lie Detection (Lie Detection, Seasoned): Notice roll with no penalty to determine if they are being lied to.

Truth Sayer (Lie Detection, Enhanced Lie Detection, Veteran): Notice roll at +2 to determine if they are being lied to.

HUMANS

PHYSICAL APPEARANCE AND STRUCTURE

Typical adult Humans are approximately 2 meters tall, and have two arms and two legs. They are warm-blooded omnivores with internal skeletons. Both hands have four fingers and one opposable thumb, which allows them to grip and use tools. Their arms are jointed at the shoulder, elbow and wrist. Their legs are similar, being jointed at the hip, knee and ankle. Humans walk upright.

Human skin color varies over a wide range, including pale white and pink, tan, pale yellow, red, brown and black. This color does not change as the Human matures. Most Humans have hair covering the top and back of the head, and males also have hair on their chins and throats. Hair color varies from white and yellow to red, brown and black, gradually changing to grey as the Human ages.

SENSES

Humans have color vision, sensing the spectrum between infrared and ultraviolet wavelengths. They have good depth and motion perception. Their hearing covers a range from 16 to 27,000 cycles per second, with good separation and direction sensing qualities. Their skin is touch sensitive. Their senses of taste and smell are not as highly developed as their sight.

SPEECH

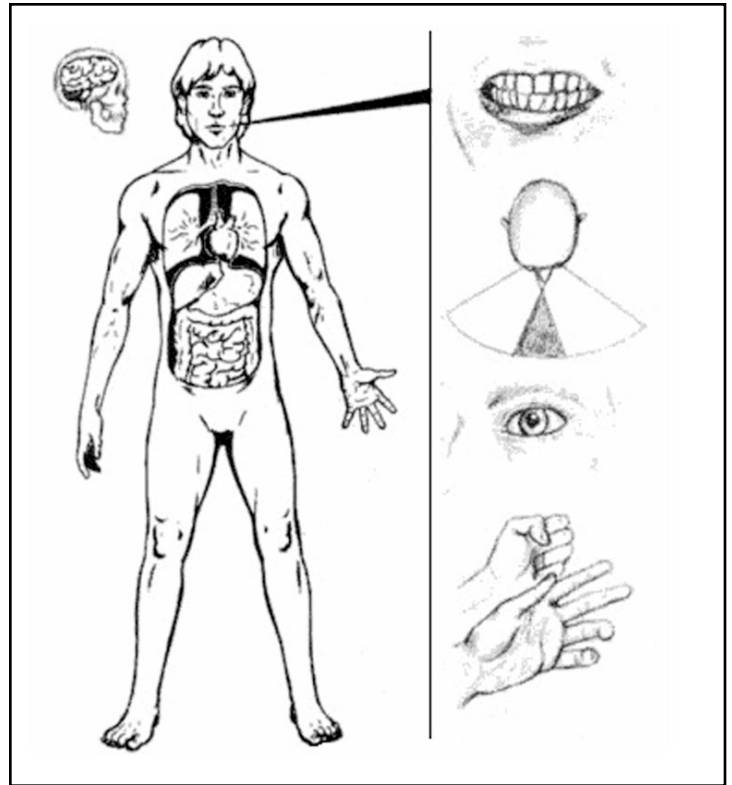
Humans speak by forcing air from their lungs through a larynx or voice box and shaping sounds with their lips and tongue. They can create a wide range of sounds, and have no difficulty speaking Pan-Galactic and Yazirian languages.

SOCIETY AND CUSTOMS

Human society centers around the family. A family generally consists of a father, a mother and 1 to 10 children. Families usually group together into communities for mutual support and protection. Community size varies widely; several Human cities are known to have populations above 5 million.

Of all the star-faring races, Humans are the most varied. As a race they are not as warlike as the Yazirians, as businesslike as the Vrusk or as thoughtful as the Dralasites. Yet, individual Humans can be found who surpass even the most violent Yazirians, the most dedicated Vrusk and the most philosophical Dralasites. Humans tend to value individuality and personal freedom more than anything else, but they do not hesitate to work together to reach a common goal or to protect themselves from attack.

To members of the other races, the most puzzling aspect of Human behavior is their curiosity and love of adventure. Many Humans are willing to put themselves in great danger simply to see something new or go somewhere no one has ever gone before. Some Humans (a very small percentage) seem to actually enjoy being in danger, thriving on the excitement of a life-or-death situation. This type of behavior has never been observed in normal members of the other races. Even the Yazirians, known for their violence and fits of rage, try to avoid taking unnecessary risks. This spirit of adventure has served Humans well, however, as most major exploration missions organized by local governments or private companies are led by a Human.



average size:	1.9 m tall
average mass:	80 kg (male), 55 kg (female)
average life span:	200 years
reproduction:	heterosexual, viviparous
body temperature:	37 C

ATTITUDES

Humans are one of the most open and accepting of the known races. They get along very well with Dralasites, and their similarity to Yazirians usually is strong enough to overcome the usual negative reaction to a Yazirian's pushiness. Many Humans, however, are mildly nervous around Vrusk. Human psychologists blame this on the Vrusk's resemblance to a giant insect. (Many Humans dislike insects, and some are actually afraid of them.)

SPECIAL ABILITIES

Humans emphasize on training and education more than the other races, so Human characters start with 2 extra skill points in addition to the free edge as stated in the Savage Worlds rule book. These extra skill points are Personal skill points as explained under Skills, below.

VRUSK

PHYSICAL APPEARANCE AND STRUCTURE

Vrusk look like large insects. Eight legs grow from their abdomen, four on each side. Their torso is upright in front of the abdomen. The torso is humanoid, with two arms connected at the shoulders. The head is above the shoulders. Vrusk hands are circular pads with five fingers spaced evenly around the edge. A Vrusk's shoulders are double-jointed, so they can rotate their arms in a full circle without straining any muscles. They can reach any point on their abdomen or behind their backs easily.

A Vrusk's body is covered by a carapace (hard shell). This shell is jointed at the Vrusk's elbows, hips, knees, etc. The carapace protects the Vrusk from bruises, cuts, scratches and other minor injuries. Unlike insects, Vrusk have an internal skeleton to support their bodies. Young Vrusk have a blue carapace with bright orange near the joints. As the Vrusk gets older, its carapace changes to dull green with yellow joints.

Vrusk have large eyes that are protected by a hard, clear covering. The mouth is surrounded by four eating mandibles. The two larger mandibles hold food while the small ones tear it apart and place it in the mouth. They are omnivores. Vrusk have lungs, and breathe through many small nostrils under their abdomens. This arrangement makes it difficult for Vrusk to swim.

SENSES

Vrusk have very good color vision, but they see more of the short wavelengths (blue and ultraviolet light) than Humans do, and less of the long wavelengths (orange and red). Their sense of smell is centered in their antennae, and is slightly better than a Human's. They also can touch with their antennae. Their hearing is about the same as a Human's.

SPEECH

Vrusk speak by combining clicks produced by their mandibles and buzzes produced by a plate in their mouths.

SOCIETY AND CUSTOMS

Vrusk are hard-working and practical. Their society is organized around independent corporations. To a Vrusk, the company he works for is his family and his nation. The company determines everything about the Vrusk's life; who he lives with, what his job is, where he travels, etc. Vrusk give their company name before their personal name.

Vrusk have two types of corporations: conglomerates and trade houses. Conglomerates have business interests in many areas. A single conglomerate might have divisions that build computers, operate farms, train lawyers and set up colonies. A Vrusk that works for a conglomerate usually works for only one division, and might not even know what other divisions the company owns. Trade houses, which are more common in the Frontier, specialize in one type of business. Because all Vrusk working for a trade house do the same work, trade houses usually work together. For example, a trade house that builds farming equipment would hire accountants from an accounting house to keep their financial records. Business between companies is regulated by laws that are so complex no one besides Vrusk have ever fully understood them.

Vrusk also love beauty, harmony and order. The goal of most Vrusk is to become wealthy, collect art, and live in peace. Their love for



average size:	1.5 m tall, 1.5 m long
average mass:	85 kg
average life span:	175 years
reproduction:	heterosexual, ovoviviparous
body temperature:	38 C

beauty makes them unwilling to get into fights that do not involve their company. However, Vrusk that are defending their company will do any thing to remove the threat permanently. Vrusk adventurers, however, do not belong to a company. Some are independent businessmen, some are company employees who were fired and some are just too rebellious to put up with company rules. A few start their own companies and eventually become leaders in their communities.

ATTITUDES

Vrusk get along well with the other three races. They respect the Yazirian custom of choosing a life enemy, and feel at ease around Dralasites because they are careful and skillful planners (though they are annoyed by the Dralasites' sense of humor). They understand Humans the least because, to a Vrusk, Humans seem unpredictable and a little lazy.

SPECIAL ABILITIES

Vrusk start with a d6 in Smarts instead of a d4. Vrusk are faster than most races, Pace is +2.

Ambidextrous (Novice): Vrusk ignore the -2 penalty for using their off-hand

Comprehension: Because Vrusk have such a complicated society, they are able to understand all sorts of social dealings. It is the ability to figure out any type of social dealing that the player them self cannot. This ability adds +2 to all Common Knowledge rolls in this situation.

YAZIRIANS

PHYSICAL APPEARANCE AND STRUCTURE

Yazirians are tall, thin humanoids. They have long arms and legs and slender torsos. Two large flaps of skin grow on either side of their bodies, attached along their arms, torso and legs. When a Yazirian raises its arms, this membrane is stretched tight and forms a sort of wing. Under certain conditions (explained under Gliding). Yazirians can glide short distances using these wings.

Yazirians have muzzles and high foreheads, giving them an animal-like appearance. Their heads are surrounded by manes and collars of hair, which varies in color from glossy black to pale yellow. Their skin color ranges from gray to light tan. Because their bodies do not sweat, Yazirians pant to keep cool. They are omnivores.

Yazirians have four knuckles (one more than Humans) on their fingers and toes. The inside toe is opposed like a thumb, allowing them to grasp things with their feet. The tips of their fingers and toes end in broad, ribbed pads, giving them an excellent grip. These characteristics, combined with their animal-like appearance, earned them the nickname "monkeys."

SENSES

Yazirians' senses of hearing, smell and taste are equivalent to a Human's. Because they evolved from nocturnal hunters, however, their eyes are adapted to seeing in dim light. They can not see in complete darkness. They usually wear dark goggles when they must work in sunlight.

SPEECH

Yazirians have no trouble speaking Human languages or Pan-Galactic. Their own language is a combination of Human-type sounds and snarls and growls.

SOCIETY AND CUSTOMS

Yazirian communities are divided into large, loosely organized clans. All the members of a clan are related to each other. In the past, clan ties were very strong. The clans had traditional enemies and allies, and they struggled constantly for power and land. Since the Yazirians moved into space, they have learned to cooperate more and the clans have become less important. Despite this, Yazirians still have a reputation throughout the Frontier as proud, fierce fighters.

A custom Yazirians have kept intact is the selection of a life-enemy. When a Yazirian chooses a life enemy, he dedicates his life to destroying, overcoming or outdoing that enemy as completely as possible. In the past, a Yazirian would choose an enemy clan or clan member as his life-enemy, but now the choice is much wider. A Yazirian scientist could name an incurable disease as his life-enemy, or a Yazirian trader could choose a competing company. The scientist would try to find a cure for the disease; the trader would try to build up his own company so it is more powerful than his enemy's, or even try to drive the other company out of business.

A Yazirian gains honor by striving to defeat his enemy. Yazirians with powerful life-enemies are respected and admired. A Yazirian that defeats its enemy does not need to choose another, but some Yazirians do. There is no set point in a Yazirian's life when he must choose a life-enemy, and some Yazirians never choose one. A



average size:	2.1 m tall
average mass:	60 kg (male), 50 kg (female)
average life span:	140 years
reproduction:	heterosexual, viviparous
body temperature:	39 C

Yazirian that dies without having chosen a life-enemy is considered unlucky.

ATTITUDES

In general, Yazirians like Vrusk and Humans. They occasionally lose their patience with Dralasites, because they are slow and would rather discuss ideas than act on them.

SPECIAL ABILITIES

Yazirians start out with a d6 in both Smarts and Agility instead of a d4. However they are not as strong as other races, Strength cost x2. Example: It costs two attribute points to raise one's Strength from a d4 to a d6.

Flight (Gliding) Yazirians can glide short distances using the membranes along their sides. A Yazirian can glide 1" (2 meters) for every meter he is above the ground when he starts. He must start at least 10 meters (5") above the ground. The maximum distance a Yazirian can glide depends on the gravity of the planet, as shown below.

Gravity	Max. Glide
.6	300m (150")
.7	200m (100")
.8	100m (50")
.9	50m (25")
1.0	20m (10")

Battle Rage (Novice, Berzerk): Yazirians train themselves to go berserk in battle. The Yazirian does not have to wait until it receives a wound to make the Smarts roll. With a raise, they may use skills that require concentration they would otherwise be unable to use

Low Light Vision: Yazirians can see without penalty in dim light, however they must wear goggles while in bright light or sunlight or suffer a -2 to all ranged attack rolls and Notice rolls.

EQUIPMENT

Standard currency in the Frontier is measured in Credits or Cr. All characters start the game with a standard equipment pack, a kit according to their PSA and 250 + d100 Credits.

PSA Kits

Bio-Social Specialists start with either an Envirokit or Medkit.

Technological Specialists start with either a Techkit or Robcomkit.

Military Specialists start with a pistol of their choice.

The Standard equipment pack contains many useful items as described below, but does not include any weapons other than a single dose grenade.



Chronograph / Communicator. This device looks like a large wristwatch, but it can do many things. It is a watch with a lighted face that can be used as a stopwatch, it is a mini-calculator, it is a radio / video communicator that can be used to talk with other characters up to 5 kilometers away. It can be used to summon the police or a rental skimmer as well.

Coveralls. This is a highly durable, waterproof suit. It will keep the character warm in cool weather and cool in hot weather. It has large pockets on the hips, legs and chest, as well as several smaller pockets on the sleeves.

Doze Grenade. A doze grenade releases a cloud of fast-acting knockout gas. All creatures within a medium burst template must make a Vigor roll or will fall asleep for 1d10 minutes. A shot of Stimdose will revive a sleeping individual immediately. The doze gas is only effective on the round the grenade goes off.

ID Card. All characters carry an ID card. An ID Card can be used only by its owner because the computers which read ID cards also scan the character's thumbprint. ID cards are commonly used as credit cards. When a character buys something, his ID card must be inserted into a computer. He places his thumb (or paw, digit or pseudopod) on a screen so the computer can verify his identity, and then the money is deducted from the character's account. This same process is used to pay for Monorail rides and rented skimmers.

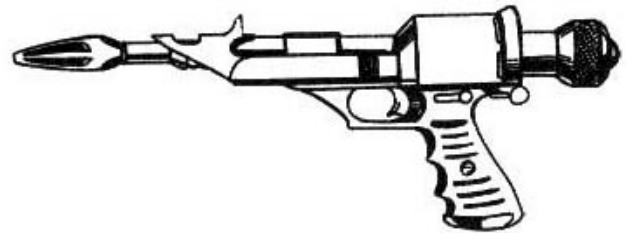
Pocket Tool. This device is similar to a pocket knife, but it includes many tools besides a penknife blade; a universal screwdriver, a small adjustable wrench, vice pliers, a hole puncher, and electromagnet and a small flashlight that will shine a light for up to 25 meters (12 squares).

Survival Rations. This small package contains enough concentrated food and water purification tablets for one person for 5 days.

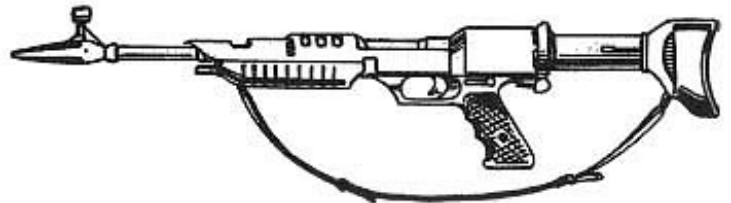
WEAPON DESCRIPTIONS

BEAM WEAPONS

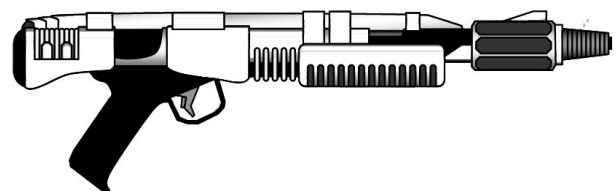
Electrostunner. An electrostunner looks like a large pistol. It is a short-range weapon that fires an arc of electrons that looks like a lightning flash. It is commonly called a zapgun because of the noise it makes when fired. An electrostunner has two settings, stun and blast. A blast causes 3d6 points of damage. A stun can knock a creature unconscious for 1 hour unless it makes a Vigor roll. A zapgun uses two SEU per shot. It holds a 20 SEU clip, but can also be connected to a backpack or powerpack with a 1.5 meter powercord. A gauss screen will block the electrostunner's beam. An anti-shock implant will nullify a stun but not a blast.



Laser Pistol. A laser pistol is a large handgun that fires a pulse of bright light. Laser pistols are commonly called blasters. A laser pistol has a dial that can be set from 1 to 3 to control how many SEU are fired by each shot. Each SEU fired causes 1d6 points of damage. For example, when the dial is set at 3, the shot uses 3 SEU and causes 3d6 points of damage. Players must tell the referee what setting they are using before rolling the dice to see if the shot hits. Laser pistols use 20 SEU clips but can be attached to backpacks or powerpacks. An albedo suit or screen defends a target from lasers.



Laser Rifle. A laser rifle is a rifle-sized version of a laser pistol. It has a longer range and the SEU dial can be set from 1 to 5 instead of 1 to 3.



Sonic Disruptor. A sonic disruptor is a type of rifle and is commonly called a disruptor. A sonic disruptor generates a focused sound beam. The damage it causes depends on the range. At closer ranges, it causes more damage. It causes 3d8 points of damage at short range, 2d8 at short range and 1d8 at long range. It uses a 20 SEU clip but can also be attached to a backpack or powerpack. A disruptor uses 4 SEU per shot. Only a sonic screen can stop its deadly beam.

Sonic Stunner. A sonic stunner is a type of pistol. It is commonly called a stunner. It will stun a victim for 1 hour unless the victim makes a Vigor roll. One shot uses two SEU. It uses a 20 SEU clip, but can be attached to a backpack or a powerpack. A target with an anti-shock implant is immune to the effect of a Sonic stunner. Otherwise, only a sonic screen can stop the stunner's sound beam.

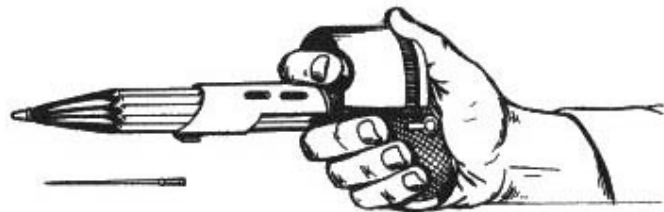
Heavy Laser. A heavy laser is about the size of a machine gun. It must be mounted on a tripod or a swivel mount to be fired. It has a longer range than a laser rifle, and a minimum SEU setting of 2. Otherwise it operates the same as the laser rifle.

Sonic Devastator. A sonic devastator is a heavy weapon that must be mounted on a tripod or a swivel mount to be fired. Except for its greater range and damage, the sonic devastator operates just like the sonic disruptor.

PROJECTILE WEAPONS

Automatic Pistol. An automatic pistol is a refined version of the sub-machine gun. It looks like a heavy pistol, with a folding metal wire stock. The gun can be fired like a pistol when the stock is folded, or fired from the shoulder when the stock is extended. An automatic pistol can be set to fire single shots or bursts.

Automatic Rifle. An automatic rifle is similar to the automatic rifles being used today. It is basically a heavier, longer version of the automatic pistol. It can fire up to three single shots or bursts.



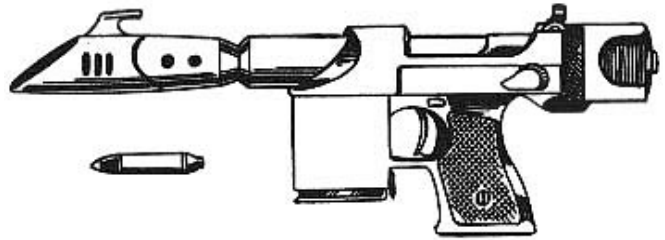
Needler Pistol. A needler pistol is a handgun that uses an upright disc clip. It makes only a very soft, coughing noise when it is fired. Needler pistols magnetically propel a cluster of needles at high speed. Two types of needles can be used: barbed needles that cause 2d6 points of damage per shot, and anesthetic needles that cause only 1d6 points of damage but can put the victim to sleep for 1 hour. An individual can resist the anesthetic by making a Vigor roll. Needles will not penetrate skeinsuits or inertia screens. Neither the suit, screen, or individual is damaged.

Needler Rifle. A needler rifle is a rifle-sized version of a needler pistol. It has a longer range than a needler pistol and its barbed ammunition does more damage.

Machine Gun. A machine gun is a fully automatic heavy weapon that must be mounted on a tripod or a swivel mount to fire. Except for its greater damage and range, it operates just like an automatic pistol.

Recoilless Rifle. A recoilless rifle is a heavy weapon that must be mounted on a tripod or a swivel mount to fire. It fires an exploding shell that causes 4d10 points of damage if it hits. Only one shell can be fired per round, and loading another shell takes 2 actions.

GYROJET WEAPONS



Gyrojet Pistol. A gyrojet pistol is a large handgun. It shoots miniature, self-propelled rockets that cause 2d8 points of damage when they explode. A gyrojet pistol is not effective at very short range, because the rocket is still accelerating. Thus the weapon may not be fired at a target of less than 5" away.

Gyrojet Rifle. A gyrojet rifle is a rifle-sized version of a gyrojet pistol. It has a longer range and causes 2d10 points of damage per shot.

Grenade Rifle. A grenade rifle resembles a shotgun which fires hand grenades that are fitted into special grenade bullets. Any type of grenade can be used. It can fire one shot per round, and then must be reloaded, which requires an action. Launched grenades follow the normal rules as per SWEX page 65.

Grenade Mortar. A grenade mortar is a hollow tube that is attached at an angle to a large base plate. It can fire any type of grenade, using a special shell called a grenade shell. It operates like a grenade rifle, except for the greater range. Because it lobs grenades in a high arc, it has a minimum range of 12".

Rocket Launcher. A rocket launcher is a long, hollow tube that is fired while resting across the firer's shoulder. It fires a large, long-range rocket. It must be reloaded after every shot, and reloading takes 2 actions.

GRENADES

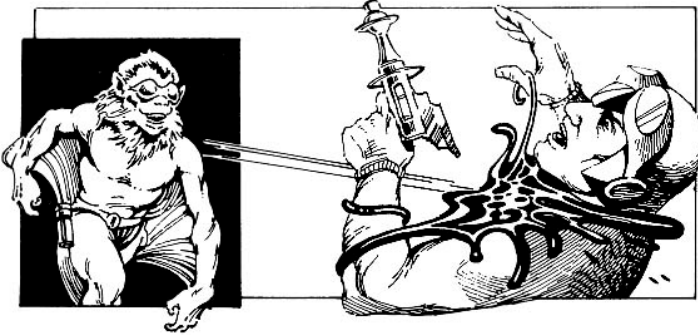
Doze Grenades. A doze grenade releases a cloud of fast-acting knockout gas. All creatures within a Medium Burst Template will fall asleep for 1 hour unless they make a Vigor roll. A shot of stimdose will revive a sleeping individual immediately. The doze gas is effective only on the round that the grenade goes off.

Fragmentation Grenade. When a fragmentation grenade explodes it throws hundreds of small, sharp pieces of metal in all directions. Fragmentation grenades are commonly called frag grenades. All creatures or characters within a Medium Burst Template suffer 3d6 points of damage. Thrown grenades follow the normal rules as per SWEX page 65.

Incendiary Grenades. An exploding incendiary grenade scatters sticky, flaming liquid across everything in a Medium Burst Template. Incendiary grenades are commonly called fire grenades. A fire grenade causes 3d6 points of damage on the turn it explodes. The burning liquid sticks to the victim, causing an additional 1d6 points of damage on the second, third and fourth rounds after the explosion. Anyone in a spacesuit takes no damage from an incendiary grenade.

Poison Grenades. A poison grenade releases a cloud of poisonous gas in a Medium Burst Template. The gas is effective only on the round the grenade explodes. The gas causes 1 automatic wound, and 1 wound per round thereafter for 5 rounds. A character who succeeds at a Vigor roll -2 will not be affected, nor will anyone in a gas mask. A shot of antitox will neutralize the poison so that no further damage is taken.

Smoke Grenades. A smoke grenade produces a thick cloud of smoke that both blocks vision and acts like tear gas. Smoke grenades are available in colors so they can be used as signals. Anyone in the blast radius, (a Medium Burst Template) on the round the grenade explodes must make a Vigor Roll. If the character fails the check he has a -2 on all ability checks for 1d10 rounds, due to coughing and blurred vision. The smoke will continue to spread 2" /round for three rounds, when it will cover an area 16", (32 yds.) in diameter. The smoke cloud gives light cover to anyone behind it or inside it. The smoke screen will last for 10 minutes.



Tangler Grenades. An exploding tangler grenade throws out hundreds of strong, sticky polymer threads. These threads stick to everything within a Small Burst Template. An entangled individual can not move until the threads decay (in 30 minutes) or until solvaway is spread over the threads. A creature with a die 8 or higher in Strength may make a Strength roll at -4 to try to break free. Cooperative attempts may be made as per SWEX rules page 57.

MELEE WEAPONS

Brass Knuckles. Besides actual brass knuckles, this category includes any improvised weapon that increases the damage caused by someone's fist. Examples are rocks, coin rolls, etc.

Chain / Whip. A chain does Str+d4 damage and reduces your opponent's Parry by -2. It also adds +1 to disarm attempts and Agility Tricks (if the Trick is performed with the chain). A Whip does Str. damage and follows the same rules as above.

Electric Sword. This is a light-weight metal rod that contains a battery in the handle. It delivers an electrical shock when it strikes someone and can be set to either shock or stun. When set on stun, a successful hit causes no damage but can stun the victim for 10 minutes unless a Vigor roll is made. An electric sword can be hooked into a backpack or powerpack with a power cable. A successful hit by an electric sword uses 2 SEU. Individuals wearing gauss screens or with anti-shock implants are not affected by electric swords.

Nightstick. A nightstick is a weighted plastic club. This category also includes improvised weapons that are more effective than simple clubs, like baseball bats and quarterstaves.

Shock Gloves. Shock gloves are silvery gloves that deliver an electrical shock to anything they touch. The attacker is considered unarmed. Shock Gloves must be connected to a backpack or powerpack to work. Shock gloves will not affect anyone protected by a gauss screen or an anti-shock implant. Shock gloves use 2 SEU each time they hit.

Sonic Knife. A sonic knife looks like a golden tube, 15 cm long and 4 cm in diameter. This tube is actually only the weapon's handle. When

a small button on the side of the tube is pressed, a powerful "blade" of focused sound is created at one end of the tube. The sound blade is about 20 cm long and emits a high-pitched whine, however. The blade is turned off when the button is released. The knife is powered by a 20 SEU clip, but can be hooked into a backpack or power pack. A sonic knife uses 1 SEU when it hits. Anyone wearing a sonic screen can not be injured by a sonic knife. Unlike a regular knife, a sonic knife cannot be thrown.

Sonic Sword. A sonic sword looks like a sonic knife, but the blade is 1 m long when it is turned on. A sonic sword uses 2 SEU when it hits.

Stunstick. A stunstick is a copper-colored tube 30 cm long and 3 cm in diameter, with an insulated grip. It has two settings: shock and stun. When set on shock, a successful hit causes Str.+ 1d6 points of damage. When set on stun, a successful hit will stun the victim for 10 minutes. A character can resist the stun by making a successful Vigor roll. A successful hit uses 2 SEU. A 20 SEU clip can be fitted into the handle, or the weapon can be connected to a backpack or powerpack. A character with an anti-shock implant is immune to the stun setting.

Vibroknife. A vibroknife has a 20 cm saw-toothed blade. When it is turned on, the blade vibrates at high speed. It uses 1 SEU with each successful hit. A 20 SEU clip can be plugged into the handle, or the weapon can be connected to backpack or powerpack.

AMMUNITION

BEAM WEAPONS

Powerclip. The standard 20 SEU powerclip is a sturdy plastic box about the size of a cigarette pack. A powerclip will fit any weapon that can use a powerclip. Players must keep track of how many SEU are in the clip. Powerclips can not be recharged.

Power Backpack. A power backpack is a 20 cm x 8 cm x 5 cm plastic box that attaches to a character's belt. It comes with three different powercords that can be plugged into three distinct outlets in the side of the unit. One port is for weapons, one is for screens and one is for auxiliary equipment such as scanners or radios. Only one weapon and one screen can be plugged into a backpack at the same time. Backpacks can be recharged at a cost of 5 credits per 1 SEU recharged. Recharging can be done at any weapons shop, hardware store or fuel station.

Power Backpack. A power backpack is worn on a harness that slips over the shoulders. Special adapters are available for Dralasites at no additional cost. A backpack has two weapon ports, one screen port and three auxiliary ports. Only two weapons can be connected to the same backpack. Backpacks can be recharged for 5 credits per 1 SEU recharged. It takes one action to plug in or unplug a powercord from a power backpack.

PROJECTILE AMMUNITION

Bulletclip. A bulletclip is a plastic, spring-loaded rack of bullets, 5 cm x 2.5 cm x 15 cm. It holds 20 bullets for either an automatic pistol or rifle. Rifle and pistol clips are not interchangeable.

Needleclip. A needleclip is a drum-shaped canister 10 cm in diameter and 5 cm thick, It holds 10 clusters of needles. Two varieties of needles are available: barbed and anesthetic. Anesthetic needles do less damage than Barbed, and cause the target to fall unconscious for 1

hour unless a Vigor roll is made. Rifle and pistol needleclips are not interchangeable.

Machine Gun Belt. Machine guns use a disintegrating belt of 100 bullets (nothing is left of the belt after all the bullets are fired except individual shell casings). If someone is working with the firer, ammo belts can be linked together so the gun can keep firing without stopping to be reloaded.

Recoilless Rifle Shell. A recoilless rifle shell looks like a 15 cm long artillery shell. It is essentially a giant bullet.

GYROJET AMMUNITION

Jetclip. Jetclips are loaded with 10 miniature rockets. The clip is inserted into the weapon's ammo chamber in front of the trigger. Pistol and rifle jetclips are not interchangeable.

Grenade Bullet. A grenade bullet looks like a shotgun shell. It is used to launch a grenade from a grenade rifle. It has no effect if fired without a grenade.

Grenade Shell. A grenade shell looks like a mortar round. It must be loaded into a grenade mortar in order to fire the grenade.

Rocket. Rockets are 25 cm long cylinders, with no fins. The rocket's exhaust is vented out the back of the launcher when fired. Anyone standing directly behind the launcher will suffer 1d6 points of damage from the blast.

ARCHAIC WEAPONS AMMUNITION

Arrows. Arrows can be bought in quivers that contain 20 arrows.

Powder and Shot. One package of powder and shot includes 20 lead bullets and enough black gunpowder to fire them.

DEFENSES

POWER SCREENS

All powerscreens except the chameleon screen are worn like belts around the waist. Special adapters are provided for Dralasites at no extra cost. Only one powerscreen can be worn or used at one time. Putting on or taking off a powerscreen takes 2 full rounds. When a screen runs out of power, it has no effect.

Albedo Screen. An albedo screen projects a silvery aura that absorbs laser damage. The aura completely surrounds the person wearing the screen. For every 5 points absorbed (+5 Toughness), 1 SEU is drained from the power source. For example, absorbing 11 points of damage (+11 Toughness) drains 3 SEU. The person wearing the screen will take no damage from lasers as long as the power holds out. A person can fire a laser weapon out of an albedo screen.

Gauss Screen. A gauss screen generates an invisible barrier that provides protection to the wearer from electrical attacks (electro stunners, electric swords, shock gloves and stun sticks). The screen drains 2 SEU and absorbs one-half of the damage from an attack before it is applied to ones overall Toughness. There is a quick flash of light when the screen is hit.

Holo Screen. A holo screen projects a 3-dimensional image around its wearer. The image is projected from a holo disc, a small disk that

slides into the top of the holo screen control unit. The holo disc contains complete holographic information on one person or thing. For example, a holo disc could project the image of an adult male Yazirian in civilian clothes. Onlookers may make a Notice roll at -4 in order to detect the false image / disguise.

The holo image is limited to roughly the same size and shape as the wearer. For example, a Vrusk could not masquerade as a Human. Personalized holo discs can be ordered for 5,000 Cr. A personalized holo disc contains holo information on a specific individual. Producing a personalized holo disc takes 1d10 months, because it requires detailed (and very illegal) holo-filming of the desired subject. If the subject is willing, the filming can be done in one day.

A camouflage feedback loop can be added to the holo screen for an additional 1,000 Cr. The camouflage loop adjusts the holo image to match nearby surroundings, giving the wearer a +4 to one's Stealth roll chance to be "invisible" to onlookers.

Inertia Screen. An inertia screen defends against all projectile weapons, gyrojet pistols and rifles, fragmentation grenades, explosives and all melee weapons except electrical or sonic weapons. When hit by one of these weapons, the screen uses 2 SEU and absorbs one-half of the damage, before the damage is applied to ones overall Toughness.

DEFENSIVE SUITS / HELMETS

Albedo Suit. An albedo suit is made from a special shiny flexible material. It will partially reflect the damage from a laser attack. An Albedo suit grants a +4 to one's Toughness versus Laser attacks only.

Skeinsuit. A skeinsuit is made of light ballistic cloth. It can be used along with an inertia screen. A character wearing a skeinsuit adds +4 to their Toughness versus inertia / ballistic attacks.

Two types of skeinsuits are available: military and civilian. Military skeinsuits are camouflage green. Civilian skeinsuits look like regular clothing.

Basic Helmet. A helmet is made of polymer construction and for purposes of protection covers the wearer's entire head. A basic helmet provides +2 Toughness to the wearer's head only.

TOOLKITS

If a starting character chose a skill that requires a toolkit, the character gets the toolkit automatically along with the skill. Characters who learn these skills after character creation must buy their own toolkits. None of the Military skills require toolkits.

TECHNOLOGICAL TOOLKITS

Techkit. The technician's toolkit contains all of the tools needed to make field repairs on vehicles and other equipment. Because plasteel is used to make so many items that formerly were made of steel or iron, the kit weighs only 20 kg and can be carried in a backpack. A techkit contains:

- Socket wrench--adjustable from 5 mm to 5 cm
- Open end wrench--adjustable as socket wrench
- Insulated wire--10 meters
- Uninsulated wire--25 meters, can support 2,000 kg
- Prybar--1 meter plasteel rod, collapses to 10 cm
- Jack--5,000 kg capacity, .5 meter lift, collapses to 200 cm cube

Hammer--large ballpeen high-impact head
 Ion Bonding Tape--10 cm wide x 5 m long, bonds directly to any metal
 Plastibond--tube of plastic filler, bonds to any plastic surface in one minute; five applications
 500 nuts, bolts, clamps, screws and nails
 10 hoses of assorted sizes
 Electroknips--powered metal-cutting shears (sheet metal only)
 Magnegrips--electromagnetic vicegrips
 Spray lubricant--10 applications of pressurized synthoil
 Spray waterproofing--will insulate circuits, cloth, etc., from moisture; five applications

Robcomkit. The robcomkit is another highly specialized assortment of tools. It weighs only 15 kg and, like the techkit, is designed to be carried in a backpack. A robcomkit contains:

Electrodriver, ion bonding tape, insulated wire, spray lubricant, electroknips, spray waterproofing--all the same as those in the techkit.
 Lasoldering iron--pen-sized laser soldering iron
 Solder--1-meter roll of conductive soft metal
 Magnetic by-pass clips--10 small connectors used to short-circuit wiring
 Breadboard circuits--5 standard boards for mounting robot circuitry
 Demagnetizer--electrical tool to demagnetize fouled circuits
 Spray cleaner--spray solvent to remove dirt from the robot's works; 10 applications
 Miniature flashlight--20 hours of light; magnetized handle
 Calipers--capable of taking measurements as small as .001 mm
 Needlenose pliers--similar to 20th century tool
 Sonic Scalpel--tool for cutting plastic, metal or flesh; makes a smooth, bloodless incision up to 5 mm deep
 Components--box of transistors, diodes and computer chips for robot circuits
 Oscilloscope--miniaturized viewer which displays information on electrical flow and other aspects of circuitry

BIOSOCIAL TOOLKITS

A medic needs a medkit and an environmentalist requires an envirokit to be most effective.



Medkit. A medkit has specialized equipment the medic needs to perform his or her job. It weighs 10 kg and can be carried as a backpack. The medkit contains:

Local Anesthetic--10 hypo doses to relieve pain
 Plastiflesh--5 cans of spray which closes up wounds and heals burns
 Omnimycin--10 hypo doses to control infections
 Acid neutralizer--1 bottle of liquid to neutralize acids
 Antiseptic--5 cans of spray to clean and disinfect a skin area
 Microforceps--adjustable, used to remove shrapnel and bullet fragments from wounds
 Medscanner--an electrical instrument used to diagnose ailments
 Spray hypo--syringe used to give shots without a needle
 Biocort--20 hypo doses to stimulate very fast healing

Telol--10 hypo doses of truth serum
 Stimdose--10 hypo doses to revive unconscious individuals
 Staydose--10 hypo doses to sustain a dying character for 20 hours
 Sonic scalpel--same as in robcomkit
 Laser scalpel--used to make deep incisions
 Electrosurgeon--a small machine that keeps wounds open and controls bleeding during surgery.
 Autosurgeon--a special device that allows a medic to operate on himself
 Antibody plus--10 hypo doses that increase the body's ability to recover from diseases
 Antitox--10 hypo doses to neutralize poisons

Envirokit. An envirokit contains only three items, but they are very sophisticated pieces of equipment. The entire kit weighs 5 kg, and can be fastened to a belt or placed in a backpack. The envirokit contains:

Bioscanner--This device consists of a network of straps and electrodes connected to a readout gauge. When attached to a plant or animal, living or dead, it can determine what type organism is being examined and whether it is edible or poisonous.
 Vaporscanner--A vaporscanner is a small device that contains sensitive gas analyzers. It will report on a digital screen what gaseous elements are present, their quantities and whether breathing them is dangerous.
 Geoscanner--The geoscanner can break down up to a fist-sized sample of rock or soil and analyze it. It will report what minerals the sample contains and whether there are likely to be valuable ore, gas or oil deposits nearby.

MISCELLANEOUS EQUIPMENT

Allweather Blanket. This 3m x 3m blanket has a layer of soft pseudowool on one side, and a layer of smooth waterproof plastic on the other. The blanket will keep a character warm in temperatures down to 0° (freezing temperature). The blanket can be used to carry water.

Anti-Shock Implant. This is a small device that can be implanted in the back of a character's neck, making the character immune to stun attacks. A-S implants must be installed at a hospital.

Chronocom. Chronocom is short for chronograph/communicator. A chronocom is a combination wristwatch, calculator and communicator. It has a range of 5 kilometers.

Compass. A compass is used to find direction. A compass can be deceived so it points away from magnetic north by the presence of nearby magnetic rocks, electrical generators or other powerful magnets or large metal deposits.

Emergency Beeper / Receiver. This pen-sized transmitter sends out a high frequency, broad-band beep once it is activated. It operates from a sealed power source and cannot be turned off once activated. Its power life is two days. Most communications equipment can pick up the beep if they are within one km and special emergency beeper trackers can pick it up at enormous distances.

Envirotent. This tiny 6 pound pouch-sized kit can be erected into a small 3-man habitat tent in about ten minutes. It takes a similar amount of time to deconstruct. It can come in a variety of colors. When deconstructed and properly stowed, it fits in a small pack that straps to the thigh for easy transport.

Everflame. An everflame is a permanent, waterproof, windproof lighter guaranteed to last 20 years.

Exoskeleton. An exoskeleton is a mechanical, metal frame that is worn on the outside of a character's body. It follows the body's movements and increases the strength of its wearer. Each joint has its own miniature motor. An exoskeleton must be specially fitted to the character that will wear it, and can not be worn by anyone else. Getting into or out of an exoskeleton takes 1d10+10 minutes. A character in an exoskeleton increases their Pace by 4, doubles their jumping distances and increases the wearer's Strength by two die types. If the wearer's Strength is already at d12, then the increase is in +1 increments. An exoskeleton provides no protection to the wearer. It can be worn along with a powerscreen and defensive suit.

Explorer Vest. This heavy-duty vest comes with a variety of patch pockets, inside zipper pockets, velcro strips, rings, and snaps for maximum item attachment. It is designed with an attached plastipack on the back so breakables can be kept relatively safe.

Flashlight. The flashlight is about the size of a pencil. It contains enough power to operate for 200 hours. Its beam will shine up to 100 meters (50").

Food Purifier. This backpack-sized device has a low-level radiation bombardment chamber built into it. Plants, vegetables, grain, fowl, fish, and even meat can be placed in this chamber and cleansed of most harmful organisms, poisons, and other conditions that would otherwise harm a character if he were to eat them. The food purifier has 50 uses from a single 20-SEU powerclip. When in use, this device shows up on every radiation scanner within range.

Freeze Field. Each freeze field device contains 20 SEU. The field uses 1 SEU every 10 hours. Another power source can be attached if the power runs low, but if it ever runs out the body can not be revived. A character loses one die from one of his ability scores when his body is finally revived due to the cryogenic state. The player can subtract this die from any ability he chooses. A freeze field device can be re-used, but it must be recharged and returned at a hospital or shop, at a cost of 100 Cr.

Gas Mask. A gas mask fits over the wearer's face and filters out all hazardous gases as the character breathes. It will not allow a person to breathe underwater or in a vacuum, or anywhere there is not enough oxygen to keep a character alive.

Grappling Gun. This rifle-shaped device comes equipped with 30 meters (300 feet) of high-tensile strength microline, a metal claw type grappling hook, and four explosive digger heads. It also has an optional mini-motor for automatic reel-in and ascent. The grappling gun is used for small-scale climbs after anchoring it with its grapple, or, unscrewing the claw and attaching an explosive head, blasting its way into a rock facing, thus creating an anchor. The optional motor not only reels the line in but can also lift 60 lbs. of weight. The anchor rod is fired by the same type of shell as in a grenade rifle. This device is of Vrusk origin.

Holoflare. A holoflare is a small, solid, ball-shaped device. When lit, the flare rockets about 200 meters into the air and hovers there for 10 minutes. The flare will illuminate an area 1 km across with a dim light.

Infla-Tent. These inflatable tents are one-piece cocoons and come in single or two-man sizes. They are made of vinylast and are extremely durable and reusable. The infla-tent comes with pressurized canisters that pop them up in two rounds, providing a secure haven in most planetary atmospheres.

Certain canisters, available at a slightly higher cost, inflate the shelter with coolant gas or insulating gas to keep the inhabitants alive in severe cold or hot climates. The worst atmosphere for an infla-tent is one with a high concentration of acid rain, which can eat through the vinylast in an hour.

Infra-Red Goggles. Infra-red (IR) goggles allow a character to see heat images in total darkness. They can be used to spot characters that are hidden in light foliage or darkness, or that are using a holobelt. While wearing the goggles the user gains the Infravision edge.

Infra-Red Jammer. An IR jammer hides the wearer from infra-red sensors, including IR goggles.

Life Jacket. A life jacket is an inflatable vest that will keep a character afloat for any length of time. It comes folded into a package about the size of a person's fist.

Machete. A machete is a short sword used for chopping through soft jungle growth or grass. It is treated as a sword for combat purposes.



Magnigoggles. Magnigoggles are goggles that magnify visual images the same way binoculars do. They add +2 to the wearer's Notice roll for the purpose of spotting objects at long distances. They do not work like telescopic sights, and a character wearing magnigoggles can not aim a weapon.

Parawing. A parawing is a disposable glider used as an emergency parachute. A character can jump with a parawing from any altitude. The wing is opened automatically by small solid-fuel jets, and the frame glues itself open. The character then floats to the ground at a Pace of 6. The wing can not be refolded to be used again.

Poly-vox. A poly-vox is a specialized computer that can be worn around the throat. It translates a message that it hears in one language into another language, and then repeats it. It can learn an unknown language if it can be programmed with key phrases, and then exposed to the language for 1-100 hours. A character does not need the computer skill to use a poly-vox.

Radiophone. A radiophone is a short-wave communicator with a 1,000 km range.

Rope. This is a 50 foot coil of braided plastic rope that will support up to 1000 lbs.

Solvaway. Solvaway is the only solvent that will immediately dissolve tangle grenade threads. It must be applied by someone other than the person who is tangled in the threads. One vial of solvaway con-

tains enough liquid to dissolve the threads from one tangler grenade. It will not dissolve anything but tangler grenade threads.

Subspace Radio. A subspace radio is used for sending messages between distant planets and star systems. Subspace communicators send coded tachyon beams that must be broadcast from very carefully aimed dish antennas to hit their target planet or system. A subspace message crosses one light-year in one hour. The radio uses a type 1 parabattery. Sending a message uses 100 SEU.

Sungoggles. Sungoggles are high-quality sunglasses.

Survival Rations. A box of survival rations contains four airtight foil-wrapped packets. Each packet holds a food concentrate that looks like crumbly dust. When water is added, the dust quickly becomes a delicious meal of protein and vitamin-packed mush. One packet will feed one character for one day.

Tornadium D-19. Tornadium D-19 ("kaboomite") is the standard plastic explosive. It can be bought legally only by someone with Demolitions skill. A 50-gram (1.75 oz.) charge of TD-19 will cause 2d6 points of damage to anyone and anything within a Medium Burst Template. Each additional 50 grams causes an additional 1d6 damage up to a maximum of 10d6 over a Large Burst Template. A thrown charge does full damage to living creatures, but only one-half damage to structures.

Toxyrad Gauge. A Toxy-rad gauge is a special device that is worn on the wrist like a watch. It will alert the wearer to several types of danger. There are three colored lights on the device. If the red light flashes, it indicates that the oxygen content of the surrounding air is dropping to a dangerously low level. If the blue light flashes, it indicates that there is dangerous radioactivity nearby. If the yellow light flashes, it means that the sensor has encountered some substance that is poisonous to Humans, Dralasites, Yazirians or Vrusk. A small dial on the face of the gauge indicates the degree of danger to a character.

Variable Timer / Detonator. Variable timers are used to detonate Tornadium D-19. A timer can be set for 1 to 60 seconds, 1 to 60 minutes or 1 to 60 hours.

Vitasalt Pills. Vitasalt pills are special pills containing vitamins and minerals, including salt. They reduce a character's need for water in dry areas by half.

Water Distiller, Purifier. This collapsible distillation filtering tank can purify up to 400 liters (100 gallons) of water before it needs to be changed. This is a necessary item for explorers who cannot carry enough drinking water with them but are on a planet where water can be found. Characters drinking unfiltered water run the risk of infection, contamination, or even poisoning. The tank also has a section for dehydration, so plants can be inserted and the water drawn from them. This is also a good method for drying fruit and vegetables so they will last longer as rations.

Water Pack. A water pack contains eight one-liter plastic bags of water. Each bag has a closable seal. The water bags come packed in a lightweight plastic frame. The frame can be converted into a simple backpack in 5 minutes.

ROBOTS

Robots are complex, mobile machines that are designed to perform specific jobs. The following rules are for non-sentient, non player character robots. Robots are either purchased from a "standard" type or design, or are custom built by a player. All robots purchased by players are considered Extras in the sense that they do not use a Wild Die when making skill or Attribute rolls. Some robots, as stated in their description, may take multiple wounds like a Wild Card. Most robots, however, are disabled or destroyed after receiving one wound.

Robots are defined by the same characteristics as other characters with some standards and guidelines.

All robots have the Construct ability and, if the robot has limbs, the Ambidextrous Edge.

ATTRIBUTES

Robots have the same 5 attributes as characters. Standard model robots will have their attributes already determined according to the robots purpose and level. Non standard robots, (robots that are custom built) start with a die 4 in their attributes except Smarts and Vigor. A robot's base Smarts is determined by their level as shown below. A robot that is Level 4 or lower, has a Smarts listed as animal intelligence because they are machines simply taking orders from their listed programs and functions. Level 5 and 6 robots can act independently of their listed functions. A robot's base Vigor is determined by its body type, shown below. A robot's Vigor may be adjusted by increasing or decreasing the robot's size as shown on the Body Type chart.

SKILLS AND EDGES

What a robot can do, its skills and edges, is determined by its programming. Each skill and edge is purchased as a separate program. A skill may not be purchased beyond its linked attribute. The linked attribute must be increased first before the higher die type skill can be purchased.

When purchasing Edges, the only requirements that a robot needs to meet is the Smarts requirement, (if applicable) any other edge listed ,or in some cases, the Robot Level requirement. Examples; Improved Frenzy requires the Frenzy edge first and the Command edge may only be purchased for level 5 and level 6 robots.

ABILITIES

Some monstrous abilities are listed in the standard robot types and as enhancements in the custom build area.

ROBOT LEVELS

There are six levels of robots. A robot's level indicates how complex it is. High-level robots can perform more complicated jobs.

Level 1 (Smarts d4(A)) robots can do only simple jobs. They have been pre-programmed for some specific job and usually can not do any other job. They can not communicate, and often are nothing more than moving, self-operated appliances. An example of a level 1 robot is a maintenance robot that washes and waxes the floors of a building each night.

Level 2 (Smarts d6(A)) robots can handle several simple jobs. They can receive and follow radio commands in binary machine language

sent from some other machine, such as a robot brain or a computer. An example of a level 2 robot is a heavy machine that digs into and smashes up rock, then separates out flecks of gold.

Level 3 (Smarts d8(A)) robots can do more complicated jobs. In addition, all robots that are level 3 or higher can talk and follow verbal instructions. If these instructions disagree with the robot's programming, it will ignore the orders.

Level 4 (Smarts d10(A)) robots can act semi-independently. Their programs are flexible, letting the robot accomplish specific goals using different methods. When asked, "How do I get to the starport?" one level 4 service robot might give verbal directions, while another might photocopy a city map and mark the proper route on it.

Level 5 (Smarts d8) robots can act independently and give orders to other robots (level 6 robots can do this also). For example, a level 5 security robot might decide to stop chasing a criminal because the criminal left victims tied up in a burning house. The robot could organize a rescue mission of other robots.

Level 6 (Smarts d10+) robots are self-programming. They can change the methods they use and even their goals to account for changing conditions. They are almost, but not quite, living machines. A robot brain that runs an automated manufacturing plant and alters the manufacturing process in response to changing economic conditions is an example of a level 6 robot.

ROBOT MISSIONS

All robots have a mission. A mission is a set of rules dictated by its programmer that tell the robot what its job is. A robot's mission is the most important order it has, and overrides any orders that conflict with it. Players create missions for their own robots or they can have them predetermined when the robot is purchased, (by the game master).

ROBOT FUNCTIONS

All robots have several functions that tell them how to accomplish their mission. Low-level robots cannot make decisions, so their functions must be very specific statements. Higher-level robots can make decisions for themselves, so their functions can be more general statements.

For example, a level 3 security robot might have the mission: "Stop all unauthorized personnel from entering this building." Its functions could define "stop" as giving intruders a warning, then using the Restrain program, (as detailed below) to keep them from entering. "All unauthorized personnel" could be defined as any person or machine that is not wearing a special badge. The robot must be given a function that defines "this building," and another that tells it what areas it must patrol to look for intruders. Another function could instruct it to call the police and report the break-in after an intruder has been restrained.

STANDARD ROBOTS

The Standard Robot Cost table in the equipment charts section includes the following types of robots. The chart shows the costs of these robots in their base form. As each robot's level progresses on the chart, it is only the robot's Smarts attribute which is reflecting the increased cost, not any other attributes, skills or added edges.

If a player wishes to purchase a standard robot, they may do so and then increase or lower the Attributes, Skills etc. as they see fit.

A robot's mode of movement has also been factored into the cost, however parabatteries, weapons and any ammunition have not been factored into these costs.

Some robots also have defenses (armor or screens) added to their standard description. These also may be omitted or increased as the player chooses.

Combat Robots Combat robots have standard bodies and the attack/defense program. They are limited to levels 2 to 4. Combat robots serve as active combat soldiers.

Type A Combat Robot. The Type A Combat robot is an ariel sentry bot about 3 feet high and has a mounted laser gun. It has no limbs and thus can only use its mounted gun in close combat.

Attributes: Agility d6, Smarts d6(A), Spirit d4, Strength d4, Vigor d6

Skills: Notice d6, Shooting d6, Stealth d6

Pace: 6*; **Parry:** 2; **Toughness:** 7(2)

Special Abilities:

- **Armor +2:** Inertia.
- **Laser Gun:** Range 30/60/120, Damage 2d6, ROF 2, Shots 25 (2 SEU per shot), Internal SEU clip of 50 .
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Combat bots are immune to Fear and Intimidation.
- **Size:** +0
- **Movement:** Hover, Pace 6"; Climb 3"
- **Body style:** Standard
- **Power:** Type 1 Parabattery
- **Cost:** 5,800 Cr.

Type B Combat Robot. A Type B combat robot is similar to the A model except for its mounted weapon, mode of transportation and slightly increased Toughness. It too does not have any limbs for manipulating objects or melee combat. The Type B model may be equipped with either Wheels or Tracked movement.

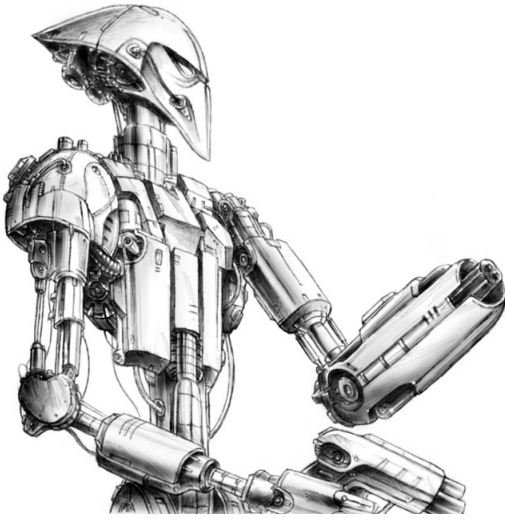
Attributes: Agility d6, Smarts d6(A), Spirit d4, Strength d4, Vigor d8

Skills: Notice d6, Shooting d6, Stealth d6

Pace: 8; **Parry:** 2; **Toughness:** 9 (3)

Special Abilities:

- **Armor +3:** Inertia armor plating
- **Automatic Rifle:** Range 24/48/96, Damage 2d8, ROF 3(1), Shots 100 round internal box.
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Combat bots are immune to Fear and Intimidation.
- **Movement:** Wheeled or Tracked
- **Size:** +0
- **Body style:** Standard
- **Power:** Type 1 Parabattery
- **Cost:** 5,800 Cr.



Cybernetic Robots Cybernetic robots (cybots) have both mechanical and organic parts. They can perform any job other robots of their level can perform. Cybots can have any body type, but usually are anthropomorphic. They are limited to levels 4 to 6.

Military model

Attributes: Agility d6, Smarts d10(A), Spirit d6, Strength d8, Vigor d8

Skills: Demolitions d8, Fighting d8, Notice d6, Shooting d8,

Pace: 6; **Parry:** 6; **Toughness:** 8(2)

Special Abilities:

- **Armor +2:** Inertia armor plating
- **Ranged weapon:** As per weapons list.
- **Robot Arms:** Str+ d4
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Cybots are immune to Fear and Intimidation.
- **Low Light Vision:** Ignore Dim and Dark light penalties
- **Size:** +0
- **Movement:** One pair of legs
- **Body style:** Anthropomorphic
- **Power:** Type 2 Parabattery
- **Cost:** 8,500 Cr.

Heavy Duty Robots Heavy duty robots do heavy excavating, crop harvesting, rock quarrying, etc. They have heavy duty bodies and are limited to levels 1 to 4.

Attributes: Agility d6, Smarts d4(A), Spirit d4, Strength d12+4, Vigor d10

Skills: Fighting d6, Notice d4

Pace: 6 or 8; **Parry:** 5; **Toughness:** 9

Special Abilities:

- **Robot Arms (Heavy Duty):** Str+ 4 damage, Heavy duty robots are equipped with either drills, scoops, wrecking balls etc.
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Size:** +2
- **Movement:** 2 to 4 legs or Wheeled / tracked (add 500 Cr.)
- **Body style:** Heavy Duty
- **Power:** Type 2 Parabattery
- **Cost:** 5,200 Cr.

Maintenance Robots Maintenance robots clean areas, oil machines, watch for breakdowns and malfunctions, build simple things (if given specs), etc. These models are found on many space stations, ships and home worlds helping doctors, engineer staff and maintenance crew members. They are usually non-combatant robots. They use standard bodies and are limited to levels 1 to 4. Maintenance robots may use their knowledge skills to assist characters, but cannot actually do repairs themselves.

Attributes: Agility d6, Smarts d4(A), Spirit d6, Strength d4, Vigor d6

Skills: Knowledge (computers, machinery, robotics or science) d4, Investigation d4, Notice d4

Pace: 8; **Parry:** 2; **Toughness:** 4

Special Abilities:

- **Scholar:** +2 to all Knowledge skills
- **Extra limbs:** engineer / science bots have one extra pair of limbs
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Size:** +0
- **Movement:** Wheeled or tracked , Magnetic (+1,000 Cr.)
- **Body style:** Standard
- **Power:** Type 1 Parabattery
- **Cost:** 4,300 Cr.

Robot Brains Robot brains are robot managers. They usually command other types of robots. Robot brains are generally non-combatative but may be fitted with any limbs and weapons. They have heavy duty bodies plus the computer link program. All robot brains are level 6.

Attributes: Agility d6, Smarts d10, Spirit d8, Strength d6, Vigor d10

Skills: Fighting d8, Knowledge (computers, machinery, robotics, science) d10, Investigation d10, Notice d8, Persuasion d8, Shooting d8

Pace: 6 or 8; **Parry:** 5; **Toughness:** 11 (2)

Special Abilities:

- **Ranged Weapon:** as standard weapon list
- **Scholar:** +2 to all Knowledge skills
- **Quick:** Due to their quick assessments of any situation a robot brain may discard an initiative card of 5 or less and redraw
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Armor +2:** Inertia armor plating
- **Size:** +2
- **Movement:** Wheeled or tracked
- **Body style:** Heavy Duty
- **Power:** Type 2 Parabattery
- **Cost:** 20,000 Cr.

Security Robots Security robots serve as both guards and police. They have standard bodies and the restrain program. They are limited to levels 2 to 6.

Attributes: Agility d8, Smarts d6(A), Spirit d6, Strength d8, Vigor d8

Skills: Fighting d6, Investigation d6, Notice d6, Shooting d6,

Pace: 8; **Parry:** 5; **Toughness:** 8(2)

Special Abilities:

- **Armor +2:** Inertia armor plating.
- **Ranged Weapon:** As per weapons list
- **Robot Arms:** Str+ d4
- **Alertness:** Security bots have keen senses
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Security bots are immune to Fear and Intimidation.
- **Size:** +0
- **Movement:** Wheeled or Tracked
- **Body style:** Standard
- **Power:** Type 1 Parabattery
- **Cost:** 5,200 Cr.

Service Robots Service robots are used as servants. They work as store clerks, information sources, gardeners, tailors etc. Service robots have anthropomorphic bodies modeled after whichever race they serve. They can not be mistaken for a living person, however. These robots are limited to levels 3 to 6.

Attributes: Agility d6, Smarts d8(A), Spirit d6, Strength d6, Vigor d6
Skills: Knowledge (as per profession) d8, Notice d6

Pace: 6; **Parry:** 2; **Toughness:** 5

Special Abilities:

- **Robot Arms:** Str+ d4
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Size:** +0
- **Movement:** Standard legs
- **Body style:** Anthropomorphic
- **Power:** Type 2 Parabattery
- **Cost:** 3,500 Cr.

Warbots Warbots are intelligent war machines. They often command combat robots. They have heavy duty bodies and the attack/defense and search and destroy programs. They are limited to levels 5 to 6.

Type A

Attributes: Agility d8, Smarts d8, Spirit d6, Strength d12+4, Vigor d10

Skills: Fighting d8, Shooting d8, Notice d8

Pace: 6 or 8; **Parry:** 5; **Toughness:** 11 (2) + Albedo screen

Special Abilities:

- **Robot Arms:** Str+ 4 damage,
- **Ranged Weapon:** as per weapon list
- **Armor +2:** Inertia armor plating.
- **Albedo Screen:** 25 SEU internal power pack
- **Alertness:** Warbots have keen senses
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Warbots are immune to Fear and Intimidation
- **Size:** +2
- **Movement:** 2 to 4 legs or Wheeled / tracked (add 500 Cr.)
- **Body style:** Heavy Duty
- **Power:** Type 2 Parabattery
- **Cost:** 14,400 Cr.

Type B. Type B Warbots are arial versions of the Type A model. They are primarily used for reconnaissance and arial support.

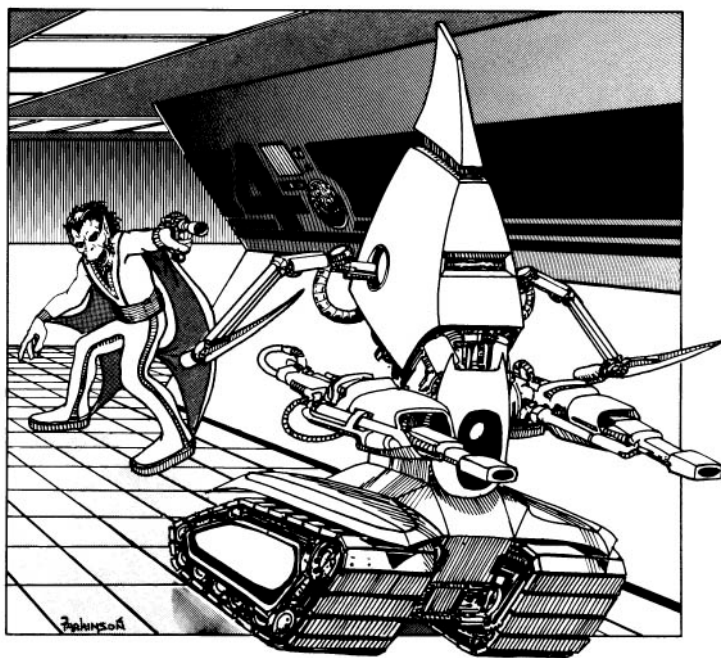
Attributes: Agility d8, Smarts d8, Spirit d4, Strength d6, Vigor d10

Skills: Shooting d8, Notice d10, Stealth d6

Pace: 12; **Parry:** 5; **Toughness:** 10 (1) + Albedo screen

Special Abilities:

- **Ranged Weapon:** as per weapon list
- **Armor +1:** Inertia armor plating.
- **Albedo Screen:** 25 SEU internal power pack
- **Infraision:** Half penalties for bad lighting when attacking living objects
- **Flight:** Type B warbots are either equipped with one or two rotors giving them an Acceleration of 4, Pace of 12 and a climb of 6
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Warbots are immune to Fear and Intimidation
- **Size:** +2
- **Movement:** Rotor
- **Body style:** Heavy Duty
- **Power:** Type 2 Parabattery
- **Cost:** 14,400 Cr.



CUSTOMIZING ROBOTS

When a robot is built, the designer must give it a body type, a way to move and programming. Special items can be added at additional cost.

BODY TYPES

Standard Body. Standard robot bodies come in all shapes. They are about the size of an average character, weigh 100 kg (200 lbs. without a parabattery) and have a base Vigor of a die 6. A standard body is powered by a type 1 parabattery.

Heavy Duty. Heavy duty robot bodies also are available in any shape, but they are about the size of a ground car and weigh about 500 kg (1000 lbs. without a parabattery) and have a base Vigor of die 10. A Heavy Duty body type is powered by a type 2 parabattery.

Anthropomorphic. Anthropomorphic robot bodies look like one of the four major races. They weigh roughly 100 kg (200 lbs. without battery) and have a base Vigor of die 6. They are powered by a type 2 parabattery.

LIMBS

All three body types come with two manipulative limbs. These can be mechanical arms, tentacles, or specialized limbs for digging through rock or mounting tools.

ROBOT MOVEMENT

All three body types can be equipped with wheels, tracks or mechanical legs, whichever the designer wants. Robots may also be equipped with other modes of movement that allow forms of flight.

Standard movement mode is a form of "legs" or limbs which grants a Pace of 6. This form of movement is included in the Body Type Price.

Tracked or Wheeled. Tracked is a form of movement seen on most military tanks. It reduces the penalty of difficult terrain to a cost of 1.5 movement points per inch instead of 2.. Both tracked and Wheeled movement increases a robot's Pace to 8.

Hover. Small lift and propulsion jets allow a robot to hover and still move. The robot's Pace is 6 and has a climb rate of 3" per round. The maximum height a robot may achieve is 20", (sixty feet).

Magnetic. This mode uses the robot's normal movement to allow the robot to move along the outside of ship hulls and other metal surfaces at its normal Pace.

Rotor. This movement grants a robot movement similar to a Jetcopter as described below, but with an Acceleration of 4, Pace of 12 and a climb of 6.

Rocket. This movement grants a robot the same movement as an Aircar as described below but with an Acceleration of 4, Pace of 24 and a climb of 6.

PROGRAMS

The following is a list of Edges and Monstrous Abilities from the SWEX book that are available to robots. Other Edges and Abilities from other source books may be included with the GM's permission. Any skill listed in the above PSA skill list for characters may be purchased for a robot.

SPECIAL PROGRAMS

Each robot can be programmed with one or more of the following Special Programs. A robot, having a collection of skills and edges, must still be told what to do as defined by the robot's mission (as described above).

Restrain. The robot can both defend itself and attack, but can not use any lethal weapon.

Self Defense. The robot can fight back if attacked in melee.

Attack / Defense. The robot can fight using the same type of weapons as a character, and can be equipped with either Albedo armor or Inertia armor and a screen (with its own power supply). The robot can use lethal weapons.

Search and Destroy. The robot can perform combat missions that include tracking down its target. A robot must have the Attack/Defense program to use this program.

Computer Link. This program enables a robot to communicate directly with a computer using a tight beam long-range communicator. This gives it access to all the information in the computer.

COMPUTERS

A computer is a sophisticated electronic machine that can receive and analyze information. A computer works by running programs. Every program is available in five levels. The higher levels are more complex and able to handle more information. Each program requires a certain number of computer function points in order to operate. A function point is a measurement of a computer's ability to process information. Higher level programs have a higher function point requirement. The Computer Program list shows the number of function points a program needs.

When a character buys a computer he actually is buying individual programs and the hardware needed to run them. For example, when a character buys a level 1 Analysis program (1 function point), he gets not only the program, but also a computer circuit module that can process a 1-function point program. A computer's level is determined by totaling all the function point requirements of the various programs and finding this number on the Computer list. If more programs are added to the computer later, its level may be raised.

Example: A small inter-stellar business run by "Slingshot" Simmons buys a computer to keep track of its finances. Simmons buys a level 2 Analysis program (2 function points), a level 2 Commerce program (6 function points) and a level 1 Information Storage program (2 function points). The computer needs a total of 10 function points, making it a level 1 computer.

It costs 1,000 Credits. If Simmons later adds a level 2 Robot Management program (4 function points), his computer has 14 function points, making it a level 2 computer.

POWER SOURCES

If a computer is not hooked to a central power source, whether a public source or a ship's or field base's generator, then they need to run off a parabattery. Level 1 to level 3 computers are powered by parabatteries of the same type as the computer's level. Level 4 and 5 computers use power generators type 1 and 2, respectively. Computers will operate for at least one year before their batteries must be recharged. Power sources must be bought separately.

COMPUTER PROGRAMS

The standard computer programs listed below can be purchased by anyone in any store that sells computers or computer parts and equipment. A program's cost is the number of function points it requires, multiplied by 100 Credits.

Analysis. An Analysis program allows a computer to perform mathematic calculations and computations. Level 1 is basically a sophisticated calculator. At level 3 the program can do advanced algebra and calculus. At level 5 it can do all known mathematical calculations, including theoretical math.

Bureaucracy. A Bureaucracy program coordinates other programs. For example, a city could use the Bureaucracy program to coordinate Commerce, Communication, Industry, Law Enforcement, Life Support, Maintenance and Transportation programs. A Bureaucracy program can coordinate a number of programs equal to its level x 3. It is not needed unless the programs being coordinated are level 3 or higher.

Commerce. A Commerce program enables a computer to handle business transactions. Commerce covers such areas as banking, stocks, market trends, bookkeeping, imports and exports. A level 1 program could be used by starship computers to record the cargo manifest, passenger records and ship's books. A level 5 program could be used to coordinate all commerce in a city.

Communication. A Communication program deals with all aspects of communication, including news, entertainment and public service announcements. It can control radio, holophones and holovision communication devices. Higher program levels can handle more complex systems. A level 1 communications program might be used to handle communication and to provide packaged entertainment on a starship. A level 5 program could monitor all communication in an entire city.

Computer Security. Computer Security programs protect a computer against both physical and program tampering. A Computer Security program must be defeated or bypassed before a computer specialist can change any programs or interface two computers. Computer Security programs can also control physical defenses guarding the computer. A level 1 Computer Security program is simple code words that lock other programs, plus a simple recognition code such as a fingerprint reader. A level 6 security program sets up a complex system of codes and special directions, and guards the computer with robots or remote guns.

Industry. An Industry program deals with turning raw materials into products. It can be used for both agriculture and manufacturing. At level 1 an Industry program could run a starship's hydroponics system and machine shop. At level 6 the program could coordinate many large factories and farms.

Information Storage. The Information Storage program is passive. It is simply a record-keeping system. A level 1 Information Storage program could be used by a business to record its yearly sales data. A level 5 program could store an entire university library.

Installation Security. An Installation Security program coordinates the defense of an area. Higher level programs can defend larger areas. A level 1 Installation Security program could lock a building's doors at a certain time and call the police if an alarm sets off in the building. A level 3 installation Security program would not only lock the doors and call the police, but could control pressure plate sensors, I-R scanners, holovision cameras, special weapons, etc. At level 5, the program could defend an entire city or starport.

Language. The language program enables a computer to translate known languages into each other and, at higher levels, to translate unknown languages into known languages. Higher level programs can translate more languages. Translating an unknown language requires at least a level 3 program.

Law Enforcement. The law enforcement program is used to coordinate the efforts of all law enforcers in an area. Higher level programs can control a larger area. The program can handle police calls, schedule patrols, monitor trials, control riots and scan for developing crime trends. A level 1 program could monitor traffic flow and patrol routes in one precinct, while a level 5 program could run an entire city police department.

Life Support. The life support program controls lighting, temperature control, weather prediction, heating and power plant control. A level 1 program can control the life support system on a starship. A level 5 program could handle all the life support functions of an enclosed city.

Maintenance. The Maintenance program handles standard janitorial functions such as cleaning, painting and basic repair. It can also coordinate services such as garbage collection, fire inspection and sewage removal. A level 1 program could maintain a starship. A level 5 program could coordinate maintenance for an entire city.

Robot Management. The Robot Management program lets a computer control robots. Higher level programs can control more robots. This program often is used along with the Industry, Security, Law Enforcement and Maintenance programs. The Robot Management program must be at least as high a level as the robots it is controlling. The number of robots that a program can control equals its level multiplied by its number of function points.

Transportation. The transportation program allows a computer to control a mass transit system, including traffic control and distribution of products. A level 1 program could control mechanized sidewalks, elevators and escalators in a building. A level 5 program could run all of the monorails, buses, subways and traffic control signals in a city.

PARABATTERIES AND GENERATORS

Parabatteries are used in vehicles, computers and robots. They vary in size from a few hundred cubic centimeters to one cubic meter. The cost to recharge a parabattery is equal to the amount of the SEUs being recharged.

Power Generators are much larger than parabatteries. A power generator produces a certain number of SEU every hour it operates. However, there is a maintenance cost to run the generator, and it needs an outside force of some kind: solar, nuclear, hydrodynamic, thermal, etc.

VEHICLE DESCRIPTIONS

The following standard vehicles are available on **Star Frontiers** worlds.

Ground Car

Acc/ Top Speed: 20 / 40 **Toughness:** 10(3) **Crew:** 1+5

Notes: May include luxury features at extra cost

Weapons: None

Cargo Limit: 300 lbs. 1 cubic meter

Cost: 5,000 Cr. (rental - 50 Cr.+ 50 Cr. per day)

A ground car is a wheeled vehicle similar to cars in use today, except it runs on a parabattery instead of gasoline. Because ground cars run in contact with the ground, they are very maneuverable. A ground

vehicle can cross almost any type of terrain if it has enough ground clearance. However, they are not as fast as hover vehicles on level ground or roads.

Ground Transport

Acc/ Top Speed: 10 / 30 **Toughness:** 16(4) **Crew:** 1+3

Notes: Acceleration 5 when fully loaded

Weapons: None

Cargo Limit: 20,000 lbs. 30 cubic meters

Cost: 15,000 Cr. (rental - 75 Cr.+ 100 Cr. per day)

Ground transports are heavy, wheeled trucks. They can have open or enclosed cargo areas.

Ground Cycle

Acc/ Top Speed: 25 / 60 **Toughness:** 8(2) **Crew:** 1+1

Notes: None

Weapons: None

Cargo Limit: 40 lbs. .5 cubic meter

Cost: 2,000 Cr. (rental - 25 Cr.+ 25 Cr. per day)

Ground cycles are similar to today's motorcycles. They are fast and very maneuverable.

Hover Car

Acc/ Top Speed: 20 / 60 **Toughness:** 10(3) **Crew:** 1+5

Notes: May include luxury features at extra cost

Weapons: None

Cargo Limit: 200 lbs. 1 cubic meter

Cost: 8,000 Cr. (rental - 50 Cr.+ 75 Cr. per day)

A hovercar or "skimmer" is a car that floats on a cushion of air 30 centimeters above the ground. A pair of turbo fans propel it through the air. In general, hover vehicles are faster than ground vehicles, but are less maneuverable and are limited to traveling on fairly level surfaces or calm water. Hover cars come in many different styles and some may be open topped.

Hover Transport

Acc/ Top Speed: 20 / 60 **Toughness:** 16(4) **Crew:** 1+3

Notes: Acceleration 15 when fully loaded

Weapons: None

Cargo Limit: 20,000 lbs. 30 cubic meters

Cost: 20,000 Cr. (rental - 75 Cr.+ 150 Cr. per day)

A hover transport is a heavy truck version of a "skimmer". They are used for both military and civilians. Some are fitted with multiple seats and used as "buses". If the latter is the case, the crew score is increased to 1+10. Hover transports may be fitted with mounted weapons at an additional cost. The cost and type of weapon fitted is determined by the referee.

Hover Cycle

Acc/ Top Speed: 20 / 50 **Toughness:** 8(2) **Crew:** 1+1

Notes: None

Weapons: None

Cargo Limit: 40 lbs. .5 cubic meter

Cost: 2,000 Cr. (rental - 25 Cr.+ 25 Cr. per day)

Hovercycles are two-man hover vehicles similar to motorcycles. They are easier to ride and control than a ground cycle, but are not as maneuverable at high speeds. Hovecycles like ground cycles leave the rider and passenger exposed.

Explorer

Acc/ Top Speed: 10 / 30 Land **Toughness:** 16(4) **Crew:** 1+5

Acc/ Top Speed: 5 / 5 Water

Notes: Amphibious , Four Wheel Drive

Weapons: May be fitted with any mounted weapon on its top.

Cargo Limit: 4000 lbs. 6 cubic meters

Cost: 20,000 Cr. (rental - 75 Cr.+ 200 Cr. per day)

Explorers are heavy, four-wheeled vans built for traveling and exploring in rugged areas. They are very maneuverable and reliable. Each wheel has its own motor, and the extra-wide tires make it very stable. Explorers are air-tight and have a retractable rudder so they can cross open water, but they can be capsized by high waves. Explorers have a hatch on the roof. Mounted weapons are attached to the hatch in a 360 degree swivel turret.



Glijet

Acc/ Pace: 20 / 50 Rocket **Toughness:** 8(2) **Crew:** 1

Glide Pace: 10

Climb: 20, Rocket

Notes: Weighs 5 lbs.

Weapons: None

Cargo Limit: 30 lbs. .5 cubic meter

Cost: 3,000 Cr. (rental - 75 Cr.+ 50 Cr. per day) 50 Cr. to refill

A glijet is a combination rocketpack and hang glider. The rocketpack

is used to fly to high altitude, where the glider wings are extended. The user can glide slowly with the wings, or use the rocketpack to fly at higher speed. The chemical rocket pack weighs 5 lbs. and costs 50 Cr. to refill.

Jetcopter

Acc/ Pace: 20 / 120 **Toughness:** 15(4) **Crew:** 1+3

Climb: 20

Notes: Heavy Armor,

Weapons: Any Heavy or mounted weapons may be fitted.

Cargo Limit: 1,000 lbs. 5 cubic meters

Cost: 40,000 Cr. (rental - 100 Cr.+ 100 Cr. per day)

A jetcopter is a helicopter with jet engines. They can be flown like normal helicopters, or when using the jet engines, allowed to fly at higher speeds. Some jetcopters have open tops which allow the crew to fly exposed in seats or platforms behind the pilot.

Aircar

Acc/ Pace: 50 / 450 **Toughness:** 16(4) **Crew:** 1+3

Climb: 40

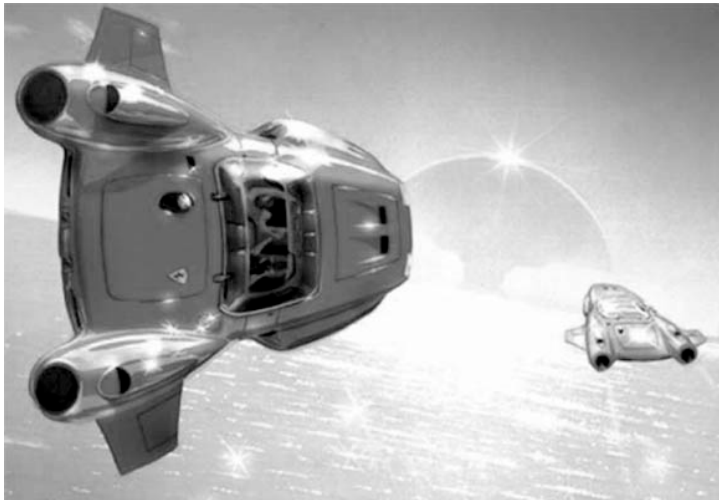
Notes: Heavy Armor,

Weapons: None

Cargo Limit: 2,000 lbs. 2 cubic meters

Cost: 50,000 Cr. (rental - 100 Cr.+ 100 Cr. per day)

An aircar is a vertical take-off and landing vehicle, or VerTOL. It takes off and lands like a helicopter, but flies like an airplane.



VEHICLE POWER SOURCES

All of the vehicles described above, except the glijet, are powered by parabatteries. Parabatteries range in size from fist-sized to 1 cubic meter. Recharge stations in cities allow vehicle owners to recharge vehicle parabatteries at a cost of 2 credits per SEU. The following four types are used in vehicles:

Type 1: ground cycles and hover cycles

Type 2: ground cars and hovercars

Type 3: trucks, hover trucks and explorers

Type 4: aircars and jetcopters

TRAVEL RANGE

All vehicles listed above can travel about 900 kilometers (560 miles) on a new parabattery before it is out of energy and must be re-charged. A glijet does not use a parabattery; its range varies with fuel use, altitude and air currents.

OTHER FORMS OF TRANSPORTATION

Many other means of transportation besides those described above are available in **Star Frontiers**. The systems and vehicles listed below will not be used in combat very often, but players may find ways to work them into their adventures.

PUBLIC TRANSPORTATION

Monorails are the most common mass transit systems on Frontier worlds. Monorail cars can hold up to six passengers and travel at 140 to 200 yards per round (about 40 mph). Monorail passengers usually pay 1 Cr. per day for unlimited number of rides.

Cabs of many types are common. Ground cars, skimmers and even cycles are used as cabs. Some are operated by drivers while others are piloted by robots or computers. A typical price is 2 Cr. for the first mile traveled and 1 Cr. for each mile thereafter.

Moving Walkways, also called peplemovers or sliders, are side-walks that are built like conveyor belts. A person simply steps onto the slider and it carries him/ her, or it, along at 10 yards per round, (or doubling ones Pace if they continue to walk or run on it). Using a slider does not cost anything.

FLYERS

Super-Sonic Transports, or SSTs, are large jet-powered aircraft capable of flying at very high altitude at several times the speed of sound (sound travels at 768 miles per hour). They are used as luxury passenger planes flying between large cities, as large cargo haulers supplying cities under construction, etc.

Orbital Shuttles, often called orbiters, are a cross between an airplane and a space ship. They are powerful enough to fly into orbit around a planet, and sturdy enough to re-enter the atmosphere and land on the surface. They are commonly used to carry supplies and passengers to orbiting space stations and spaceports. An orbiter can reach an orbiting space station in one to two hours.

WEAPONS AND EQUIPMENT CHARTS

RANGED WEAPONS

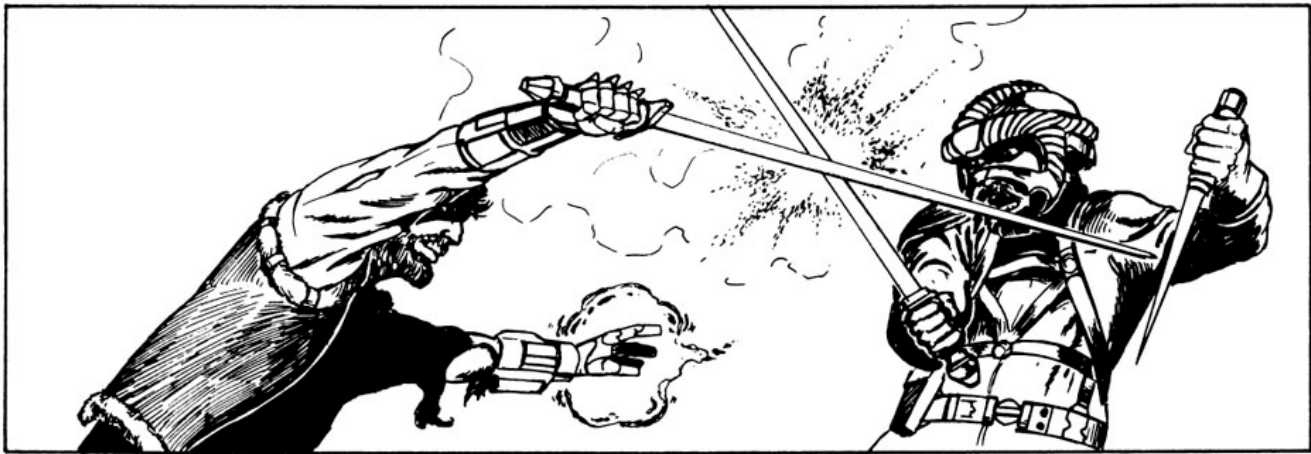
Beam Weapons	Range	Dmg	RoF	Shots	Cost	Wt.	Min.Str.	Defense	Notes
Electrostunner	2 / 4 / 8	3d6	1	20	500	2		Gauss / A-S	Stun, Vigor roll to avoid
Laser Pistol	15 / 30 / 60	1-3d6	2	20	600	2		Albedo	
Laser Rifle	30 / 60 / 120	1-5d6	2	20	800	6	d6	Albedo	
Sonic Disruptor	5 / 10 / 20	3/ 2/ 1d8	1	20	700	8		Sonic	Uses 4 SEU per shot
Sonic Stunner	4 / 8 / 15	Stun	1	20	500	2		Sonic / A-S	Uses 2 SEU per shot
Heavy Laser	125 / 250 / 500	2-10d6	1	100	6000	40		Albedo	Mounted or tripod weapon
Sonic Devastator	10 / 25 / 50	6/ 4/ 2d8	1	100	5000	30		Sonic	Mounted or tripod weapon
Projectile Weapons									
Automatic Pistol	12 / 24 / 48	2d6	3(1)	20	200	4		Inertia	AP 1, Auto
Automatic Rifle	24 / 48 / 96	2d8	3(1)	20	300	8	d6	Inertia	AP 2, Auto
Needler Pistol	5 / 10 / 20	2d6*	3	10	200	2		Inertia	*1d6 + sleep
Needler Rifle	10 / 20 / 40	2d8*	3	10	400	6	d6	Inertia	*1d8 + sleep
Machine Gun	50 / 100 / 200	2d10	3	100	2000	40	d8	Inertia	AP 4, HW, Auto
Recoilless Rifle	250 / 500 / 1km	4d10	1	1	4000	40	d8	Inertia	AP 10, 2 actions to reload
Gyrojet Weapons									
Gyrojet Pistol	10 / 25 / 50	2d8	3	10	200	2	d6	Inertia	
Gyrojet Rifle	15 / 50 / 75	2d10	3	10	300	8	d6	Inertia	
Grenade Rifle	12 / 24 / 48	as grenade	1	1	700	8	d6		Agility roll to avoid effect
Grenade Mortar	125 / 250 / 500	as grenade	1	1	2000	30			2 actions to reload
Rocket Launcher	36 / 72 / 144	4d8+2	1	1	5000	30	d8	Inertia	Medium burst, AP 10, Snapfire, HW
Grenades									
Doze Grenade	5 / 10 / 20	Special	1	1	10	-			Medium Burst Template
Frag. Grenade	5 / 10 / 20	3d6	1	1	20	-		Inertia	Medium Burst Template
Incendiary Grenade	5 / 10 / 20	3d6*	1	1	20	-			M. Burst Template, 1d6 for 3 rnds.
Poison Grenade	5 / 10 / 20	Special	1	1	30	-			Medium Burst Template
Smoke Grenade	5 / 10 / 20	Special	1	1	10	-			Medium Burst Template
Tangler Grenade	5 / 10 / 20	Special	1	1	25	-			Small Burst Template
Archaic Weapons									
Thrown Axe	3 / 6 / 12	Str+ d6	1	1	15	2		Inertia	
Thrown Knife	3 / 6 / 12	Str+ d4	1	1	10	1		Inertia	
Thrown Spear	3 / 6 / 12	Str+ d6	1	1	20	5	d6	Inertia	
Bow	12 / 24 / 48	2d6	1	1	50	1	d6	Inertia	
Musket	15 / 30 / 60	2d8	1	1	80	8	d6	Inertia	AP 2, 3 actions to reload

AMMUNITION

Beam Weapon Ammunition	Cost	Wt.	Energy/ Rounds	Projectile Weapon Ammunition	Cost	Wt.	Energy/ Rounds
Powerclip	100	1	20 SEU	Pistol Bullet clip	2	-	20 Rounds
Power Belt pack	250	2	50 SEU	Rifle Bullet clip	5	-	20 Rounds
Power Backpack	500	5	100 SEU	Pistol Needle clip	10	-	10 Rounds
Gyrojet Ammunition				Rifle Needle clip	20	-	10 Rounds
Pistol Jetclip	10	1	10 Rounds	Machine Gun belt	50	2	100 Rounds
Rifle Jetclip	20	1	10 Rounds	Recoilless Shell	10	1	1 Round
Grenade Bullet	3	-	1 Round	Archaic Weapon Ammunition			
Grenade Shell	8	1	1 Round	Arrow	2	2	20 Arrows
Rocket	15	2	1 Round	Powder and Shot	10	1	10 Rounds

MELEE WEAPONS

Weapon	Damage	Cost	Wt.	Defense	Notes
Axe	Str.+ d6	15	2	Inertia	
Bottle / Mug	Str.+ d4	-	-	Inertia	
Brass Knuckles	Str.+ d4	10	1	Inertia	
Chain / Whip	Str.+ d4	20	4 / 1	Inertia	-2 Opponent Parry, +1 to disarm
Chair	Str.+ d4	-	-	Inertia	Improvised, -1 to Attack and Parry
Club	Str.+ d4	-	1	Inertia	
Electric Sword	Str.+ d8+2 or Stun	150	4	Gauss / A-S	2 SEU per hit, Vigor roll to avoid Stun
Knife	Str.+ d4	10	1	Inertia	
Nightstick	Str.+ d4	20	2	Inertia	
Pistol Butt	Str.+ d4	-	-	Inertia	
Polearm	Str.+ d8	40	8	Inertia	Reach 1, 2 Hands
Rifle Butt	Str.+ d6	-	-	Inertia	
Shock Gloves	2d6	50	-	Gauss / A-S	2 SEU per hit, Unarmed
Sonic Knife	Str.+ d8+2	50	2	Sonic	1 SEU per hit, AP 2
Sonic Sword	Str.+ d8+6	300	2	Sonic	2 SEU per hit, AP 8
Spear	Str.+ d6	20	5	Inertia	Parry+1, Reach 1, 2 Hands
Spray Hypo	Special	10	1	-	Effects see Medkit, Unarmed
Stunstick	Str.+ d6 or Stun	75	2	Gauss / A-S	2 SEU per hit, Vigor roll to avoid Stun
Sword / Machete	Str.+ d8	30	8 / 4	Inertia	
Vibroknife	Str.+ d4+2	25	2	Inertia	1 SEU per hit



POWER SOURCES

Battery	SEUs	Cost	Weight
Parabattery Type 1	500	600	12
Parabattery Type 2	1,000	1,200	25
Parabattery Type 3	2,000	2,300	50
Parabattery Type 4	4,000	4,500	100

Generator	SEUs / Hour	Cost	Maintenance
Generator Type 1	500	10,000	50 Cr. / day
Generator Type 2	1,000	20,000	100 Cr. / day
Generator Type 3	2,000	40,000	200 Cr. / day
Generator Type 4	4,000	80,000	400 Cr. / day

DEFENSES

Power Screens	Cost	Wt.	Energy / Def. Against
Albedo Screen	2,000	4	1 SEU/ Min. Lasers
Gauss Screen	1,000	4	2 SEU/ Hit Electric Stun
Holo Screen	1,000	2	1 SEU/ Min.
Inertia Screen	2,000	5	2 SEU/ Hit Ballistic Melee
Sonic Screen	2,000	4	1 SEU/ Min, 2 SEU/ Hit

Defense Suits

Albedo Suit	500	2	+4 Toughness vs. Lasers
Military Skeinsuit	300	2	+4 Toughness vs. Inertia
Civilian Skeinsuit	500	2	+4 Toughness vs. Inertia

Helmets

Basic Helmet	75	3	+2 Toughness vs. Inertia
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MISCELLANEOUS EQUIPMENT

Item	Cost	Wt. / lbs.
Allweather Blanket	20	2
Anti- Shock Implant (R)	2,000	-
Chronocom (R)	100	-
Compass (R)	10	-
Emergency Beeper	25	-
Emergency Receiver	25	-
Envirotent	40	6
Everflame	5	-
Exoskeleton	2,000	10
Explorer Vest	15	4
Flashlight	5	-
Food Purifier	650	20
Freeze field	1,200	8
Gas Mask	30	1
Grappling Gun / Extra Grapple	200 / 25	6 / 2
Holoflare	5	-
Infla-Tent	200	15
Infra-red Goggles (R)	300	-
Infra-red Jammer* (R)	500	2
Life Jacket	10	2
Machete	30	4
Magni-goggles (R)	200	-
Parawing	200	6
Poly-vox	1,500	-
Radiophone (R)	500	8
Rope (50')	2	5
Solvaway	10	-
Standard Equipment Pack	150	2
Subspace Radio	20,000	50
Sungoggles	2	-
Survival Rations	2	-
Tornadium D-19	50	.5
Toxy-rad Gauge (R)	20	-
Variable Timer	5	-
Vitasalt pills	1	-
Water Distiller, Purifier / Extra filter	150 / 15	1 / -
Water pack	4	- / 4 full

TOOLKITS

Tool kit or Refill	Cost	Weight
Techkit	500	20
Robcomkit	500	15
Medkit	500	12
Antibody Plus	5	-
Antitox	5	-
Biocort	10	-
Omnimycin	5	-
Staydose	5	-
Stimdose	5	-
Telol	10	-
Envirokit	500	20

COMPUTERS

Level	Function Points	Toughness	Wt.
1	1-10	4	3
2	11-30	6	8
3	31-80	10	20
4	81-200	15	100
5	201-500	18	300

COMPUTER PROGRAMS

Program	Function Points for Levels					Cost
	1 (d4)	2 (d6)	3 (d8)	4 (d10)	5 (d12)	
Analysis	1	2	4	8	16	
Bureaucracy	2	4	8	16	32	
Commerce	3	6	12	24	48	
Communication	3	6	12	24	48	
Computer Security	2	4	8	16	32	
Industry	3	6	12	24	48	
Information Storage	2	4	8	16	32	
Installation Security	3	6	12	24	48	
Language	1	2	4	8	16	
Law Enforcement	4	8	16	32	64	
Life Support	4	8	16	32	64	
Maintenance	2	4	8	16	32	
Robot Management	2	4	8	16	32	
Transportation	3	6	12	24	48	

Cost = number of function points X 100 Cr.



STANDARD ROBOT COST TABLE

Type	Cost per Level					
	1	2	3	4	5	6
Maintenance Robot	4,300	4,600	5,100	6,100		
Heavy Duty Robot	5,200	5,500	6,000	7,000		
Combat Robot		5,800	6,300	7,300		
Security Robot		5,200	5,700	6,700	8,700	12,700
Service Robot			4,000	5,000	7,000	11,000
Cybernetic Robot				8,500	10,500	14,500
Warbot					14,400	18,400
Robot Brain						20,000

ROBOT DESIGN COST TABLE

Body Types	Base Size	Standard Cost	Size Change Cost	Size Min. / Max.
Standard	+0	1,000	100	-1, +1
Heavy Duty	+2	2,500	300	+2, +4
Anthropomorphic	+0	1,200	200	-1, +2

Programs	Cost
Standard Edges	1,000 per Rank
Skills	200 / die up to linked Attr.
Attributes	100 per die type

Extra Limbs	Cost
Standard Pair	800
Anthropomorphic	1,000
Heavy Duty (drills, cranes, etc.)	1,000

Weapons As per standard cost

Armor

Inertia	500 per +1
Albedo	1,000 per +1

Screens

As per standard cost, runs off Standard power packs

Movement Modes

Movement Modes	Cost
Tracked or Wheeled	500
Hover	1,000
Magnetic (Wall walker edge)	500
Rotor	2,000
Rocket	5,000

Abilities:

Aquatic	4,000
Burrowing	2,000
Fearless	1,000
Hardy	8,000
Immunity	2,000 per immunity
Infravision	1,000
Low Light Vision	600
Wall Walker	500

Special Programs, Min. Level Required	Cost
Restrain (2)	500
Self Defense (2)	500
Attack / Defense (2)	1,000
Search & Destroy (3)	3,000
Computer Link (4)	4,000

Levels (Smarts)	Die Type	Cost
Level 1	d4 (A)	200
Level 2	d6 (A)	500
Level 3	d8 (A)	1,000
Level 4	d10 (A)	2,000
Level 5	d8	4,000
Level 6	d10+	8,000

