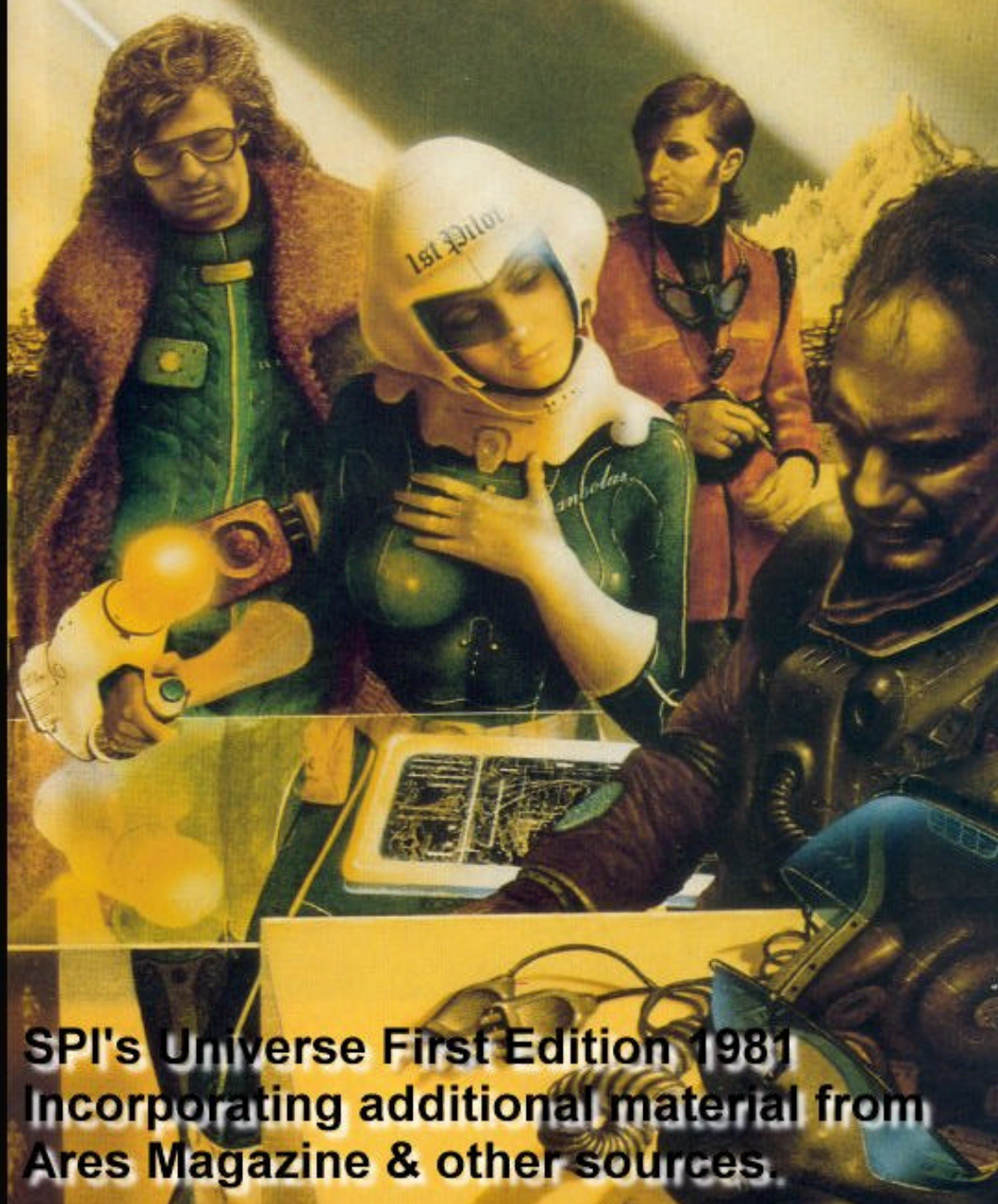


UNIVERSE PLUS

Includes SPI's Universe
GAMEMASTER'S GUIDE
DELTAVEE &
ADVENTURE GUIDE



SPI's Universe First Edition 1981
Incorporating additional material from
Ares Magazine & other sources.

UNIVERSE: PLUS

GAMEMASTER'S GUIDE, DELTA VEE & ADVENTURE GUIDE

SPI Universe First Edition 1981 Incorporating additional material from Ares Magazine & other sources

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UNIVERSE

GAMEMASTER'S GUIDE

SPI Universe First Edition 1981 Incorporating additional material from Ares Magazine & other sources.

- I. Introduction
- II. Character Generation
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Universe: PLUS is an original publication, combining SPI's Science Fiction Role Playing Game, Universe, Delta Vee and the Adventure Guide first published in 1981 and does not appear in this format officially.

Universe: PLUS has been compiled from the 1st and 2nd Editions of SPI's Universe and incorporates errata and some minor additions from SPI's Ares Magazine with the intent to offer the complete game system in one publication as close to it's original form.

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I. Introduction

[1.0] The Universe and the Future

Rakal, the Expedition Chief surveyed the hot, virulent terrain. The movement had set him on his guard; he worried for the eight other members of the Survey Team. Looking at his Bio Officer he asked, "What form do you think it takes?"

"I think the creature is in great pain," replied Mylina. "The readings on my bio scanner indicate a skittishness; perhaps our scanning has caused it harm. May I send my Scoutbot over to inspect it at closer range?"

"Yes," answered Rakal hesitantly. At Mylina's verbal command the Bot whirled through the thin atmosphere and began to traverse the 100 meters to the creature. "Do we know the chemistry of its energy transferences?"

"It is an alkaloid life form, Chief." The robot's metallic twang was clear through the respirator helmet speaker. This model had been with the crew a long time, Rakal thought. He squinted as he looked into the harsh blue-white sun, following the bot's flight.

Rakal was concerned. He had seen too many specimens damaged through ignorance. Equipment couldn't think for itself - man still rely all too much on his instinct. If only the Psion were along on the Survey. Why *had* he allowed Kk'rral, his navigator, to remain shipboard? "The Shuttlecraft needs no navigator to reach the surface," the psion had scorned. "Leave me my abrogation chores and our courses will be plotted by your return. Good hunting!"

Kk'rral, however, might have been able to communicate with this creature...where was the Scoutbot, anyway? It should have returned or at least given readings.

"Mylina, any readings from the Bot?" Mylina was busy staring into the distance and paid Rakal no heed. "Mylina, any readings?"

He quickly looked around the perimeter at the remainder of the Survey Team. They, too, were staring at some point in the distance. Rakal quickly drew his Paint Gun. His instinct not to watch the creature had probably just saved his mind. His mind, however, now was filled with moans of great pain; pain that was not his own...he ran. Looking for cover by the ridge, he was stopped by an outcropping of cyan rock, so he turned north. The moaning increased. He dared not look back but knew the creature followed. Rakal needed to circle back to the Shuttle and return to the ship; unless he somehow managed to slow the creature down this would be impossible.

As he searched for higher ground, the moaning increased painfully. Realizing it was now or never, he turned to face his pursuer. He aimed the weapon at the beast. He touched the trigger lightly to activate the aiming beam. The creature approached rapidly. The aimer found the cortex, or what appeared to be the cortex; Rakal fired. The coherent light splashed as the creature's natural armour splayed the beam everywhere. Rakal retreated and fired again. Again the beam scattered wildly... Rakal felt a burn on himself from a reflection. Rakal thought of running, but the beast no longer seemed ugly; what a lovely melody he found running through his brain. Wasn't that the creature's song? He stood up as it drew very close. Looking up into the enormous open maw, his last thought was how warm and soft it would be once he got inside.

It is the 24th Century. Mankind, searching for its destiny, has begun to explore and colonize the Milky Way. The stars themselves are now man's playground; they are also the seat of his greed.

After having overcome the temptation to annihilate himself, man found the time to let science proceed with its work. The most important discovery of the 21st Century was the isolation of the chromosome controlling the intensity of psionic talent.

Once this was isolated and brought out of its dormant state, the psionic abilities of some individuals could be awakened. This led to a long series of experiments in telekinesis, psychokinesis and, ultimately, in forms of aportation. It was thus that faster than light travel via mass teleportation (called hyperjump) was discovered. The Psions were found to act as catalysts for both travel and communications between the stars. They became very wealthy and aloof, as their talents tended to isolate them from society. Feared by the ignorant and the untalented alike, they guarded many secrets and controlled the throttle on man's outward expansion.

At last the dream of leaving behind the earth was within mankind's grasp. The final frontier was before him. The earth, politically united at last, funded the first colonizing missions. Each major national power sent its own ships to habitable worlds to explore and colonize. To govern these new worlds, the earth founded the Federation of Planets. Not to be caught in the old mistakes once again, the federation was a loose conglomeration of these worlds rather than a tight-fisted ruling body. Some of the larger colonies set themselves up as independent states, practically free from federal authority. The federal influence was exerted at the spaceports within the star systems. No direct control was insisted upon; rather light but very strictly enforced taxation was the method of the times. The armed might of the federation was considerable, consisting of far-reaching army and naval forces (both space-faring). Local forces resented their presence, but were usually no match in any combat situation.

The federation still controlled, to a large extent, the monetary systems. This was to insure fair trade amongst the stars. The unit of currency was the Tran, the abbreviation for one Transfer. This was the equal of 500 1980 dollars. The Tran was subdivided into one thousand Milli-transfers or Mils.

With fair (or at least reasonably fair) trade ensured by federal measures, business and technology flourished. Robots became economically feasible, as well as technologically, and they were as commonplace as the home computer of the 1980's. Business became the major sponsor of scientific missions, mainly to discover new resource sites and discover the means of bringing these resources back. This exploration spawned a new curiosity on the part of humankind: the capturing and exhibition of alien creatures discovered on these new worlds. Trade involving live specimens was lucrative, and every week brought the news of a new find.

The initial colonies met with mixed success; some floundered while others blossomed. Many kept their own national flavour; Russian, Chinese and Hindustan could just as easily be heard on a colony world as *Universal*, the business language of the era. Universal had its roots in the English of the 20th century, but was as closely related to that as English was to the Middle English of the 11th Century.

Amongst the languages, which still existed, were German, Japanese, Chinese, French, Italian, Spanish, Russian, Swedish, Afrikaans, Hindustani, Portuguese, Danish, Dutch, Arabic, Greek, and Arctican.

As mixed as the national flavour of the colonies was, so was their level of economic and technological development. Although exploration was speeded exponentially due to hyperjumping, commerce between stars was still slow due to the long transit time from the jump points into a system and the world itself. This jump point had to be outside the system's gravity well; thus the distance was often very great.

The pressures facing mankind's first colonists were tremendous; the mettle of mankind's best and brightest was sorely tested. Some worlds found new strengths under this pressure while others reverted to old ways for the peace, which they hoped simplicity would bring. Still others just could not match the space faring technology of the era with the resources at hand in the sometimes hostile environments. Thus the level of civilization in each colony found its own level. Worlds developed into major powers within their sector next to others who found it quite enough just to simply survive. As always, business found ways to make either situation pay off. And since business was now fronting almost all the scientific missions, the federals kept their interference to a minimum.

And what of Earth and its future history? The planet, much battered and misused, had survived pretty much intact into the era. Much of its life and livelihood revolved above the surface; the age of active space station technology had moved industry into orbit. Along with the many spaceports launching one colony ship after another, these working space factories cluttered the orbital lanes around the earth. This development had allowed much of the land to be reclaimed and enjoyed once again by the people; massive refertilization projects were undertaken and a green and beautiful Earth once again flourished.

No contact with intelligent alien life had occurred. Long having been both the dream and the nightmare of mankind's new star-faring mobility, discoveries of ruins and numerous artefacts and burnt out spaceship hulls of unknown design saw hopes (and fears) rise.

Civilization had progressed, but still man needed to strive and take risks to advance. The Universe held wonder and surprise; danger lurked around every outcropping of ore.

This vision of the future lies before you, as you own this game. These rules are your guide and your key to the Universe; the journey is yours to take.

[2.0] The Gamesmaster and the Players

Universe is a role-playing game, and in such a game there is no winner or loser; rather, the *Gamesmaster* and the *players* interact in a non-combative way to resolve *adventures*. The Gamesmaster acts as a referee. Within the framework of the rules, he objectively determines the effects of the players' actions. The players act out the part of their character as if that character actually existed in the universe the GM has created. The actions which the players take within the GM's universe may be grouped together to form *adventures*, which are similar in length and complexity to a short story.

The GM is a master storyteller, a weaver of tales, which deal in the unknown: unknown worlds, uncharted star systems, unmapped reaches of the galaxy. These stories, strung together, form the campaign. Players yearn to lose themselves in this "alternate existence," and the GM is the one who creates it.

The rules of *Universe* are intended as a framework in which the GM creates adventures for the players. These adventures can exist individually or be strung together to form a campaign. Either method is viable; a coherent campaign takes much more of the GM's time to create and maintain but there are certain joys which come from seeing characters grow, story lines interweave, and history actually being created. The story is the GM's, and he has final say concerning anything to do with that story. This includes the rules, which he is free to alter to fit his individual needs. However, the GM should not take free license with the rules; they were not published to be disregarded. Rather, careful inspection by a conscientious GM will yield what modifications he can make without unbalancing play. The players are great sources of feedback on this; they will let the GM know loud and clear if something about play bothers them.

To feel confident enough to alter any rules, and to GM *Universe* well, the GM must know the rules intimately. Since he is the final arbiter, this knowledge is a must. Many concepts in the game will be foreign, and it is up to the GM to know and explain them to his players. If this means playing "unofficial" sessions to solve problems, do it! Without this familiarity with the rules, play will not flow smoothly.

This flow of play is critical to a well run adventure. Since the GM is an entertainer, he is putting on a performance. All the players must be kept interested and involved throughout play. If this is not done, play will bog down and become dull. An interesting flow of play supercedes almost all else; let the technical details slide. The players won't mind a detail flubbed if the story was really interesting. GM's should discourage things, which slow down play (i.e., players leaving the room, talking too much amongst themselves, the GM having to look up too many rules).

Every player should be treated equally and fairly by the GM; all characters should be given chances to perform tasks, as this is how characters advance in *Universe*. Players respect a GM who is impartial and as interested in seeing the characters advance as he is in seeing his story work out. If the players think the GM is not treating them fairly, this will sow a seed of discontent, which will end the campaign or instigate arguments. The players need to trust the GM.

In preparing the adventures for the players, give thought to the balance of danger and challenge. No player wishes to solve every problem all the time; on the other hand, no player wants to be beaten all the time. The GM should constantly challenge his players' abilities, both mentally and emotionally. Encourage role-playing by enacting the non-player characters to the hilt; the GM should use them to make the players think on their feet by engaging them in direct conversation.

The adventures must be varied, and the GM will need a lot of input to remain creatively fresh. Use many different sources: science fiction literature, television, movies, and your players. Take ideas and inspirations from these sources to make your own. The players will tire of a series of adventures all dealing with a similar theme; the ideas must be varied. If a campaign is created, very often ideas for new adventures will materialize right out of the play itself — the story takes on a life of its own.

Players have many responsibilities of their own; the creation of a well-run science fiction campaign is the sum of all who play. The voices of the players must be heard loud and clear. After all, why play the game if not for enjoyment and escape? The GM must be made aware of what the players desire out of *Universe*.

If the players wish the GM to listen to their ideas and desires, they must be willing to take on their share of the burden for the game. The players must know the rules that they will use all the time (use of a skill, for instance). Also the players must respect the GM as the final arbiter of the rules and on events, which occur within his universe. It is his creation and if he didn't know the secret reasons for things, who would? This knowledge, which the players are not entitled to, may cause things to occur the players do not understand. They must accept this convention and abide by all final rulings the GM may deliver. The player must take responsibility for keeping the record pertaining to his character. This burden should not concern the GM, who certainly has enough to worry about without keeping tabs on how much is in any character's bank account, for instance. And finally, the players must have respect for the time and enjoyment of the other players and the GM.

[3.0] Sequence of Events

When players and a GM get together to play *Universe*, a certain sequence of events will usually occur. These are outlined below, and most games will follow this sequence, more or less. The following are not rules; rather take them as guidelines, which may or may not be adhered to.

1. The GM prepares the adventure. This may involve many hours of pre-play preparation on his part, creating the scenario the players will be involved in. The GM generates non-player characters (or NPC's), worlds, creatures, etc., in order to give the adventure the elements needed to flesh it out. This preparation is the most important part of the sequence for the GM, as mistakes or assumptions made at this point will be almost impossible to correct once play begins. The serious GM spends as least as much time preparing an adventure, as it will take to play it.
2. The GM and the players agree to meet and play. All concerned parties should set aside a block of time 4 to 6 hours in length. This is the average amount of time it takes to play through a short-to-medium length adventure, and two of these sessions should finish off almost any adventure. Remember that the time from beginning to end is not all spent playing (human beings being what they are), and the GM should be aware of this when he estimates how long an adventure would take to complete.
3. The players then choose or generate characters. If the adventure is part of an extant campaign, most players will have characters already. A new player or a player whose character just died will have to generate a new one. It is advised that these individuals arrive early and take care of this, but it can be done just before the adventure starts. Any monetary maintenance, which characters have to take care of, is done now. This includes room and board, equipment purchase, spaceship upkeep, etc.
4. The GM presents the adventure. This may be done any number of ways. Some of the more common are through a pre-arranged meeting with a sponsor, picking up a story line left over from a previous adventure session, or letting the players go do what they wish and let them find adventure. A non-player character for instance, could approach the players and offer employment (see the adventure in the **Adventure Guide**, *Lost on Laidley*), or coerce the players, or drop a clue as to some interesting occurrence the players might become curious about. The goal for the GM is to *entice* (not force) the players into going on the adventure he had planned for them. Players do not often like being forced into doing something. Sometimes it is the only way (as in a hijacking scenario), but a constantly manoeuvred player is an unhappy player. If the adventure created by the GM is interesting enough, the players will want to go without much provocation.
5. The adventure begins and continues until resolved. This may force the playing of an adventure beyond the time that a session must end. In that case, the GM "freezes" time, and the players pick up where they left off the next time they meet. Play will normally continue until either the characters succeed, they fail, or they aren't sure and return from whence they came. During play, the GM must act as narrator, describing the events as an impartial observer and giving the players all the information they would ordinarily become entitled to. The GM plays the parts of various NPC's, describes graphically locations the characters find themselves in, resolves combat (taking the side of the enemy or creature), and tells the players the results of their actions. During the adventure, the players have as much if not more control than the GM due to the decisions they must make.
6. The adventure is resolved. The characters have succeeded, failed, or staged a strategic withdrawal. Any adjustments to the characters' records are made and plans discussed to meet and play again. If this was a single adventure, not tied in with an extant campaign, the GM may wish to give the players the answer to the adventure (such as it might be), if they did not find it themselves. In a campaign situation this would not occur, as many answers are yet to be discovered through continued play.

[4.0] Requirements for Play

[4.1] A complete copy of *Universe* should include:

1 22" x 33" Interstellar Display 1 Gamesmaster's Guide Book 1 Adventure Guide Book

The following parts are included in the boxed version only:

One 17"x22" Tactical Space Combat game map

One *Delta Vee* rules booklet (tactical space combat)

One 200 die-cut *Delta Vee* counter sheet

Two 20-Sided dice

One Counter tray

One Game Box

[4.2] The Interstellar Display shows the positions, in three dimensions, of every known star within 30 Light Years of earth.

Each star's location is shown using three co-ordinates (**x**, **y**, **z**). Each coordinate represents a distance in light years from our sun (Sol). The **x** and **y** co-ordinates are also shown visually, by the star's actual position on the display. The **z** coordinate is a positive or negative number representing the star's distance above or below the plane of the display (the plane of the earth's equator). Also included on the display is a chart listing the distances between other stars. The Interstellar Display is not used as a playing surface. It is intended as an information source for the players and the GM. The GM chooses stars from the display (and uses the information provided with each star) when he generates worlds.

[4.3] The Gamesmaster's Guide includes many masters of logs and records that must be photocopied before use.

These include the Character Record, Star System Log, Environ Hex Map, and eight pages of different sized World Logs. The logs in this book should be carefully removed to facilitate photocopying. Note that World Logs 8 and 9 take up two pages each. SPI grants permission to photocopy all this material for personal use.

[4.4] All die rolls in *Universe* are conducted with one or two 20-sided dice only.

In a given situation, the GM or one of the players will be called upon to roll dice in one of three different ways: roll *one* die, roll *two* dice, or roll *percentile* dice.

One Die. Roll one 20-sided die and read the result. A result of **0** is *always* considered a **10**. Thus, a range of numbers from **1** to **10** is possible when rolling one die.

Two Dice. Roll two 20-sided dice and *add* the two results together. On both dice, a result of **0** is considered a **10**. A range of numbers from **2** to **20** is possible when rolling two dice. **Example:** If one die result is a **4** and the other is a **7**, the two-dice result is **11**.

Percentile Dice. Roll one die and read the result as the **10's** result (i.e., multiply the result by **10**). Roll the second die and add its result to the first. When rolling percentile dice, a result of **0** is considered a **0** *unless both* dice show a **0** result, in which case the result is read as **100**. A range of numbers from **1** to **100** is possible when rolling percentile dice. **Example:** If the first die result is **5** and the second die result is **9**, the percentile dice result is **59**.

Note: By using two dice of different colours, a percentile number may be rolled quickly. One die is declared as the **10's** die, and then both dice are rolled together.

[4.5] The GM and the players must provide some miscellaneous play aids.

All concerned should have a pencil with a good eraser. The GM should have a set of collared pencils or markers to draw world logs, environ hex maps, and other game displays. Plenty of scrap paper is also fervently recommended.

A large hex grid map (with 19mm or 25mm hexes) is recommended for use as the Action Display (see 26.1). The tactical space combat maps may be used if nothing else is available. Miniature figurines or cardboard counters are recommended for conducting Action Rounds on the Action Display.

Additional 20-sided dice are helpful in speeding up play. Some players (and GM's) prefer their own personal pair of dice. The GM will find a pocket calculator most helpful.

II. Character Generation

Each player of *Universe* assumes the role of a character. The player develops the distinct personality and abilities of his character during adventures, as the character interacts with the other players characters and the various entities controlled by the Gamesmaster.

The player generates a character by using the rules in Sections 5,6, and 7. By rolling dice and making choices in the order laid out in these Sections, the character is developed into an adult who is a result of the luck of his parentage, the pressures of his environment, and the decisions he has made throughout adolescence and young adulthood. A completely generated character is defined by a series of numerical *Characteristic Ratings* and *Skill Levels* that represent the character's strengths and weaknesses in all situations that might occur while playing adventures.

Each player keeps track of his character's attributes and acquisitions during character generation and throughout his adventuring life on a *Character Record*. The GM should provide each player with a photocopy of the Character Record included with this booklet. The players should use pencil to fill in their Character Record, as much of the information they record will be altered during play. At some point during character generation, the player must select a name and a sex for his character. These decisions are entirely up to the player, but it is suggested that a character's sex be the same as that of the player. The GM should supervise character generation and all record keeping on each Character Record, to make sure the current status of a character is noted correctly. If the GM wishes, he may make a second copy of each Character Record to verify all character information and/or to note things about a character that he does not want the player to know (such as a price on his head or an undetectable alien disease).

Terms Used in Character Generation

Characteristic. A numerical *rating*, ranging from **1** to **12**, which describes a facet of a character's physical, mental, or emotional makeup. Characteristic Ratings are determined during character generation and may not be increased once play begins. The nine characteristics each character receives are:

Strength. The brute force a character can exert using the muscles of his arms, legs, and torso. Strength determines how much a character can carry, how far he can throw an object, and the force with which he may strike.

Endurance. The amount of punishment the character's body can absorb before he loses consciousness or dies. Endurance determines the length of time a character may keep up an exertive action (such as sprinting) and the amount of time required for the character to heal from wounds or diseases.

Dexterity. The character's digital control and eye-hand co-ordination. Dexterity affects the character's use of any hand-held weapon and the efficiency with which he may perform complex tasks with his hands.

Agility. The quickness with which the character uses his body. Agility determines the speed with which a character can move and his ability to dodge and manoeuvre in close quarters. **Note:** The preceding four characteristics are collectively referred to as the *Physical Characteristics*.

Intelligence. The character's intuitive and acquired knowledge. Intelligence affects the character's ability to note peculiarities and to deduce information in a situation.

Mental Power. The character's control of his mind and emotions, especially in stress situations. A character with high mental power (**4**, **5** or **6**) may be psionic.

Note: The mental power Characteristic Rating ranges from **0** to **6**.

Leadership. The character's ability to lead others and to control a situation. Leadership determines whether or not a party of characters have the initiative during combat (see 29.1).

Empathy. The character's ability to interact with humans and other intelligent and semi-intelligent beings. Empathy affects the chances of communication with alien life forms and may allow a character to perceive another human's unspoken intentions.

Aggression. The base instincts a character exhibits, especially in a stress situation. A character with a low Aggression Rating will often behave in a cowardly or self-preserving manner, while a character with a high Aggression Rating will often take reckless actions in combat. A character's aggression may be controlled by his mental power.

Field of Study. One of seven areas of schooling that a character undertakes in his youth, including theoretical science, applied science, business, the humanities, the mind, the body, and the military. In addition, each character's basic education is represented by the *general* field of study. The fields of study a character undertakes affect his characteristics, the professions he may choose, and the skills he may acquire.

Habitat. The environment in which the character was raised. Each character's habitat consists of a home environ (expressed in terms of the contour of the land and its major features), a gravity type, a temperature range and, in some cases, an urban background.

Potential. A numerical rating, expressed as a multiplier from $\frac{1}{2}$ to **4**, representing the strengths and weaknesses exhibited by the character in his childhood. There are four potentials: physique, co-ordination, intellect, and social background. Once character generation is completed, potentials have no effect on the character.

Skill. A specific area of expertise that may be acquired by a character. During character generation, each character receives *Initial Skill Points*, with which to acquire skills before entering a profession, and normal *Skill Points*, with which to acquire skills while practising his profession. The proficiency that a character has with a given skill is represented by a numerical *level* ranging from **1** up to a maximum level that varies from one skill to another and is sometimes limited by one of his Characteristic Ratings. Exception: An Environ Skill Level or a Gravity Skill Level may be a negative number or **0**. Unlike characteristics, skills may be acquired and improved during play. The nature and use of all skills are detailed in Chapter III. Three skills are introduced in the early part of character generation:

Environ Skill. The character's knowledge and acclimation in a specific environ. Each character receives Skill Levels in all 33 environs listed on the Environ Skill Display of the Character Record during character generation. The single highest Environ Skill Level received is his Skill Level in his home environ.

Gravity Skill. The character's ability to function in a specific gravity type. Each character receives a Skill Level in all four gravity types on the Character Record during character generation. The single highest Gravity Skill Level received is his Skill Level in the gravity type of his home planet.

Urban Skill. The character's familiarity with the ways of city life and the upper classes. Certain characters receive an Urban Skill Level during character generation; those that do not are considered to come from essentially rural areas.

Study Point. A representation of a commitment by the character to a certain field of study. Each character receives **2 to 6** Study Points, which he expends to enter any of the seven fields of study.

Character Generation Sequence

To generate a character, the player should conduct the following steps in order. The specific procedures mentioned in this outline are explained in detail in Sections 5.0, 6.0, and 7.0.

A. CHARACTER HERITAGE

1. Determine 4 Potential Multipliers.

Each character begins as a series of four numbers, representing his potential in the areas of physique, co-ordination, intellect, and social background.

2. Calculate the number of Study Points the character receives. A character receives from **2 to 6** Study Points, depending on his potentials.

3. Determine the character's natural habitat. This includes the character's home environ, his Skill Levels in all environs, his Skill Levels in various gravities, his comfortable temperature range, and his Skill Level in urban areas. Certain characters may come from a deep space environ.

4. Determine the character's social standing. Each character receives a particular family history and, initial wealth. Each character receives from **1 to 5** Initial Skill Points, depending on his social standing.

B. CHARACTER DEVELOPMENT

5. Choose fields of study for the character. Study Points are expended to choose any of seven fields of study.

6. Choose initial skills for the character. Initial Skill Points are expended to choose a variety of basic skills. Skills that may be chosen depend on the character's fields of study.

7. Determine the character's 9 Characteristic Ratings. The character's Potential Multipliers and fields of study affect the determination of his characteristics.

C. CHARACTER PROFESSIONS

8. Choose a profession for the character. Any one of 23 professions is available, depending on the character's fields of study and Characteristic Ratings.

9. Declare how many years the character will practice his profession. A character may not be able to spend as many years at his profession as the player declares; he may be discharged or without work for part of the declared time.

10. Determine the effects of age on the character. His physical characteristics (strength, endurance, dexterity, and agility) may be reduced if the character is beyond the age of 24.

11. Calculate the number of Skill Points the character receives. The character's profession, his Intelligence Rating, and the number of years he spent at it affect the number of Skill Points received.

12. Choose skills for the character. Skill Points are expended to choose and improve a variety of skills related to the character's profession and his fields of study. Mark an **X** next to the skills for which the character is eligible that were not chosen for him.

13. Determine benefits the character receives from his profession. Weapons equipment, money and/or prestige are available to a character, depending on how long he spent at his profession.

[5.0] Character Heritage

The early years of a character's life are very important in forming the basis of his physical and mental makeup. The well being of his predecessors determines the opportunities the character will be able to exploit. Each character receives a series of potential values representing an early assessment of his attributes, skills in the habitat in which he was raised, and a financial endowment based on his family's social standing.

[5.1] The player begins generating his character by determining the character's potential in the areas of physique, co-ordination, intellect, and social background.

For each of these four, the player rolls one die and locates the result on the **Character Heritage Table** (see below) to find the character's *Potential Multiplier* for that area.

The player must roll for each Potential Multiplier in the order listed above. As each potential is determined, its Multiplier is recorded on the Character Record.

After determining all four potentials, the player *adds* the multipliers together to find how many *Study Points* his character receives, in accordance with the **Character Heritage Table** (below).

Note: the number of Study Points received on the Character Record.

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[5.2] The player uses the Habitat Table to determine the natural environment in which his character grew up and in which he will be most effective during play.

The player rolls one die to determine the column of the Table used and rolls a second die to determine the entry referred to in that column. The second die result is modified by *adding* the character's *Physique Multiplier* and *subtracting* his *Co-ordination Multiplier*. A multiplier of ½ is considered **0** for this purpose. Each entry on the Home Environ Table contains the following information:

The specific type of environ from which the character comes. Each environ type is stated as a two-part abbreviation, explained on the Table. The first part represents the contour of the land (flat, hills, mountains, or peaks). The second part represents the major features of the land (volcanic, craters, barren, light vegetation, woods, forest, jungle, marsh, or ice). Exceptions to this two-part system include the three *water* environs (inland waterways, sea surface, or sea submerged). Certain characters may be able to choose a *deep space* environ (see 5.5).

The character's Home Environ Skill Level. Each character receives a Skill Level ranging from **1** to **6** in his home environ. This level may be reduced if the player chooses to increase his character's *Gravity Skill Level* (see 5.4). A character's Skill Level in his home environ affects his Skill Level in other environs and may be improved during play of the game.

The gravity on the character's home planet. Each gravity type is stated as an abbreviation, explained on the Table. *Near weightless* gravity represents from **0.0** to **0.4G**, *light gravity* represents from **0.7** to **1.0G**, *heavy gravity* represents from **1.3** to **1.7G**, and *extreme* gravity represents from **2.0** to **2.5G**. Each character is considered to be at Skill Level **1** in his own gravity type and at lesser Skill Levels in other gravity types (unless his Gravity Skill Level is increased per 5.4). Gravity Skills may also be improved during play.

The temperature range in the character's home environ. Each temperature range is stated as an abbreviation, explained on the Table. *Cold* ranges from **-50** to **0** degrees Fahrenheit; *normal* ranges from **25** to **100** degrees; and *hot* ranges from **125** to **175** degrees. Characters receive no Skill Level in their temperature range.

The character's Urban Skill Level. Certain results give a character an Urban Skill Level ranging from **1** to **4**. If a result from the Table lists no Urban Skill Level, the character receives none. A character's Urban Skill may be improved during play.

[5.3] Habitat Table

See below

[5.3] HABITAT TABLE

SECOND DIE ROLL
PLUS PHYSIQUE POTENTIAL
MINUS COORDINATION POTENTIAL

FIRST DIE RESULT

	1	2	3	4	5	6	7	8	9	10
-3	4:HL-VO NW-HO	6:SF HY-NL	4:FL-CR LT-NL	4:HL-IC NW-NL/1	2:HL-CR NW-NL/2	2:HL-CR HY-NL/2	3:FL-CR LT-NL/1	2:HL-BN HY-CD/2	4:FL-MA HY-NL/1	3:HL-IC NW-NL/3
-2	3:HL-WD LT-NL/1	4:HL-LV NW-NL	4:FL-CR NW-CD/1	3:PL-BN LT-HO/1	4:SF LT-NL/4	2:HL-CR HY-NL/1	3:HL-FT LT-NL/1	4:MN-VO NW-HO/1	3:HL-VO LT-HO/1	2:HL-WD LT-HQ
-1	4:HL-JU EX-NL	6:FL-LV NW-HO	3:HL-WD LT-NL	3:HL-LV HY-NL/1	4:HL-IC HY-CD/1	2:HL-WD LT-NL/1	4:FL-BN LT-CD	3:PK-WD LT-NL/1	3:MN-LV LT-NL/1	5:SF LT-NL/2
0	5:FL-IC HY-NL	3:HL-CR HY-NL/1	3:FL-JU LT-HO/1	3:HL-VO NW-CD/1	2:MN-LV NW-NL/2	3:MN-CR HY-NL/1	3:MN-WD HY-NL/1	3:FL-WD LT-NL/1	3:MN-VO HY-NL/2	3:HL-VO LT-NL/2
1	4:MN-WD HY-NL	3:MN-LV HY-NL/1	4:PK-FT HY-HO	5:FT-IC HY-CD	2:HL-BN EX-NL/2	4:FL-WD EX-NL	3:HL-BN LT-HO	3:HL-JU LT-NL/2	3:MN-FT LT-NL/1	2:FL-JU HY-NL/3
2	4:MN-WD HY-NL	6:SB HY-NL	3:HL-LV HY-HO/1	2:MN-BN LT-HO/1	4:FL-BN LT-NL	2:FL-LV LT-NL/1	2:FT-LV LT-NL/1	3:MN-FT HY-NL/1	4:FL-WD HY-CD/1	3:MN-CR NW-HO/3
3	5:MN-JU EX-NL	4:HL-LV LT-NL	4:HL-JU HY-HO	3:HL-BN NW-NL/1	6:FL-IC EX-CD	5:IN HY-NL	4:FL-MA HY-NL/2	2:MN-LV LT-NL/1	4:FL-IC HY-NL/1	2:HL-CR LT-NL/2
4	5:NL-IC LT-NL	4:FL-WD HY-HO	2:MN-BN LT-NL/1	4:HL-WD LT-NL	3:FL-CR LT-NL/1	3:FL-WD HY-NL/1	2:HL-BN LT-HO/2	3:HL-LV LT-NL/1	4:MN-VO EX-CD/2	2:HL-LV HY-NL/1
5	4:HL-LV HY-NL	4:FL-BN HY-NL	3:HL-WD LT-NL/1	5:FL-IC HY-NL	3:HL-CR HY-CD/1	5:IN LT-NL/1	3:HL-VO HY-NL/1	2:FL-LV EX-HO/3	3:MN-WD EX-NL/2	1:HL-WD HY-NL/4
6	4:FL-LV HY-CD	4:FL-LV LT-HO	4:PK-LV HY-NL	4:IN LT-NL/1	3:PK-BN HY-HO/1	3:FL-FT LT-CD/2	3:MN-VO EX-NL/1	3:FL-JU HY-HO/1	5:PL-MA EX-HO/2	2:FL-LV NW-HO/4
7	4:MN-WD LT-HO	3:HL-VO LT-NL/1	4:MN-FT HY-NL	2:FL-WD HY-HO/1	3:SB EX-NL/3	3:HL-FT HY-NL/1	3:MN-FT LT-NL/2	3:PK-LV HY-NL/1	3:HL-JU LT-HO/2	2:HL-CR LT-HO/4
8	4:FL-BN HY-NL	4:MN-FT HY-NL	3:FL-FT HY-NL/1	3:MN-FT HY-NL/1	4:HL-WD EX-HO	3:FL-FT LT-CD/1	4:FL-IC HY-NL/1	4:HL-FT EX-CD/1	2:HL-CR HY-NL/1	1:HL-LV HY-NL/2
9	5:SB EX-NL	3:HL-WD HY-NL	4:HL-LV LT-HO	3:HL-LV HY-HO/1	4:FL-IC HY-NL/1	4:FL-IC LT-NL/1	4:SF HY-NL/1	4:MN-JU EX-NL/1	3:HL-VO HY-HO/1	3:HL-FT HY-NL/1
10	5:FL-MA EX-NL	4:FL-JU LT-NL	4:HL-JU LT-HO	4:HL-LV LT-HO	3:FL-WD LT-NL/1	2:MN-LV LT-NL/1	3:HL-WD LT-HO	3:MN-FT NW-NL/1	4:HL-FT EX-HO/2	2:MN-BN HY-NL/2
11	4:FL-JU LT-NL	4:FL-WD HY-CD	3:HL-BN LT-CD/1	4:FL-BN HY-CD	3:HL-FT EX-NL/1	4:MN-LV HY-NL	3:PK-BN LT-NL/1	3:FL-WD LT-CD/1	2:HL-CR EX-NL/2	1:FL-LV LT-CD/3
12	3:HL-BN HY-NL	5:MN-FT EX-CD	3:HL-CR HY-NL/1	3:MN-CR HY-HO/1	5:FL-CR EX-CD	4:PL-WD LT-NL	3:FL-FT HY-HO/1	3:HL-FT LT-CD/1	4:HL-FT EX-Hp/1	2:FL-CR LY-CD/3
13	4:MN-CR HY-NL	3:MN-BN LT-NL	3:PK-CR LT-CD/1	3:FL-BN EX-NL/1	4:FL-MA EX-NL/1	3:PK-CR HY-HO/1	2:MN-BN EX-NL/2	4:MN-JU HY-NL/1	2:HL-BN HY-NL/1	3:FL-MA HY-HO/4
14	3:MN-LV EX-NL/1	4:MN-BN EX-NL	4:MN-FT EX-NL	3:MN-VO EX-NL/1	2:HL-WD HY-HO/1	3:HL-LV EX-NL/1	4:HL-VO EX-NL/1	2:FL-LV LT-NL/1	3:FL-WD HY-NL/2	3:FL-LV EX-HO/1

Environ Skill Level: Contour – Feature.

Gravity – Temperature/Urban Skill Level (if any).

All abbreviations are explained in the Environ, Gravity, and Temperature sections of Character Record.

See 5.2 for explanation of use.

[5.4] The player records the information obtained for his character from the Habitat Table on the Character Record as follows:

- If an Urban Skill Level is obtained, note the number in the Urban Skill Level box.
- Place an **X** rather than a number in the Temperature space corresponding to the character's comfortable temperature range.
- Record a **1** in the proper Gravity Type box. If desired, a character's Gravity Skill Level may be *increased* at this time by *reducing* the *Environ Skill Level* the character received. Thus, a character that received an Environ Skill Level of **3** may receive a Gravity Skill Level of **2** (or **3**) in his gravity type by reducing his Environ Skill Level to **2** (or **1**). A character's Environ Skill Level may never be reduced below **1**. A character's *Urban Skill Level* may not be reduced to increase his Gravity Skill Level. After recording the character's Gravity Skill Level, *subtract 1* from the Level and record this result in the Gravity Type boxes *adjacent* to the character's home Gravity Type box (even if the number is negative). Then subtract **2 more** and note this result in the box adjacent to the boxes just filled in. Repeat this once more if necessary. These numbers represent the character's Gravity Skill Levels in gravity types other than the one in which he grew up.

When using the Social Standing Table (see 5.6), add twice the character's Social Background Multiplier to the die result *only* (the character's Urban and Environ Skill Levels are ignored). When expending Initial Skill Points (see 6.2), the following skills may be chosen in addition to those listed for the character in 6.3: agriculture, EVA, and asteroid mining. These skills are *not* available to the character when expending Skill Points acquired from his profession (unless they are listed in his profession or one of his fields of study).

[5.6] The player uses the Social Standing Table to determine his character's family history and the amount of money with which he is endowed.

The player rolls one die and modifies the die result as follows:

- *Double* the character's *Social Background Multiplier* and add the product to the die result.
- Add the character's *Urban Skill Level* to the die result.

- *Subtract* the character's *Home Environ Skill Level* from the die result (use the number derived from the Habitat Table, before it was reduced to increase Gravity Skill Levels).

Note the social standing result corresponding to the modified die result on the Character Record.

Roll one die again and *multiply* the die result by the amount of money shown for the acquired social standing. Note this product on the Character Record. Remember, one Tran equals 1,000 Mils.

The Initial Skill Point Modifier shown for the acquired social standing is used in conjunction with 5.8.

Aside from determining how much money and how many Initial Skill Points he receives, a character's social standing will affect him during play. When encountering NPC's and when dealing with bureaucracy and government, the GM should take into account a character's social standing. Class distinctions in *Universe* are not as pronounced as in, say, a feudal society; but people still feel most comfortable with those of similar background.

[5.7] Social Standing Table

See Below.

[5.7] SOCIAL STANDING TABLE

MODIFIED DIE RESULT	SOCIAL STANDING	WEALTH: ONE DIE x	INITIAL SKILL POINT MODIFIER
-1 or Less	Unfostered Orphan	1 Mil	+3
0	Oppressed minority	10 Mils	0
1, 2	Poor colonist family	10 Mils	+1
3	Family fallen on hard times	100 Mils	+1
4	Communal colony	10 Mils	+2
5-7	Lower middle class family	100 Mils	0
8-10	Skilled tech family	1 Tran	+1
11-13	Local establishment (business or farm run by family)	1 Tran	-1
14-15	Independent trading family	10 Trans	+2
16-17	Family runs planetary corporation	10 Trans	-1
18	Family dominates planet	100 Trans	-2
19	Family dominates star system	100 Trans	-2
20	Family influences entire Federation	200 Trans	-3
21	Wealthy dilettante	200 Trans	-4

See 5.6 for explanation of use.

[5.8] The player determines how many Initial Skill Points his character receives for experience gained in the early part of his life.

The player rolls one die, adds the Initial Skill Point Modifier (listed with the character's social standing on the Social Standing Table) to the die result, and refers to the **Initial Skill Points Table** (see below).

A player expends Initial Skill Points after choosing fields of study for his character (see 6.2).

[5.8] INITIAL SKILL POINTS

IF THE MODIFIED RESULT IS...	THE CHARACTER RECEIVES...
0 or less	1 Initial Skill Point
1-3	2 Initial Skill Points
4-6	3 Initial Skill Points
7-9	4 Initial Skill Points
10 or more	5 Initial Skill Points

Roll one die and add the Initial Skill Point Modifier (listed with character's social standing on the Social Standing Table) to the die result.

[6.0] Character Development

Each character undertakes one or more fields of study during his teen years. His schooling provides him with basic skills and, along with his potentials, determines his final characteristics.

[6.1] The player expends Study Points to have his character undertake any of 7 fields of study.

These include theoretical science, applied science, business, the humanities, the mind, the body, and the military. An eighth field of study, general, is automatically undertaken by every character, with no charge in Study Points.

Each field of study costs **1** Study Point to enter (**Exception:** See the *mind*, following). The player declares which fields of study his character is entering and notes the choices on his Character Record. A character may enter any given field of study *twice* at a cost of **2** Study Points (representing heavy concentration by the character in that field). If this is done, write the field of study twice on the Character Record. A given field of study may not be studied more than twice.

Restrictions on the Study of the Mind: A character must have an *Intellect* Potential of at least **2** in order to study the mind. The expenditure of **2** Study Points is required to study the mind *once*; **4** Study Points must be expended to study the mind *twice*. A character may *not* study the mind if he is studying the *military* and/or *business*.

A player should expend all his available Study Points when generating his character. Unused Study Points are useless during play.

[6.2] The player expends Initial Skill Points to give his character basic skills acquired in youth.

The expenditure of **1** Initial Skill Point allows the character to receive any skill for which he is eligible at Skill Level **1** *only*. No more than **1** Initial Skill Point may be expended for a particular skill at this time.

The types of skills that may be chosen for a character depend on his fields of study. The skills listed in 6.3 may be chosen for a character that has undertaken the appropriate field of study. At this time, a character may receive no skill that is not mentioned in one of his chosen fields of study. All characters may receive skills in the *general* category on the skill list. Initial Skill Points that are not expended before determining characteristics are lost.

[6.3] The following skills may be chosen for a character that has undertaken the appropriate field of study.

See Chapter III for a detailed explanation of each of these skills.

Theoretical Science: Chemistry, Physics, Programming, Biology, Geology, Astronomy.

Applied Science: Suit tech, Electro tech, Construction, Vehicle Tech, Programming.

Business: Programming, Recruiting, Law, Economics, Trading.

Humanities: Linguistics, Diplomacy, Law, Teaching.

The Mind: Psionic Boost, Psionic Communication, Life Sense.

The Body: Unarmed Combat, Ambush, EVA, Gravity (home gravity type only), Jetpack, Survival.

Military: Battlefield, Longarms, Handguns, Demolitions, Grenades.

General: Streetwise, Laser/Stun pistol, Gambling, Blades, Ground Vehicles, Urban (only if character already has an Urban Skill Level of 1 or greater), Environ (home environ only).

[6.4] The player determines his character's 9 characteristics one at a time, by using the Characteristic Modifier Chart and the Characteristic Generation Table.

The Characteristic Modifier Chart is used to calculate the effect of the character's potentials and fields of study on each characteristic. The Characteristic Generation Table is used to find the actual rating of each characteristic.

For each characteristic, the player completes the following steps:

1. *Add together* all numbers listed for the characteristic on the Modifier Chart that correspond to the fields of study undertaken by the character. If a *given* field was studied *twice*, double the corresponding number. Note that every character is considered to have undertaken the *general* field of study and may add its number to the total.

2. Check the *potential* section of the chart to find which potential affects the characteristic and multiply the total determined in Step 1 by the Potential Multiplier. If *two* potentials affect the characteristic, multiply the total by the first Potential Multiplier and then multiply this product by the second Potential Multiplier.

3. Roll percentile dice and add the final product derived in Step 2 to the dice result. Locate this modified result on the Characteristic Generation Table to find the rating for the characteristic. Mark the rating on the Character Record.

Important: If an *Agility Rating* of *less than 5* is received at this time, it is considered a **5**. The *Mental Power Rating* is *divided by 2* (rounding fractions up) before being noted on the Character Record. The Mental Power Rating may range from **0** to **6**. This procedure is conducted nine times when generating a character — once for each characteristic.

Note: That no potentials affect the aggression characteristic. The modifiers listed under aggression on the Modifier Chart are simply added to (or subtracted from) the characteristic generation dice result, as appropriate.

[6.5] Characteristic Modifier Chart

See Below.

[6.5] CHARACTERISTIC MODIFIER CHART

CHARACTERISTIC FIELD OF STUDY	STRENGTH	ENDURANCE	DEXTERITY	AGILITY	INTELLIGENCE	MENTAL POWER	LEADERSHIP	EMPATHY	AGGRESSION
Theoretical Science	0	0	0	0	8	2	0	0	0
Applied Science	0	0	4	0	8	0	0	0	0
Business	0	0	0	0	0	0	2	4	0
Humanities	0	0	0	0	6	2	0	4	-15
The Mind	0	2	0	0	4	6	0	0	-25
The Body	8	4	4	4	0	0	0	0	+15
The Military	4	5	0	4	0	0	5	0	+25
General	1	1	1	1	1	1	1	1	0
TOTAL CALCULATED IN ABOVE COLUMNS IS MULTIPLIED BY THESE POTENTIALS	PHYSIQUE, COORDINATION	PHYSIQUE	COORDINATION, INTELLECT	PHYSIQUE, COORDINATION	INTELLECT	INTELLECT	INTELLECT, SOCIAL BACKGROUND	INTELLECT	

Modifiers are applied to the percentile dice roll for the listed characteristic if the character studied the listed field. All applicable modifiers for a single characteristic are added together. Then the total is multiplied by the Potential Multipliers that apply to that characteristic.

See 6.4 for further explanation.

[6.6] Characteristic Generation Table

See Below.

[6.6] CHARACTERISTIC GENERATION TABLE

PERCENTILE DICE RESULT + MODIFIER	CHARACTERISTIC RATING
7 or less	1
8-15	2
16-24	3
25-34	4
35-57	5
58-83	6
84-96	7
97-108	8
109-119	9
120-129	10
130-139	11
140 or more	12

When generating the Mental Power Rating, divide the rating by 2 (rounding fractions down). An Agility Rating of less than 5 is considered a 5.

See 6.4 for explanation of use.

[7.0] Character Professions

Every character in *Universe* undertakes a profession - a particular area of employment where he may hone his abilities, gain skills, accumulate wealth, and/or acquire weapons and equipment otherwise difficult to obtain. There are 23 professions, including seven branches of military service. However, the character must fulfil certain requirements to enter a profession, and sometimes these are quite strict. A character with poor attributes can always be a *colonist* for a short while and start his adventuring early, while still young and naive. Each character practices his profession for a number of years and, if he has been in the military, is then discharged; if he has been in a commercial profession, he is considered "for hire" at the end of his term of employment, and his life of individual exploits then commences.

Each character is considered to be 20 years old upon entering a profession. The player should look over the entire list of professions before choosing one, and then note his choice on the Character Record. The procedures of the following Cases should be carried out in order by each player that is generating a character.

[7.1] Each profession has a list of prerequisites that a character must fulfil in order to enter that profession.

Certain fields of study must have been undertaken by the character. Some of his Characteristic Ratings must meet certain minimums. In some professions, a certain amount of initial wealth is required and/or other special requirements must be met. A character that does not meet all the prerequisites of a given profession may not enter that profession.

[7.2] A character with a Mental Power Rating of 5 or 6 may enter certain professions whether or not he meets any prerequisites of that profession.

Such professions list a *mental power waiver* in their prerequisites, and include star sailors, scouts, space pirates, armed traders, and merchant explorers.

A character that enters one of these professions in this manner is considered to be a *Psionic navigator*, an interstellar pilot whose Psionic powers enhance the efficiency and accuracy of Hyperjumping. Such a character must spend 2 Skill Points acquired from his profession (see 7.5) to achieve *Navigator* Skill Level 2 and 2 more Skill Points to achieve *Pilot* Skill Level 2. If the character receives fewer than 4 Skill Points for practising his profession, he must apply all the points to these two skills as evenly as possible. Other than these requirements, a Psionic navigator undertakes his profession like any other character. If he wishes, however, he may choose additional Skill Levels in navigation and piloting within the restrictions of 7.6.

[7.3] The player must declare how many years his character wishes to spend at his profession and then must use the Employment Table to determine how many years are actually spent in the profession.

The player declares that his character wishes to spend 4, 8, 12, 16 or 20 years at his profession. Then he carries out one of the following procedures:

- If the character is a *colonist* or a *thinker*, the declared number of years is the *actual* number of years employed. The Employment Table is not used. Add 20 to the number of years spent in the profession and note this sum as the character's age on the Character Record.
- If the character is in a *military profession*, roll one die and cross-reference the die result with the column of the Employment Table corresponding to the declared years of employment. The result represents the *actual* number of years the character served before being discharged. Add 20 to the actual number of years employed and note this sum as the character's age on the Character Record. The character is considered to be at the point in his life immediately after his discharge; his declared years of employment has no further effect on play and does not count against him if greater than his actual years of employment.
- If the character is in any other profession, add 20 to the *declared* years of employment and note this sum as the character's age on the Character Record. Then roll one die and cross-reference the die result with the column of the Employment Table corresponding to the declared years of employment. The result represents the *actual* number of years in which the character was gainfully employed. If the result is less than the *declared* number of years, the difference in years is considered to be time of *unemployment*; the character does not receive the benefits of experience from those years, but has aged through them.

Employment Table

**DECLARED YEARS
OF EMPLOYMENT**

DIE	4	8	12	16	20
1-2	4	4	8	12	12
3-5	4	8	8	12	16
6-8	4	8	12	12	16
9-10	4	8	12	16	20

A character in the Thinker or Colonist Profession does not use this table.

See 7.3 for explanation.

[7.4] If a character is 28 years of age or older, the player must use the Effects of Age Table to determine if any of the character's physical characteristics are permanently reduced.

The player rolls one die and adds the character's age to the die result. He then locates the modified result on the Table to find how many points must be removed from his character's Endurance, Agility, Strength, and/or Dexterity Ratings. Points must be removed from among the characteristics as evenly as possible *in the order indicated*. Erase the listed rating and replace it with the new reduced rating.

Example: A 36 year old character receives a reduction result of **5** from the Table. The player reduces the character's Endurance Rating by **2** and his Agility, Strength, and Dexterity Ratings each by **1**. A single rating may not be reduced below **1** in this manner. If this were about to happen, skip to the next characteristic.

Effects of Age Table		
1 DIE + AGE	PHYSICAL CHARACTERISTIC POINTS LOST	See 7.4 for explanation.
34 or less	0	
35, 36	1	
37, 38	2	
39, 40	3	
41, 42	4	
43, 44	5	
45, 46	6	
47 or more	7	

[7.5] Each profession description contains a Skill Point Modifier used with the Skill Point Table to determine the number of Skill Points the character receives.

The player refers to the column of the table matching his character's *actual* years of employment. He then rolls one die, adding the character's *Intelligence Rating* and the *Skill Point Modifier* to the die result. Locating the modified die result in the proper column yields the number of Skill Points that the character receives for practising his profession.

Skill Point Table						
MODIFIED DIE RESULT	ACTUAL YEARS OF EMPLOYMENT					
	4	8	12	16	20	
2-5	1	4	6	7	7	Roll one die and add the character's Intelligence Rating and the Skill Point Modifier for his Profession to the die result.
6-9	2	5	7	8	8	
10-13	2	6	8	9	10	
14-17	3	6	8	10	11	
18-21	3	7	9	11	12	See 7.5 for explanation of use.
22-26	4	7	10	12	14	
27-32	4	8	11	13	15	

[7.6] Skill Points are expended to purchase a variety of skills for the character, representing expertise acquired during his years of employment.

A player may choose any skills for his character that are listed in his profession description. He may also choose any skills in the listings for the character's fields of study in 6.3. **Exception:** A character that studied the mind may choose or improve only a skill from that field of study if his Mental Power Rating is **4** or greater. Any skills listed in the *general* category of 6.3 are also available. The expenditure of **1 Skill Point** allows the character to receive **1 Skill Level** in any skill for which he is eligible. Skill Points may be expended to receive more than one level in a given skill (at the rate of **1 point per level**), within the following restrictions:

- If the character was employed for **4** years, no single skill may exceed **Level 3**.
- If the character was employed for **8** to **12** years, no single skill may exceed **Level 4**.
- If the character was employed for **16** to **20** years, no single skill may exceed **Level 5**.

The skill list in each profession may place additional restrictions on specific skills or may require the acquisition of a certain skill. A character that received a skill by the expenditure of an *Initial* Skill Point (see 6.2) may now expend Skill Points to increase the level of that skill, but he is still subject to these restrictions.

A player may improve an environ skill (if allowed by his fields of study or profession) by expending a Skill Point. The expenditure of **1 Skill Point** allows the player to increase the Skill Level in **1** environ and the **4 environs directly (not diagonally) adjacent to it** on the Environ Skill Display by **1** level each. Thus, a Skill Point expended to increase woods/hills would also increase light vegetation/hills, woods/mountains, woods/ flat, and forest/hills. Environ, urban, and gravity Skill Levels are not affected by the years of employment restrictions in this Case; however, the limits listed in 15.0 must be adhered to.

After all chosen skills have been assigned Skill Levels, the player places an **X** in each Skill Level space for every skill his character was eligible to receive but did not take. This includes all skills listed for his profession, his fields of study and, if from a deep space environ, those listed in 5.5. Skills marked in this manner are familiar to the character and he will be able to acquire them easily during play (see 8.2).

[7.7] Each profession description contains a variety of material benefits the character may receive from practising that profession.

The player rolls one die and adds the character's actual years of employment to the die result. He then locates the modified die result on the Benefit Table to find his character's Benefit Level (a letter from **A** to **F**). The character receives the benefits listed for the acquired Benefit Level in the description of his profession.

Benefits include weapons, equipment and/or cash. The capabilities of weapons and equipment are detailed in Chapter V. Cash is received as *lump sum* (add this to any money the character may possess) or as a *multiplier* (multiply the listed amount of money by this number). Characters in a military profession also receive a *rank of office*, a duty uniform, a dress uniform (uniforms are not listed in the benefits) and, in some instances, an annual pension.

GM Note: The rank a character achieves in a military profession will help him during play when dealing with other military characters and non-player characters, especially if he is wearing his uniform. For example, a captain of the space sailors may receive special favours when travelling in a government spacecraft, such as preferential accommodations or extra information concerning the destination. The GM is responsible for handing out pensions (although the player should record the amount in the Money section of his Character Record). A character's first pension payment is received one game-year after the character is generated. See 26.2 for time-keeping guidelines.

Benefits Table		
1 DIE + ACTIVE YEARS IN PROFESSION	BENEFIT LEVEL	Explanation of each result is listing in with the appropriate Profession. See 7.7 for explanation.
5-10	A	
11-14	B	
15-18	C	
19-23	D	
24-28	E	
29-30	F	

[7.8] The Profession Tables include the Employment Table, Effects of Age Table, Skill Point Table, and Benefits Table.

[7.9] Each player may choose one of the following 23 professions for his character.

ASTROGUARD (Military)

A member of a planetary or star system spaceship force. The Astroguards protect the space lanes from privateers and monitor all ship traffic coming into and out of local space. Usually operating in groups of small craft, Astroguards also respond to distress calls and are sometimes called upon for combat duty.

Prerequisites: Study of the military; Aggression Rating of at least **5**.

Skill Point Modifier: **1**.

Skills Available: Gunnery, missile guidance, space tactics, pilot, air vehicles, EVA, spaceship tech (**1** Level only).

Benefits:

A. Corporal: 300 Mils cash.

B. Flight Sergeant: 1 Tran cash.

C. Flight Lieutenant: 3 Trans cash; internal gravity web.

D. Squadron Leader: 10 Trans cash; 250 Mils per year pension; internal gravity web.

E. Wing Commander: 25 Trans cash; 750 Mils per year pension; internal gravity web.

F. Group Captain: 60 Trans cash; 2.5 Trans per year pension; internal gravity web.

CIVIL INSPECTOR

A civilian employed by the federation's Agency for Interstellar Development. A civil inspector travels from world to world administering the progress of colonization programs. He watches for and prevents private exploitation of planets still in the early stages of development. Although he receives some self-defence training (in case of hostile merchants in isolated areas), a civil inspector usually calls for military aid when things get rough.

Prerequisites: Study of the humanities and business; Characteristic Ratings of at least Intelligence **6**, Leadership **4**, Empathy **6**, and Mental Power **2**.

Skill Point Modifier: **4**.

Skills Available: Handguns, unarmed combat, agriculture, biology, planetology, urban.

Benefits:

A. 250 Mils cash.

B. 700 Mils cash; translator.

C. 2 Trans cash; translator or interstellar commlink.

D. 7 Trans cash; translator and interstellar commlink.

E. 20 Trans cash; Frazette Blue robot with . information system and recorder system.

F. 40 Trans cash; Manner 23sd robot with information system, weapon targeting system, laser pistol system, recorder system.

COLONIST

A citizen of the federation, living and working on a newly settled planet.

Prerequisites: None.

Skill Point Modifier: **0**.

Skills Available: Trading, air vehicles, marine vehicles, agriculture, mining.

Benefits:

A. Nothing.

B. 1 Tran.

C. 2 Trans; Civ Level 6 laser pistol.

D. 4 Trans; Civ Level 6 laser pistol.

E. 8 Trans; car.

F. 15 Trans; Civ Level 5 automobile; Civ Level 6 laser pistol.

DIPLOMAT

An employee of the federation or any planet government serving as a representative to other planets. Diplomats are "couriers" of official decisions and agreements. As a symbol of goodwill, diplomats enjoy great hospitality whenever visiting an area in an official capacity.

Prerequisites: Study of the humanities and the mind; Characteristic Ratings of at least Intelligence **7**, Empathy **7**, Mental Power **2**. The Aggression Rating may not exceed **6**. The character's initial wealth must be at least **1** Tran.

Skill Point Modifier: **8**.

Skills Available: Recruitment, programming, computer/robot tech (**1** Level only), urban.

Benefits:

A. 300 Mils cash.

B. 1 Tran cash; audio-sealed case.

C. 3 Trans cash; audio-sealed case; translator.

D. 10 Trans cash; audio-sealed case; translator; interstellar commlink.

E. 25 Trans cash; Manner 38sdf robot with Holographer system, language system.

F. 60 Trans cash; Soidistant V-201 with creative thought system, Holographer system.

DOCTOR

An esteemed member of the medical profession. The state of medicine in the 24th Century allows MD's to perform feats of healing approaching the miraculous. Doctors work out of medical offices in urban areas or, in sparsely populated colonies, travel from settlement to settlement as called for.

Prerequisites: Study of theoretical and applied science; Characteristic Ratings of at least Dexterity **7**, Intelligence **8**, Mental Power **2**, and Empathy **6**.

Skill Point Modifier: **10**.

Skills Available: Teaching, diagnosis, treatment.

Benefits:

- A. First aid kit.
- B. 3 Trans cash; first aid kit.
- C. 1 Tran x Intelligence Rating in cash; Civ Level 6 Mediscanner.
- D. 4 Trans x Intelligence Rating in cash; Civ Level 6 Mediscanner.
- E. 10 x Intelligence Rating in cash; Civ Level 8 Mediscanner.
- F. 20 Trans x Intelligence Rating in cash; Manner 36sdf robot with medical system.

ENFORCER

A privately employed bodyguard, soldier, or security specialist. Enforcers usually work for corporations that control a large area of a world, executing the rules of the company or patrolling restricted lands. Enforcers are sometimes hired by backwater colonies to quell criminal activity or civil unrest. Enforcers are generally disliked by those they are watching over.

Prerequisites: Study of the mind and the body; all Physical Characteristics must be at least **4**; Intelligence must be at least **5**; Leadership must be at least **5**.

Skill Point Modifier: **6**.

Skills Available: Battlefield, demolitions, machine guns, longarms, handguns, paint gun, recruiting, law, military ground vehicles.

Benefits:

- A. 500 Mils cash.
- B. 1.5 Trans cash.
- C. 3 Trans cash; Civ Level 5 pistol
- D. 10 Trans cash; Civ Level 8 laser pistol.
- E. 25 Trans cash; Civ Level 8 paint gun.
- F. 60 Trans cash; Civ Level 8 paint gun; Civ Level 5 submachine gun.

EXPLORER

A crewman or part-owner of an interstellar exploration vessel. Explorers organize and carry out private expeditions to unsettled planets, gathering information to facilitate future commercial development. Often their efforts are financed by large corporations and private investors. Explorers are most concerned with the profitable gain of knowledge; they rarely transport large cargoes and their ships are not usually armed.

Prerequisites: Study of business and either theoretical or applied science; Characteristic Ratings of at least Intelligence **7**, Mental Power **3**, and Empathy **4**. The character's initial wealth must be at least 500 Mils. The mental power waiver applies (see 7.2).

Skill Point Modifier: **7**.

Skills Available: Handguns, paint gun, gunnery, pilot, linguistics, survival, air vehicles, marine vehicles, planetology, biology, geology, astronomy, navigation, any environs, any gravity.

Benefits:

- A. Nothing.
- B. Initial wealth x 3.
- C. Initial wealth x 5; Civ Level 8 Bioscanner.
- D. Initial wealth x 10; Civ Level 8 Geoscanner.
- E. Initial wealth x 25; Neuroscanner.
- F. Initial wealth x 50; Manner 50sd robot with bio system, self-activation system, and Holographer system.

FREEFALLER (Military)

A soldier in the zero gravity branch of the federal armed forces. Freefallers are usually assigned to a fleet patrolling a single star system. They attack and defend asteroid belts, small moons, and space colonies, and specialize in spaceship boarding operations.

Prerequisites: Study of **2** of the following fields: Applied Science, The Body, and The Military; Characteristic Ratings of at least Dexterity **6**, Agility **7**, and Aggression **4**. The character's home gravity type may not be *heavy* or *extreme*.

Skill Point Modifier: **3**.

Skills Available: Near Weightless Gravity Skill Level is automatically increased to **2** (if not already equal to or greater than **2**) at no cost in Skill Points. Battlefield, body armour, machine guns, arc guns, longarms, handguns, jetpack, demolitions, EVA, suit tech, weapon tech, near weightless gravity (in addition to any levels received as described in the preceding).

Benefits:

- A. Lancer: 300 Mils cash.
- B. Corporal: 1 Tran cash; Civ Level 6 expedition suit.
- C. Sergeant: 3 Trans cash; Civ Level 7 expedition suit.
- D. Lieutenant: 10 Trans cash; 250 Mils per year pension; Civ Level 7 expedition suit.
- E. Captain: 25 Trans cash; 750 Mils per year pension; Civ Level 7 expedition suit; arc gun.
- F. Colonel: 60 Trans cash; 2.5 Trans per year pension; Civ Level 7 expedition suit; arc gun; jetpack.

HANDYMAN

An engineer or technician working with any kind of planet-based technology. Handymen build and repair electrical devices, protective suits, weapons, computers, robots, and vehicles. They are employed by all branches of government, military and commercial concerns.

Prerequisites: Study of applied science *twice*; Characteristic Ratings of at least Dexterity **6** and Intelligence **6**.

Skill Point Modifier: **5**.

Skills Available: Agriculture, programming, physics, energy tech, spaceship tech (**1** Level only), weapon tech, compu/robot tech.

Benefits:

- A. Basic repair kit.
- B. 1 Tran cash; basic repair kit.
- C. 3 Trans cash; Civ Level 7 Electrokit.
- D. 10 Trans cash; Civ Level 8 Electrokit.
- E. 20 Trans cash; Civ Level 8 vehicle kit.
- F. 40 Trans cash; Civ Level 8 vehicle kit and robot kit.

INTERSTELLAR TRADER

A crewman or part owner of an interstellar freight vessel. Traders travel from world to world, purchasing and selling goods for profit. Trader ships are usually armed, as a defence against space pirates and unfriendly planet governments. Although traders stay on the right side of the law, they are always willing to venture away from established trade routes if good money can be made.

Prerequisites: Study of business; Characteristic Ratings of at least Intelligence **6** and Mental Power **2**. The character's initial wealth must be at least **1** Tran. The mental power waiver applies (see 7.2).

Skill Point Modifier: **4**.

Skills Available: Longarms, handguns, arc gun, gunnery, missile guidance, space tactics pilot, linguistics, diplomacy, asteroid mining, astronomy, EVA.

Benefits:

- A. Nothing; all initial wealth lost.
- B. Civ Level 7 business computer.
- C. Initial wealth x 2; business computer.
- D. Initial wealth x 5; business computer.
- E. Initial wealth x 12; business computer.
- F. Initial wealth x 30; Brummagen II robot with spaceship tech system; business computer.

LAWMAN (Military)

A member of a planetary law enforcement agency. Lawmen perform the functions of today's policemen, protecting the citizenry and investigating crimes. However, the sparse and spread out populations of most worlds often require lawmen to travel from settlement to settlement executing justice wherever necessary, much like the marshals of the old west.

Prerequisites: Study of the body and the humanities; all Physical Characteristic Ratings must be at least **4**.

Skill Point Modifier: **3**.

Skills Available: Machine guns, longarms, handguns, paint gun, air vehicles, marine vehicles, urban, any environs, any gravity.

Benefits:

- A. Patrolman: 250 Mils cash.
- B. Constable: 700 Mils cash; Civ Level 6 laser pistol.
- C. Sergeant: 2 Trans cash; Civ Level 8 laser pistol.
- D. Marshal: 7 Trans cash; Civ Level 6 paint gun and used rover (ATV).
- E. Inspector: 20 Trans cash; 500 Mils per year pension; Civ Level 8 paint gun.
- F. Chief: 40 Trans cash; 2 Trans per year pension; Civ Level 8 paint gun and any handgun.

MERCHANT

A trader of goods on the local (planetary) level. Merchants travel from settlement to settlement on a sparsely populated world, or arrange for transport of goods from point to point on a world. Merchants handle everything from basic foodstuffs to fine electronic equipment to contraband.

Prerequisites: Study of business *twice* or study of business *and* applied science; Characteristic Ratings of at least Intelligence **5** and Empathy **7**. The character's initial wealth must be at least **1** Tran.

Skill Point Modifier: **5**.

Skills Available: Diplomacy, air vehicles, marine vehicles, agriculture, electro tech, computer/robot tech, vehicle tech, urban, any environs.

Benefits:

- A. Nothing; all initial wealth lost.
- B. Civ Level 7 business computer.
- C. Initial wealth x 3; Civ Level 7 business computer.
- D. Initial wealth x 10; Civ Level 7 business computer.
- E. Initial wealth x 20; Civ Level 5 truck.
- F. Initial wealth x 40; Civ Level 7 jet.

RANGER (Military)

A soldier in the standard federal ground force. A ranger's responsibilities cover all aspects of line and garrison duty on a planet surface, including air and marine patrol. During combat, rangers come in as the "second wave" following the Space Troopers and carrying out any "mopping up" operations.

Prerequisites: Study of the military and the body; all Physical Characteristic Ratings must be at least **4**.

Skill Point Modifier: **2**.

Skills Available: Artillery, machine guns, paint gun, bows, military ground vehicles, air vehicles, marine vehicles, weapon tech, vehicle tech, treatment, any environs.

Benefits:

- A. Ranger: 300 Mils cash; respirator.
- B. Corporal: 1 Tran cash; Civ Level 6 respirator helmet.
- C. Sergeant: 3 Trans cash; Civ Level 8 respirator helmet.
- D. Lieutenant: 10 Trans cash; 250 Mils per year pension; Civ Level 8 respirator helmet; Civ Level 6 laser pistol.
- E. Captain: 25 Trans cash; 750 Mils per year pension; Civ Level 8 respirator helmet; Civ Level 8 laser pistol.
- F. Colonel: 60 Trans cash; 2.5 Trans per year pension; Civ Level 8 respirator helmet and paint gun.

REPORTER/JOURNALIST

A newsperson or media personality, this individual can become widely known, can establish contacts on many levels of federation society, from the underworld to the high echelons of government, and can be sent to dangerous and exotic places on assignment at no cost to self (other than to his safety).

Prerequisites: Study of the humanities and either business or theoretical science; Characteristic Ratings of at least Intelligence **7**, Mental Power **2**, Aggression **5**.

Skill Point Modifier: **7**.

Skills Available: Unarmed combat, survival, disguise, forgery/counterfeiting, urban, air vehicles, programming, electro tech, recruiting.

Benefits:

All reporters receive an audio recorder.

- A. Nothing additional.
- B. 2 Trans cash; photographic equipment.
- C. Credentials with planetary news service; 500 Mils x Intelligence Rating in cash; superoid camera.
- D. Credentials with star system news service; 3 Trans x Intelligence Rating in cash; basic Holographer.
- E. Credentials with federation-wide news service; 10 Trans x Intelligence Rating in cash; shoulder Holographer.
- F. Media celebrity throughout federation; 25 Trans x Intelligence Rating in cash; Manner 38sdf robot with information system, Holographer system.

The GM should take a reporter's status into account when the character requests information, assistance, or financial backing from commercial, government, or media officials.

SCIENTIST

A researcher or inventor employed by the federation or by a private concern. Scientists specialize in any of the physical sciences and are the powers behind the advanced technology and discoveries of the 24th Century. As such, any expedition or venture of an exploratory nature will receive much more support if a qualified scientist participates.

Prerequisites: Study of **2** of the following: theoretical science, applied science, or the humanities; Intelligence Rating of at least **8**.

Skill Point Modifier: **9**.

Skills Available: Teaching, agriculture, chemistry, planetology, programming (**1** Level only), biology, geology, astronomy, energy, computer/robot tech (**1** Level only).

Benefits:

- A. 1 Tran cash.
- B. 2Transcash;CivLevel5chemlab.
- C. 500 Mils x Intelligence Rating in cash; Civ Level 6 chemsynthesizer.
- D. 2 Trans x Intelligence Rating in cash; Civ Level 7 chemlab.
- E. 6 Trans X Intelligence Rating in cash; Civ Level 8 Bioscanner and Geoscanner.
- F. 15 Trans x Intelligence Rating in cash; Frazette Amber robot with geo system, chemical system, bio system, and information system.

SCOUT (Military)

A member of the exploration branch of the federal armed forces. Scouts lead the way to unexplored worlds, gathering specimens and information, forging the path for future colonization. Scouts usually work in small teams when conducting an expedition and sometimes work alone. Although administered by the military, the scouts rarely participate in actual combat. **Prerequisites:** Study of theoretical or applied science; all Physical Characteristics must be at least **3**; Characteristic Ratings of at least Mental Power **2** and Empathy **6**; the mental power waiver applies (see 7.2).

Skill Point Modifier: **4**.

Skills Available: Longarms, handguns, pilot, EVA, survival, air vehicles, marine vehicles, jetpack, planetology, treatment, biology, geology, astronomy, suit tech, any environs, any gravity.

Benefits:

- A. Scout Second Class: 300 Mils cash.
- B. Scout First Class: 1 Tran cash; Civ Level 6 expedition suit.
- C. Master Scout: 3 Trans cash; Civ Level 7 expedition suit.
- D. Single Scout: 5 Trans cash; Civ Level 7 expedition suit, Neuroscanner, and rover.
- E. Expedition Leader: 25 Trans cash; 750 Mils per year pension; Civ Level 7 expedition suit and crawler.
- F. Scout Commodore: 60 Trans cash; 2.5 Trans per year pension; Civ Level 7 expedition suit and used explorer pod.

SPACE PIRATE

A crew-member or owner of an outlaw spaceship. Space pirates waylay commercial vessels in interplanetary space, smuggle legal and illegal goods, and terrorize asteroid mining operations and small colonies. Pirate vessels may sometimes be chartered for secret journeys to distant parts at exorbitant prices.

Prerequisites: All Physical Characteristics must be at least **4**; Characteristic Ratings must be at least Aggression **6** and Mental Power **2**. The character must *not* have studied the humanities. The mental power waiver applies (see 7.2).

Skill Point Modifier: **6**.

Skills Available: Body armour, handguns, paint gun, arc gun, bows, unarmed combat, gunnery, missile guidance, space tactics, pilot, linguistics, disguise, forgery/counterfeiting, EVA, air vehicles, asteroid mining, planetology, astronomy, spaceship tech, weapon tech, near weightless gravity.

Benefits:

All space pirates receive an internal gravity web.

A. Nothing; all initial wealth lost.

B. Initial wealth x 2.

C. Initial wealth x 4; Wanted by federation.

D. Initial wealth x 10.

E. Initial wealth x 10; *Terwillicker 5000* Battlecraft; wanted by federation.

F. Initial wealth x 20; *Piccolo* spaceship with light weapon pod.

Before beginning play, a space pirate may turn any amount of his money into booty. He may purchase any weapons, robots, or equipment as if he were on a Civ Level 6 world with no law restrictions. No bargaining is allowed. If a space pirate is wanted by the federation, the GM should take this into account when the character encounters any planetary law enforcement NPC's, and especially when he encounters any federal authorities (see 27.0). The character should be kept constantly on the run.

SPACE TECHNICIAN

A specialist in the design, construction, and repair of spaceships and related equipment. Space techs are indispensable members of any lengthy space voyage. Usually employed by commercial shipping companies and ship manufacturers, space techs are sometimes called upon by governments and military branches for their specialized services.

Prerequisites: Study of applied science *twice*; Characteristic Ratings of at least Dexterity **7**, Intelligence **7**, and Mental Power **2**.

Skill Point Modifier: **8**.

Skills Available: Psion tech (1 Level only), EVA, programming, astronomy, physics, energy tech, spaceship tech, compu/robot tech.

Benefits:

A. 500 Mills cash.

B. 2 Trans cash.

C. 5 Trans cash; Civ Level 7 Electrokit.

D. 15 Trans cash; Civ Level 8 Electrokit.

E. 30 Trans cash; Civ Level 7 spaceship kit.

F. 60 Trans cash; Frazette Amber robot with spaceship tech system, electro tech system, self-activation system.

SPACE TROOPER (Military)

A soldier in the federal assault force, specializing in body armour combat on planet surfaces. Troopers are famous for their mass assaults, rapid victories, and *esprit de corps*. Space Troopers are always at the fore of any major attack and move on once the way is cleared for the standard military forces. Although their operations are sometimes launched from the air, Space Troopers are trained exclusively for ground combat.

Prerequisites: Study of the military and the body; all Physical Characteristics must be at least **6**; Aggression Characteristic Rating must be at least **5**. The character's home gravity type may not be *Near Weightless*.

Skill Point Modifier: **5**.

Skills Available: All Gravity Skill Levels except Near Weightless are *automatically* increased to **0** (if not already equal to or greater than **0**) at no cost in Skill Points. Body armour (1 Level required), artillery, machine guns, paint gun, arc gun, military ground vehicles, suit tech, any environs, any gravity except Near Weightless (in addition to any levels received as described above).

Benefits:

A. Trooper: 300 Mills cash; Civ Level 6 armour vest and respirator helmet.

B. Corporal: 1 Tran cash; Civ Level 6 reflective body armour.

C. Sergeant: 3 Trans cash; Civ Level 7 impact body armour.

D. Lieutenant: 10 Trans cash; 250 Mills per year pension; Civ Level 7 reflect/impact body armour.

E. Captain: 25 Trans cash; 1 Tran per year pension; Civ Level 8 reflective body armour.

F. Colonel: 60 Trans cash; 3 Trans per year pension; Civ Level 8 reflect/impact body armour and arc gun.

SPY

A member of a federal or planetary intelligence agency. Spies are used throughout the federation to gather information and to conduct secret missions on planets that the federation or rival planetary governments are suspicious of. Spies usually work alone, under a variety of identities.

Prerequisites: Study of the mind and the body; Characteristic Ratings of at least Dexterity **7**, Agility **5**, and Intelligence **6**; Urban Skill Level of at least **1**.

Skill Point Modifier: **7**.

Skills Available: Demolitions, longarms, handguns, paint gun, arc gun, bows, linguistics, disguise, forgery/counterfeiting, weapon tech, urban.

Benefits:

All spies receive a set of false identity papers.

A. Nothing additional.

B. Civ Level 6 plastic pistol.

C. Any one handgun or laser pistol.

D. 700 Mills cash; Civ Level 8 laser pistol and any other handgun.

E. 4 Trans cash; Civ Level 8 paint gun and any one handgun.

F. 20 Trans cash; arc gun and any one handgun.

STAR SAILOR (Military)

A member of the federal navy, serving aboard a spaceship. Responsibilities may range from plotting courses to piloting a craft to manning the guns during battle. A star sailor is familiar with all manner of known space craft and is more comfortable in a zero-G environment than he is on the ground.

Prerequisites: Study of the military and either applied sciences or the body; Characteristic Ratings of at least Agility **5**, Intelligence **7**, and Mental Power **2**. The character's home gravity type may not be *extreme*. The mental power waiver applies (see 7.2).

Skill Point Modifier: 6.

Skills Available: Near Weightless Gravity Skill Level is *automatically* raised to 0 (if not already equal to or greater than 0) at no cost in Skill Points. Pilot, astronomy, energy tech, suit tech, spaceship tech (1 Level only), weapon tech, space tactics, gunnery, missile guidance, EVA, near weightless gravity (in addition to any levels received as described above).

Benefits:

All star sailors receive an internal gravity web and free passage on any interstellar federal craft (for the distance listed in Light Years).

A. Midshipman: 500 Mils cash; no passage.

B. Ensign: 1.5 Mils cash; 10 LY passage.

C. Lieutenant: 4 Trans cash; 300 Mils per year pension; 20 LY passage.

D. Captain: 15 Trans cash; 1 Tran per year pension; 50 LY passage.

E. Commander: 36 Trans cash; 3 Trans per year pension; 100 LY passage.

F. Admiral: 80 Trans cash; 10 Trans per year pension; perpetual passage.

THINKER

A member of the exclusive psionic community. The advanced study of the mind has turned telepathy, telekinesis, and other extraordinary mental abilities into the premier science of the 24th Century. Thinkers effectively control interstellar travel and communications and are thus treated with great respect by government and corporate officials. Because of the freak nature of their powers, however, the general public greets them with a mixture of awe, fear, and mistrust. Thinkers often set up small colonies in luxurious isolation so that they may probe the mysteries of thought undisturbed. A thinker will keep his powers concealed when with non-Psions.

Prerequisites: Study of the mind and either applied science or the humanities; Characteristic Ratings of at least Intelligence **7** and Mental Power **5**.

Skill Point Modifier: 10.

Skills Available: Navigation, mind control, psychokinesis, psion tech, teaching.

Benefits:

A. Nothing.

B. Interstellar commlink.

C. 1 Tran cash; interstellar commlink.

D. 3 Trans cash; Psionic Rig.

E. 10 Trans cash; Psionic Rig.

F. 25 Trans cash; augmented jump pod.

ZERO-G MINER

A prospector of ores and precious metals in asteroid belts and on small planetoids. Miners work together in small groups, surveying the entire "ring" of an asteroid belt, staking claims on those rocks that appear promising. Actual mining operations range from a single miner with a rock blaster to orbital mining cities.

Prerequisites: Study of applied science or business; Characteristic Ratings of at least Dexterity 5 and Agility 3. The character's initial wealth must be at least 500 Mils. The character's home gravity type may not be *extreme*.

Skill Point Modifier: 4.

Skills Available: Near Weightless Gravity Skill Level is automatically increased to 0 (if not already equal to or greater than 0) at no cost in Skill Points. Pilot, economics, trading, EVA, mining, asteroid mining, geology, electro tech, near weightless gravity (in addition to any levels received as described above).

Benefits:

A. Nothing.

B. Initial wealth x 2.

C. Initial wealth x 3; rock blaster.

D. Initial wealth x 5; Civ Level 8 Geoscanner.

E. Initial wealth x 10; rock blaster and Civ Level 8 Geoscanner.

F. Initial wealth x 20; Manner 44 robot with force field system, geo system, pilot system, and chemical system.

III. Skills

Characters use skills in all aspects of play. Each skill provides a character with expertise in a specific area of endeavour. The skill descriptions in this Chapter explain when and how each skill can affect play. Each character receives skills during character generation and, once he begins adventuring, a character may improve those skills and acquire others.

Each skill description lists the *maximum level* that may be achieved in that skill (for example, the maximum level that may be achieved in the geology skill is 7). Each skill also lists a *characteristic limit*, which is the highest level a character may achieve in a skill when his Characteristic Rating appropriate to a particular skill is lower than the maximum limit for that skill (thus, a character with an Intelligence Rating of 5 can increase his Geology skill to a maximum level of 5). These limits are summarized on the Character Record.

When the GM is organising an adventure or offering employment to the characters, he should take their skills and professions into account (for example, a character with high scientific Skill Levels should have no problem finding a sponsor for a scientific expedition). During play, situations will surely arise that call for character abilities not specifically explained in these skills. After familiarizing himself with how the skills work, the GM should easily be able to determine the chances and effects of any task the characters wish to attempt.

Many skills are presented in the form of one or more *tasks*, each representing a particular use to which a character may put the skill during play. Each task is noted with a **T** symbol and has a *base chance* of success expressed as a percentage. Each task is carried out according to the following procedure and any special rules listed with the skill or task description.

1. The character declares which specific task listed in the appropriate skill description he is undertaking. In most cases, he must have access to a particular piece of equipment.

2. One of the character's *Characteristics Ratings* (specified in the skill description) is added to the *square* of his *Skill Level*, and the total is *added* to the *base chance* listed for the task. In some instances, the Skill Level may be increased by a piece of equipment or decreased if the task is especially difficult. The base chance may be further modified by the task description or at the GM's discretion (in some cases, he may apply a modifier secretly).

3. The character rolls percentile dice (the GM should roll if he wishes the outcome to remain secret). If the dice result is *equal to or less than* the modified chance, the character succeeds at the task. When a task requires a certain amount of time to perform (listed with the equipment description or with the task description), the time required to perform the task is *reduced by 1%* for *each* percentage point below the chance the dice result indicates. If the dice result is *greater than* the modified chance, the character either fails outright, must spend more time at the task to succeed, or suffers some other disappointment. Each Skill description lists different effects for failing a task. Many skills introduce a variety of results depending on how far above or below the modified chance a dice result falls.

Unless specifically prohibited, a character that does not possess a given skill *may* attempt a task or other use of the skill. However, the base chance of success is *not* increased by a Characteristic Rating or any other attribute of the character, nor will equipment increase his Skill Level. **Exception:** Treatment, 12.03

A character that fails at a task in a given situation may *not* attempt that specific task again. Another character *may* attempt the task. However, his chance of success is *reduced by 1%* for each percentage point by which the previous attempt failed (for example, if a character had a **60%** chance of success at a task and failed by rolling an **80**, the next character to attempt the task has his chances reduced by **20**). This reduction is cumulative; if a third character attempted the task, his chance would be reduced for both the first and second characters' failures. The GM should not allow an additional task attempt until all the time required for the previous attempt has passed.

[8.0] Acquiring and Improving Skills

Once generated, a character possesses a variety of skills at Level 1 or higher. During play, he will be able to improve these skills and acquire others by collecting *Experience Points* (EP's). As a character conducts actions related to a skill, he slowly amasses EP's in that skill; when he has collected enough EP's, he expends them to increase his Skill Level. When a Skill Level is increased, further improvement becomes more difficult as the number of EP's required to advance to the next level increases with each advance.

A character that has no Skill Level in a given skill is *unskilled* in that area. He is also unskilled if he has an **X** in the skill space on the Character Record, but he is somewhat familiar with the skill and may learn it more easily than a character with nothing marked in that skill space. The fact that a character is unskilled does not prevent him from conducting actions related to that skill or gaining EP's for the skill. **Exceptions:** An unskilled character may not undertake a task from a *Psionic* skill at all (see 10.0). An unskilled character may not undertake a task from a *scientific* skill unless he is familiar with the skill (has an **X** in the skill space; see 12.0).

Each character keeps track of all his current Skill Levels and the number of EP's he has for each skill on his Character Record. Pencil should be used, since Skill Levels change and EP's are collected and expended.

[8.1] Each time a character uses a skill, he has a chance of receiving an Experience Point.

Certain die results obtained by a character when using a skill reward him with one Experience Point. Each skill description or section lists the die result needed and the type of rolls that are eligible to provide the character with an EP in that skill.

Example: As explained in 12.2, a character that is attempting a *treatment* task receives an EP if either die of his percentile dice result shows a **0**, **1**, or **2**. Thus, he would receive one EP if the dice result were **01** through **32** or any higher result ending in **0**, **1**, or **2**.

When a character receives an EP, he immediately notes it in the EP space for the skill just used on the Character Record.

No more than one EP may be gained from a single die or dice roll, even if the appropriate number appears on both dice of a percentile dice roll. An EP may be gained by a character whether or not the skill was used successfully, as long as the appropriate number is rolled. (**Exception:** An *unskilled* character who is attempting a *scientific* task receives an EP only if he *succeeds* at the task *and* rolls the appropriate number.) Certain skill descriptions contain additional methods by which Experience Points may be gained.

[8.2] A character may increase a given Skill Level by amassing a number of EP's equal to the next level in that skill.

Each character keeps track of the EP's he has gained in each skill on his Character Record. When he has collected a number of EP's for one skill *equal to the next level* in that skill, he erases all those EP's and increases the Skill Level by **1**. Thus, a character must acquire **2** EP's to increase a Skill Level from **1** to **2**, **3** more EP's to go from level **2** to **3**, **4** more EP's to go from level **3** to **4**, and so on. Skill Level increase may not take place during an *Action Round* or procedure; the character should wait until a pause in the action to implement an increase.

Exceptions: A character that does *not* possess a skill, but has an **X** in the skill's space on his Character Record (noted during character generation, see 7.6) must collect **3** EP's to attain Level **1** in that skill. A character that does *not* possess a skill, and does *not* have an **X** in the skill's space, must collect **8** EP's to attain Level **1** in the skill. If a character reaches Level **1** in a skill by either of these methods, subsequent Skill Level increases occur normally.

When an EP is gained for using a skill, it may only be assigned to that skill. Note that the four *vehicle* skills are divided into *sub-skills* (see 11.11). An EP gained for a vehicle skill is assigned to the skill, not to a specific sub-skill.

When a skill reaches the maximum level that a character may attain, he may no longer earn any EP's for that skill. Skill Levels may never be permanently reduced, even if the characteristic limit for the skill drops below the current Skill Level attained by the character. This could happen if a Characteristic Rating is permanently reduced by injury (see 12.3). Temporary reduction of a characteristic has no effect on Skill Level increase; characteristic limits for Skill Levels are based on the Characteristic Ratings of a character at his best health.

Experience Points should not be confused with *Skill Points* and *Initial Skill Points*, both of which are used during character generation only.

PERCEPTION**9 Levels/Limit: None**

Perception is a measure of the character's intuition developed as a result of his adventuring experience. It is used to determine if a character notices a detail about a situation, sees something in the distance, hears a footfall, etc.

Every character automatically possesses the Perception Skill when generated. All human characters initially possess this Skill at level **2**. No initial Skill Points or Professional Skill Points need be spent to acquire the skill, nor may the skill be improved by expenditure of such points. Perception may be improved during play by amassing Perception Experience Points. Perception is used in play in either of two ways:

- 1.** If the GM wishes to allow the chance to notice something not readily apparent that is related purely to the senses (sight, smell, hearing, etc.), he instructs the character to conduct a *Perception Check* by rolling one die. If the die result is equal to or less than the character's Perception level, the GM informs him of the occurrence or item. If the die result is greater than the character's Perception level, the GM does not provide any information.
- 2.** If the GM wishes to allow a character a chance to notice something related to a particular area of expertise, he instructs the character to conduct a Perception Check by rolling *percentile dice*. The chance of success equals 10% plus the character's Perception level plus the level he has with the skill associated with the item or event. The *higher* of these two levels is *squared before adding*.

Example: A skimmer is flying by the character at the edge of view. He has Perception 3 and Air Vehicles 5, so he has a 38% chance ($10 + 5^2 + 3$) of noticing the vehicle and correctly identifying it as a skimmer.

Any one of many different skills may be associated with a Perception Check; the most common would be a scientific, technical, environ, or vehicle skill. However, any skill might apply, depending on the situation. A character who rolls a one on either die when conducting a Perception Check receives one Perception Experience Point. (*Additional: John Butterfield: Ares Magazine*)

[9.0] Military Skills

Military skills include all those used in character combat (fighting NPC's, creatures, or other characters on a planet or in a spaceship), space combat (spaceship vs. spaceship), and other action-related situations. Specific personal weapon skills are explained in 9.1, and space combat skills are explained in 9.2. Explanations of other military skills follow.

AMBUSH

7 Levels/Limit: Agility

The character may move silently and swiftly and may approach and attack a target undetected. The location of a character that conducts ambush successfully will be unknown to those he is hiding from. The character's *Agility Rating*, *Battlefield Skill Level*, *Environ Skill Level*, and the *square* of his *Ambush Skill Level* are added to the base chance of any ambush task. The highest *Environ Skill Level* and the *square* of the highest *Battlefield Skill Level* in the *enemy* force are *subtracted* from the base chance. The GM may secretly apply other modifiers as the situation warrants. A character who is performing ambush movement may move as far as normally allowed (see 29.2), but may not fire a weapon while moving. An unskilled character may attempt only the first task listed, and nothing is added to his base chance.

T Move secretly during an Action Round in which the enemy is unaware of the character's current location: (15 x the Terrain Value)%, with addition for darkness, if applicable.

T Move secretly during an Action Round in which the enemy is aware of the character's location: (5x the Terrain Value)%.

T Attack enemy being in close combat without being detected (see 29.9): **30%**. Character must be undetected by all except victim in order to attempt this task.

T If currently undetected, fire at enemy being with a silent ranged weapon (such as a bow or thrown knife) without being detected: 50%.

An ambush task may not be attempted in an area with a Terrain Value of less than 2 (including any modifier for darkness). When a character successfully performs an ambush attack, the GM controls the enemy force as if they had no idea of the character's whereabouts. A dice result for any ambush task that is above the modified chance indicates failure; the character's location is known. A character who rolls a **0** or **1** on either die when attempting an ambush task receives an Experience Point.

ARTILLERY

6 Levels/Limit: Intelligence

The character is familiar with all aspects of mounted gun use. He may spot targets and aim stationary artillery, tank guns, and self-propelled artillery.

The base chance to hit a target with artillery fire is 50%. From this chance, 1 is *subtracted* for every 700 *meters* away the target is located. The character's *Intelligence Rating* and the *square* of his *Skill Level* are added to the base chance. If the percentile dice result is greater than the modified chance for a given artillery fire, the shell strikes 2 *hexes* (ten meters) away from the target for each percentage point over the chance the dice result indicates (GM determines direction).

An unskilled character adds nothing to his base chance when firing artillery and, if he misses is target, the shell strikes 4 *hexes* away from the target for each percentage point over the chance the dice result indicates.

A character who rolls a **0** or **1** on either die when attempting to strike a target with artillery fire receives an Experience Point.

BATTLEFIELD

6 Levels/Limit: Leadership

The character is experienced in ground combat and the execution of successful strategies and tactics. He recognizes the signs of battle and the warning signs of battles to come. Battlefield skill affects various procedures during encounters with NPC's and creatures.

- The highest Battlefield Skill Level among the characters in a party is subtracted from the *awareness chance* during a creature encounter. The *square* of the highest Battlefield Skill Level among the characters in a party is subtracted from the *awareness chance* during an NPC encounter (see 28.2).
- The character chosen as the party's *leader* during an Action Round (see 29.1) adds his Battlefield Skill Level to his *Initiative* die roll. If NPC's are the enemy, *twice* his *Skill Level* is *added*.
- A character may use his Battlefield Skill Level *instead* of his Mental Power Rating when making a *Willpower Check* (see 29.8). The battlefield skill is not used when making a Shock Check.

Battlefield skill also aids a character who is planning strategy for a battle ahead of time. The GM should take the character's Skill Level into account, as well as the quality of his-stated plans, when determining the reaction and performance of the enemy force.

A character who rolls a **0** on the die when making an *Initiative Check* receives one Experience Point for his battlefield skill. The GM may also give a player who successfully plans an attack (as described in the previous paragraph) an Experience Point. No other die or dice rolls concerning a character's battlefield skill may provide him with an Experience Point.

BLADES

7 Levels/Limit: Dexterity

The character is skilled in the use of daggers and swords. When attacking or defending in close combat, a skilled character adds his *Dexterity* or *Agility Rating* (his choice) and the *square* of his *Blade Skill Level* to the Hit Strength of his blade (see 29.9). An unskilled character uses the strength of his blade only. A dagger or a sword may be thrown as a ranged weapon as described on the Weapon Chart and in 9.1. A character that rolls a **0** on the die when attacking with a blade in close combat receives an Experience Point. A character who rolls a **0** on either die when attempting to hit a target with a thrown knife receives an Experience Point.

BODY ARMOR**6 Levels/Limit: Agility**

The character has experience manoeuvring and fighting in body armour and other protective attire. The body armour skill *contains all the attributes of the EVA skill*, plus the following:

The movement rate of a skilled character wearing augmented body armour may be increased if his Skill Level is high enough (see 26.4 and 29.2).

A character with body armour skill may add his *Strength Rating* and the *square of his Skill Level* to the Hit Strength of his body armour or battle sleeve when participating in close combat (see 29.9).

A character who rolls a **0** or **1** on either die when attempting to avoid a body armour accident receives an Experience Point. A character who rolls a **0** on the die when using body armour to attack in close combat receives an Experience Point.

DEMOLITIONS**6 Levels/Limit: Dexterity**

The character is skilled in the use of plastic explosives and dynamite to blow holes through walls and doors or simply destroy a structure. If the character has sufficient demolitions equipment, he may attempt to prepare explosives so that when detonated, they will destroy all that the character wishes destroyed while leaving surrounding structures unharmed. When setting explosives, he should declare whether detonation will be triggered by radio, wire, or timer.

The base chance to destroy a declared structure and nothing but that structure is **45%**. The GM may reduce this chance if the structure to be destroyed is smaller than a trap door. The character's *Dexterity Rating* and the *square of his Skill Level* are added to the base chance. A percentile dice result that is greater than the modified chance by **30** or less indicates that the explosion occurs when planned but is too powerful (if an even dice result) or too weak (if an odd dice result). The effect of such a result is left up to the GM. A percentile dice result that is greater than the modified chance by more than **30** indicates that the explosives failed to detonate and are now defective (if an even dice result) or that the explosives went off while being set, thus injuring the character (if an odd dice result). The nature of such an injury is left up to the GM.

An unskilled character adds nothing to his base chance when setting explosives and, if his dice result is greater than the base chance at all, the explosives go off while being set (whether the result is even or odd).

A character who rolls a **0**, **1** or **2** on either die when attempting to set explosives receives an Experience Point.

EVA (Extra Vehicular Activity)**6 Levels/Limit: Agility**

The character (or Robot) is able to operate and manoeuvre in an expedition suit on the surface of a planet and in a Zero-G environment.

When a character is wearing body armour or an expedition suit with an Encumbrance Rating (see the Protective Attire Chart, 20.0), his EVA Skill Level is *subtracted* from the Rating to determine the Movement Rate (see 26.4 and 29.2). A character wearing augmented body armour may not use his EVA skill to increase his movement (the body armour skill is used for augmentation). A character without EVA skill suffers the full effects of an Encumbrance Rating.

A skilled character's *Agility Rating* and the *square of his Skill Level* are added to his base chance to avoid a suit/armour accident (see 27.8). The base chance to avoid an accident and the procedure undertaken are similar to that of a vehicle accident (see 11.2). An unskilled character has nothing added to his base chance of avoiding such an accident.

A character who rolls a **0** or **1** on either die when attempting to avoid an accident in an expedition suit or respirator helmet receives an Experience Point.

JET PACK**6 Levels/Limit: Agility**

The character is able to operate a jetpack, a device strapped to the back that allows flight. A character's Jet Pack Skill Level affects the speed and manoeuvrability he may attain with the pack (see 29.3). A skilled character's *Agility Rating* and the *square of his Skill Level* are added to his base chance to avoid a jet pack accident (see 27.8). An unskilled character has nothing added to his base chance of avoiding such an accident. A character who rolls a **0** or **1** on either die when attempting to avoid a jetpack accident receives an Experience Point.

MELEE WEAPON**7 Levels/Limit: Dexterity**

The character is skilled in the use of Melee weapons in close combat, including the use weapons or opportunity like bottles, wrenches, firearms used as clubs or as spears when bayonets are fixed. When attacking or defending in close combat, a skilled character adds his *Dexterity* or *Agility Rating* (his choice) and the *square of his Melee Weapon Skill Level* to the Hit Strength of the weapon (see 29.9). An unskilled character uses the strength of Melee Weapon only. A Melee Weapon may be thrown as a ranged weapon as described on the Weapon Chart and in 9.1. A character that rolls a **0** on the die when attacking with a Melee Weapon in close combat receives an Experience Point. A character who rolls a **0** on either die when attempting to hit a target with a thrown weapon receives an Experience Point.

UNARMED COMBAT**8 Levels/Limit: Agility**

The character is skilled in fighting with his hands and body. When attacking or defending in close combat, a skilled character uses his *Dexterity, Strength, or Agility Rating* (his choice) plus the *square of his Unarmed Combat Skill Level* (see 29.9). An unskilled character uses one half (round up) of his Strength, Dexterity, or Agility Rating only.

A character in close combat with a creature has his Unarmed Combat Skill Level reduced by **1** (to a minimum of **1**).

A character that rolls a **9** or **0** on either die when attacking unarmed in close combat receives an Experience Point.

[9.1] Weapon skills allow a character to use a weapon effectively during combat.

All weapon fire is conducted in accordance with 29.5 and the Weapon Chart (19.0). The chance to hit a target with a weapon is equal to the *base chance* listed for the weapon on the Fire Chart plus the character's *Dexterity Rating* plus the *square of his Skill Rating* with the weapon. A character that is skilled with a weapon may often fire it more than once in a single Action Round (depending on the weapon).

A character that is *not* skilled with a weapon may use the weapon with the following restrictions:

- His chance to hit is equal to the base chance listed on the Weapon Chart *only*; nothing is added for his Characteristic Ratings.
- He may fire the weapon only *once* per Action Round.
- He may *not* fire while moving or controlling a vehicle (he may fire while riding in a vehicle, see 29.6).

The following skill descriptions list the specific types of weapons that each skill allows the character to use (if more than one).

ARC GUN**8 Levels/Limit: Dexterity**

The character may fire an arc gun.

BOWS**7 Levels/Limit: Dexterity**

The character may shoot a short bow, long bow, or crossbow. When shooting a long distance with a short bow or long bow, the character's Strength Rating (as well as his Dexterity Rating) is added to his hit chance (see Weapon Chart).

HANDGUNS**5 Levels/Limit: Dexterity**

The character may fire a pistol, needle pistol, laser pistol, or stun pistol. Note that the latter two weapons are also included in the laser/stun pistol skill listing. A character may use either Skill Level when firing a stun or laser pistol; however, any Experience Points gained when doing so may only be applied to the laser/stun pistol skill.

GRENADES**8 Levels/Limit: Dexterity**

The character may throw fragmentation, smoke, illumination, and gas grenades. When throwing a grenade a long distance, the character's Strength Rating (as well as his Dexterity Rating) is added to his hit chance (see Weapon Chart).

LASER/STUN PISTOL**5 Levels/Limit: Dexterity**

The character may fire a laser or stun pistol.

LONGARMS**6 Levels/Limit: Dexterity**

The character may fire a musket, rifle, carbine, or needle rifle.

MACHINE GUNS**5 Levels/Limit: Dexterity**

The character may fire a sub-machine gun or an emplaced machine gun (see 29.3).

PAINT GUN**7 Levels/Limit: Dexterity**

The character may fire a paint gun.

A character rolling a **0** on either die when attempting to hit a target with a ranged weapon receives an Experience Point. A character may not receive an Experience Point when using the Hit Table or rolling dice for any purpose other than actually attempting to make his hit chance. A character conducting more than one fire in a single Action Round considers only his first hit chance dice roll of the Round for possible Experience Point gain. If a character is firing in a non-combat, non-pressure situation (such as putting holes in an immobile, helpless target), the GM should invalidate any dice rolls he conducts for EP purposes.

[9.2] The following four skills are used aboard a spaceship or Battlecraft during space combat.

These skills modify the procedures outlined in the *Delta Vee* rules and 34.0. Any character aboard a spaceship or Battlecraft that is participating in combat may be assigned to the functions that any of these skills entail. However, if the character is not skilled at his function, his performance will threaten the spaceship's chances of survival.

A character may use two space combat skills at the same time, if he is skilled at both, in the following instances:

- *Pilot* and *gunnery* when in a Battlecraft.
- *Pilot* and *space tactics* when in a spaceship's bridge.
- *Missile guidance* and *space tactics* when in a weapon or arsenal pod.
- *Gunnery* and *space tactics* when in a spaceship's bridge, weapon, or arsenal pod.

When a character is using two skills at once, the level of each is *reduced by 2* (to a minimum of **1**).

GUNNERY**9 Levels/Limit: Dexterity**

The character may effectively use shipboard laser and particle weapons against enemy craft. A character may be assigned to any single weapon aboard the spaceship (for instance, to the ship's burster, or to one of its pods that contains laser and particle weapons or to a Battlecraft's burster). The character's Skill Level modifies any fire conducted from his assigned location as follows:

Unskilled: The Target Value is increased by **4**. No Target Program modifier is applied.

Level 1: No Target Program modifier is applied.

Level 2: One half the normal Target Program modifier is applied.

Level 3, 4: Fire conducted normally.

Level 5: A **-4** modifier or the Target Program modifier (whichever is greater) is applied.

Level 6: A **-6** modifier is applied (instead of the TP modifier).

Level 7: A **-6** modifier is applied (instead of the TP modifier) and may be used to reduce the range (exception to DV 8.5).

Level 8: A **-8** modifier is applied (instead of the TP modifier) and may be used to reduce the range.

Level 9: As in Level 8. In addition, every hit achieved by the gunner is considered a critical hit.

A gunner assigned to an arsenal pod may conduct two fires in a single Fire Phase (see DV 8.1). When doing so, his Skill Level is reduced by **1**. A gunner may also conduct two fires in a single Fire Phase if assigned an additional fire from a battle communications pod.

A character receives an Experience Point for gunnery each time he rolls a **1** when using the Fire Results Table (DV 8.6). He may not receive an Experience Point when using the Hit Table.

MISSILE GUIDANCE**9 Levels/Limit: Intelligence**

The character may effectively launch missiles control their course, and spot their targets. Any character may be assigned to oversee missile fire in a hunter, weapon, or arsenal pod of a spaceship. The character's Skill Level affects the launch and performance of missiles from that pod.

Unskilled: MIMS and Intelligent Missiles may not be launched at all. A guided missile may not receive Manoeuvre Commands once launched. **2** is subtracted from every missile interception chance.

Level 1: MIMS may not be launched at all. A guided missile may receive only one Manoeuvre Command for each control Guided Missile Command issued to its spaceship. **1** is subtracted from every missile interception chance.

Level 2: MIMS may not be launched at all. **1** is subtracted from every missile interception chance.

Level 3: **1** is subtracted from every missile interception chance.

Levels 4,5: No modifications.

Level 6: Prepare Missile Command not required to launch unguided or guided missile.

Level 7: As in Level 6 and **1** is added to every missile interception chance.

Level 8: Prepare Missile Command not required to launch unguided, guided, or intelligent missile. Each missile possesses **1** extra Energy Unit. **1** is added to every missile interception chance.

Level 9: Prepare Missile Command not required to launch any type of missile. Each missile possesses **2** extra Energy Units. **1** is added to every missile interception chance.

A character receives an Experience Point for missile guidance each time a missile he launched successfully intercepts a target (even if the target has an active force field). In addition, at the end of a space combat, the character rolls percentile dice. If the result is equal to or less than the total number of missiles launched by the character (counting a MIMS as on missile), he receives an Experience Point.

PILOT**9 Levels/Limit: Intelligence**

The character may effectively manoeuvre a spaceship or Battlecraft. Any one character may be assigned to pilot a spaceship or Battlecraft, and when doing so is considered to be in the bridge. The character's Skill Level modifies the number of Manoeuvre Commands he may issue to the ship each Command Phase and affects the performance limits of the craft.

Unskilled: No more than one Manoeuvre Command may be issued in a single Command Phase; no Weave Commands may be issued. The spaceship is destroyed upon entering a planet hex and automatically collides with an asteroid upon entering an asteroid field (see DV 6.6).

Level 1: No more than two Manoeuvre Commands may be issued in a single Command Phase; no Weave Commands may be issued. The spaceship may not receive "free" Manoeuvre Commands upon entering a planet hex (see DV 6.5).

Level 2: No more than three Manoeuvre Commands may be issued in a single Command Phase; no Weave Commands may be issued.

Level 3: No Weave Commands may be issued.

Level 4, 5: No modifications.

Level 6: Ship's Manoeuvre Rating increased by **1**.

Level 7: Ship's Manoeuvre and Velocity Rating increased by **1** each.

Level 8: As in level 7, and the chances of missile interception and asteroid collision are reduced by **1** each.

Level 9: As in level 7, and the chances of missile interception and asteroid collision are reduced by **3** each.

Pilot skills may also be used when controlling a shuttle or any craft in low planet orbit, as described in 11.0

A character receives an Experience Point for pilot skill at the conclusion of any space battle in which he piloted a craft that was fired upon. He may also receive an Experience Point when attempting to avoid an accident while controlling a craft in low planet orbit, as explained in 11.3

SPACE TACTICS**9 Levels/Limit: Leadership**

The character may effectively direct battle strategies undertaken by a spaceship he is commanding during space combat. Space tactics may not be used aboard a Battlecraft. Any one character may be assigned to space tactics, and a character so assigned must occupy the ship's battle communications pod, if the ship has one. If not, he must be in the bridge, a weapon pod or an arsenal pod. The character's Skill Level affects the number of Battle Commands that may be issued to the ship and the number of fires that may be conducted from the ship.

Unskilled: No more than **1** Battle Command may be issued to the spaceship in a single Command Phase and no more than **1** fire may be conducted from the spaceship in a single Fire Phase. Active Search, Rendezvous and Tractor Beam Commands may not be issued at all.

Level 1: No more than **1** Battle Command may be issued in a single Command Phase and no more than **1** fire may be conducted in a single Fire Phase.

Level 2: No more than **2** Battle Commands may be issued and no more than **2** fires may be conducted.

Level 3: No more than **3** Battle Commands may be issued and no more than **3** fires may be conducted.

Level 4, 5: No modifications.

Note: If the number of Commands of fires a ship may normally receive or conduct is less than listed above, the ship's limitations take precedence.

Level 6: **1** additional Battle Command may be issued.

Level 7: **1** additional Battle Command may be issued and **1** additional fire may be conducted.

Level 8: As in level 7, and the Civ Level of the ship is increased by **2** when attempting to activate a force field during missile interception (see DV 9.8).

Level 9: **2** additional Battle Commands may be issued, and **2** additional fires may be conducted, and the ship's Civ Level is increased as in Level 8.

A character receives one Experience Point for space tactics at the conclusion of any space battle in which he commanded a spaceship that was fired upon.

[10.0] Psionic Skills

Psionic skills allow a character to use the powers of his mind in tangible ways. These skills are *restricted*; that is, unless a character possesses a psionic skill or is eligible to possess the skill (has an **X** in its space), he may *not* attempt the skill *at all*. Furthermore, a character with a Mental Power Rating of *less than 4* may never receive Experience Points for any psionic skill he uses. With the exception of navigation, none of the psionic skills require any special equipment. However, a *Psionic Rig* may enhance a character's use of certain psionic skills.

Using certain psionic skills puts a terrific strain on the character's mind. If the skill is used poorly, the character may *suffer psionic backlash*, the effects of which range from a temporary blackout to insanity or death.

LIFE SENSE

8 Levels/Limit: Intelligence

The character is sensitive to the living energy emanations of all living beings.

During the Encounter Procedure, the *square of the single highest Life Skill Sense Level* among the characters in the party is automatically subtracted from a creature's or NPC's *Surprise Ambush Chance* (see 00.00). If the GM rolls a 9 on either die when checking for surprise/ambush, he should inform the character that contributed his life sense (if any) that he has gained an Experience Point.

T When perception of a creature is possible (see 28.1), a character with life sense may attempt to perceive if the creature is intelligent: **20%**.

The creature's *Intelligence Rating* (if any), the character's *Mental Power Rating*, and the *square of his Skill Level* are added to the base chance. If the attempt is successful, the GM immediately reveals the creature's Intelligence Rating (or lack thereof) to the character. A dice result that is greater than the modified chance indicates failure; the character cannot perceive the creature's mind and may not try again. A character who rolls a **0** on either die when attempting to perceive creature intelligence receives an Experience Point.

MIND CONTROL

9 Levels/Limit: Intelligence

The character may attempt to interfere with or actually take control of another individual's mind. During an Action Round, a skilled character, NPC, or creature (however, see 10.2) that is within his natural sight. A character wearing a Psionic Rig may attempt to control an individual within **100km** whose exact location is known to him. A character attempting mind control may not move, fire, or attack during the Action Round.

The base chance of successful mind control is 10%. To this is added the character's *Mental Power Rating* and the *square of his Mind Control Skill Level*. The *square of his target's Mental Power Rating* is subtracted from the chance. The attempting character rolls percentile dice. If the dice result is greater than the modified chance, the attempt fails; *check for psionic backlash*. If the dice result is equal to or less than the modified chance, 1 is *temporarily subtracted* from the target's Mental Power Rating for every **10** (or fraction thereof) below the chance the dice result indicates. One of the following two procedures is then carried out:

If the target's modified MP Rating is now 1 or higher, the target must immediately check for shock (see 30.3), using the modified Rating. If shocked, the target does *not* collapse; he remains motionless in place for one Action Round.

If the target's modified MP Rating is now 0 or less, the target is controlled by the attempting character. A controlled individual may be moved or commanded to perform any other actions possible in an Action Round (see 29.3) in any way the controller wishes. A controlled individual may not be directed to do anything suicidal (such as walking off a cliff or firing a weapon at himself). He may be directed to do such things as attack his allies, toss aside his weapons, or run wildly away. An individual remains controlled for one Action Round only.

A character who rolls a **0** or **1** on either die when attempting mind control receives an Experience Point.

PSI NAVIGATION

9 Levels/Limit: Intelligence

The character has learned the secrets of hyperdrive thought. He is familiar with the concepts, design and use of spaceship hyperdrives. If aboard a spaceship that has an explorer, hunter, jump, or augmented jump pod — and the spaceship is at a valid *jump point* — the character may attempt a hyperjump, within the limitations of 32.0. The character declares his destination star system (and planet within the system, if known) and calculates his chance of success as follows:

The *square of his Navigational Skill Level* (a jump or augmented pod jump increases the Skill Level), *plus the square of his Mental Power Rating*, *plus 10 x the highest Starport Class* in the destination system (if the character has been to the star system before, increase the Starport Class by **1**; if the character frequents the star system, increase the Starport Class by **2**; both of these increases may be applied to a **0** Class Starport, but may, not increase the Class of any Starport above **4**), *minus the distance between the spaceship's current position and the destination star system* (in light years).

The character rolls percentile dice, and the GM refers to the Hyperjump Table (see 32.3), using the difference between the dice result and the calculated chance to locate the outcome of the hyperjump. If the outcome includes Psionic Backlash Modifier, the GM rolls percentile dice again, adds the modifier to the dice result, and locates the result on the Psionic Backlash Table (10.4).

A character who rolls **0**, **1**, **2** or **3** on either die when attempting a hyperjump receives an Experience Point. An EP may not be gained from a dice roll for the Psionic Backlash Table.

PSIONIC BOOST**8 Levels/Limit: Intelligence**

The character may attempt to call upon the powers of his subconscious to improve his performance in a stress situation. In any situation where the character is called upon to use a military skill or a vehicle skill, he may declare that he is attempting to temporarily improve that skill with a psionic boost. Only those skills in 9.0 and 11.0 that the character possesses at Level 1 or higher are eligible for psionic boost.

The base chance of successful psionic boost is **25%**. To this is added the character's *Mental Power Rating* and the *square* of his *Psionic Boost Skill Level* (may be increased if wearing a Psionic Rig). The character rolls percentile dice. For every **18** points (or fraction thereof) *below* the modified chance the dice result indicates, the declared Skill Level is *increased* by one. Thus a character with a **50%** chance of psionic boost who rolled a **36** would increase the declared skill by **2** levels. For every **10** points (or fraction thereof) *above* the modified chance the dice result indicates the declared Skill Level is *decreased* by one. If an unsuccessful boost attempt reduces the declared Skill Level below **1**, the character is considered unskilled at the task. The effects of psionic boost (successful or unsuccessful) last for one use (one die roll) of the declared skill only.

A character who rolls a **8** on either die when attempting psionic boost receives an Experience Point. A character may not receive an EP for a skill if he attempted to improve its current use with psionic boost.

PSIONIC COMMUNICATION**8 Levels/Limit: Intelligence**

The character can send and receive thoughts with other individuals. At any point during play, the character may declare that he is attempting to send a psionic (unspoken) message to another character, NPC, or creature (however, see 10.2) within his sight. A character wearing a Psionic Rig may attempt to send a psionic message to an individual anywhere on the same world or within **200,000km**. The character declares the intended receiver and the GM calculates the chance of success as follows: To the base chance of **10%** is added the character's *Mental Power Rating*, plus the *square* of his *Psionic Communication Skill Level*, plus the *receiver's MP Rating*, plus the *square* of the *receiver's Psionic Communication Skill Level*.

The GM rolls percentile dice. The GM subtracts the modified chance from the dice result and locates the difference in one of the following outcomes:

-20 or less: Successful communication has been established. The two individuals converse silently for the equivalent of one minute (adjudicated by GM).

-19 to 0: The character may send one message to the receiver. The receiver may not return a message except to acknowledge receipt.

+1 to +10: The receiver is aware that the character is attempting to contact him, but cannot receive a message.

+11 to +20: The receiver is aware that someone somewhere is attempting to contact him. The sender is not aware of this fact.

+ 21 or more: No contact is achieved at all.

A character may not attempt psionic communication with a specific individual more than once per day.

A character that rolls a **0** on either die when attempting psionic communication receives an Experience Point. If successful psionic communication is established and the *receiver* has (or is eligible to acquire) the psionic communication skill, he also receives an Experience Point on a roll of **0**. The GM should not allow EP gain for psionic communication if the skill is being used when normal or radio conversation could be safely used.

PSYCHOKINESIS**9 Levels/Limit: Intelligence**

The character is able to move and manipulate objects with the power of his mind. The character may declare that he is attempting to lift and/or move any unattached object within his sight. A character attempting psychokinesis during an Action Round may not move or fire.

The base chance of successful psychokinesis is **10%** minus the size (**0-9**) of the world the character is on (considered **0** if in a zero-G environment). The character's *Mental Power Rating* and the *square* of his *Skill Level* are added to the chance. The character rolls percentile dice. If the dice result is *less* than the modified chance by *at least* a number of percentage points equal to the *kilogram weight* of the object (rounded up) to be moved, it is successfully lifted. Any *additional* amount that the dice result falls below the chance may be converted to movement of the object: Divide the difference by the whole kg weight of the object (rounding the quotient to the nearest whole number) to determine the number of hexes (five-meter increments) the object may be moved in one Action Round (ten seconds). **Example:** A character with a **45%** chance of lifting a three kg object rolls a **25**. He may lift the object and has **17** percentage points with which to move it. Dividing **17** by **3** provides the character with the ability to move the object **6** hexes in an Action Round. If the object had weighed between **14** and **20kg**, he would be able to lift it a short distance but would not be able to move it.

A character that is able to move an object with psychokinesis may hurl the object at a target. The Hit Strength of a hurled object is calculated as follows: (**10** + the *Agility Rating of the target*) is subtracted from the *speed* of the hurled object (the number of hexes it moves in an Action Round). If this number is **0** or less, the object may not harm the target. If the number is **1** or greater, multiply it by the whole kg weight of the object and then divide this product by **20**. If this quotient is **1** or greater (after rounding fractions down) it is used as the Hit Strength on the Hit Table or the Equipment Damage Table (depending on the type of target); see 30.0. If this quotient is **less than 1**, the target is not harmed. In summary:

$$\text{Weight} \times [\text{Speed} - (10 + \text{Target Agility})]$$

20

A dice result for a psychokinesis attempt that is above the modified chance at all indicates failure; check for psionic backlash.

If a character is wearing a Psionic Rig while attempting psychokinesis rolls less than his modified chance, the number of percentage points below the chance the die result indicates is *multiplied by 10*. Thus, if the character in the preceding example were wearing a Psionic Rig, his dice result would be considered **200 percentage points** below his chance. He could then move the three kg object **66 hexes** in one Action Round and strike an NPC (Agility Rating of **6**) with a Hit Strength of **7**. A Psionic Rig does not increase the actual psychokinesis chance.

A successful psychokinesis attempt lasts one Action Round *only*. If a character wishes to continue controlling an object, he must conduct another attempt.

A character who rolls a **0** on either die when attempting psychokinesis receives one Experience Point. However, a character may receive no more than one EP when controlling an object through more than one Action Round.

[10.1] A character may enhance certain of his psionic skills by wearing a Psionic Rig.

If wearing a Psionic Rig while attempting *psionic boost*, a character's skill level is *increased by 2*. A Psionic Rig greatly increases the range (to **100km**) over which a character may attempt *mind control* and greatly increases the range (anywhere on the world) over which the character may attempt *psionic communication*. A Psionic Rig increases the effect of successful *psychokinesis* by a factor of **10**. These effects are detailed in the specific skill descriptions. A Psionic Rig does not aid PSI Navigation, Psion tech, or Life Sense. If a Psionic Rig is being worn by a character that must use the Psionic Backlash Table, **10** is *subtracted* from the result on the table.

A Psionic Rig may be purchased in a psionic institute at a cost of **25Trans**.

[10.2] If a character is aware that a creature has an Intelligence Rating, he may attempt mind control or psionic communication with the creature.

Such a creature is considered to possess a Mental Power Rating of **1** unless otherwise specified. A character's Mind Control and Psionic Communication Skill Levels are reduced by **2** when dealing with a creature. If a creature has no Intelligence Rating or the characters are not aware that it has an Intelligence Rating, mind control and psionic communication cannot be attempted with it.

[10.3] A character must sometimes check for psionic backlash after attempting navigation, mind control, or psychokinesis.

If a dice result for mind control or psychokinesis is above the modified chance, the difference is located on the Psionic Backlash Table and the listed effect is applied to the character (no additional dice roll is made). If the outcome of a hyperjump includes a psionic backlash modifier, the character must roll percentile dice again, apply the modifier to a roll, and locate the modified result on the Psionic Backlash Table to determine the effect on the character.

If a character is wearing a Psionic Rig, **10** is subtracted from the result on the Psionic Backlash Table. However, the rig may become damaged, as listed in certain outcomes.

A stun result from the table is carried out in accordance with 30.3. If a stunned character is not in an action situation, it can be assumed that he blacked out for a few moments and then came to with no long term effects.

A character that suffers Mental Power loss as a result of psionic backlash may regain the lost points only if he is healed at a psionic institute (see 10.5). Lost Mental Power Points may be regained at the rate of one per month (once healing has begun). If a character's Mental Power Rating is reduced by **2** or more, he may use none of his skills (psionic or otherwise) until healed; he is temporarily insane. The manifestation of his insanity is determined by the GM.

[10.4] The Psionic Backlash Table is used to determine the effects of psionic backlash.

[10.4] PSIONIC BACKLASH TABLE

PERCENTILE DICE RESULT MINUS CHANCE*

+10 or less

+11 to +20

+21 to +30

+31 to +40

+41 to +55

+56 to +70

+71 to +85

+86 to +100

+101 or more

EFFECT ON PSIONIC CHARACTER

No effect.

Shock check (See 30.3).

Character is automatically shocked.

Character is shocked; loses one die roll of points from his Endurance Rating.

Character passes out; Endurance Rating reduced to **0**. Psionic Rig suffers superficial damage.

Character passes out; Endurance Rating reduced to **0**. Mental Power reduced by **1** (See 10.3). Psionic Rig suffers Heavy damage.

Character passes out; Endurance Rating reduced to **0**. Mental Power reduced by **2** (See 10.3). Psionic Rig suffers Heavy damage.

Character passes out; Endurance Rating reduced to **0**. Mental Power reduced to **1** (See 10.3). The character may use no Psionic skills until cured (See 10.5). Psionic Rig is Partially Destroyed.

Character is dead. Psionic Rig destroyed.

* When checking for Psionic Backlash after a hyperjump attempt, roll percentile dice and add the modifier from the Hyperjump Table to the dice result. See 10.3 for detailed explanation of use.

[10.5] A psionic institute is a secluded centre of research and meditation controlled by Psions.

Any world with a class **3** or **4** spaceport has a psionic institute (see 25.5). The location of an institute on a given world is determined by the GM. Any character that is a psionic navigator or a thinker may always enter a Psionic institute. Any character with a Mental Power Rating of **3** or greater may enter a psionic institute if accompanied by a psionic navigator or thinker. A character in an institute may be healed of any ill effects of psionic backlash and any physical ailments as well. Psionic Rigs may be purchased and repaired at an institute.

[11.0] Vehicle Skills

Vehicle skills allow a character to safely drive or pilot all types of planet-based vehicles on the ground, in the atmosphere, or on or below liquid.

Any character may attempt to operate a vehicle. However, in situations that require skilful manoeuvring or quick decisions, a character with the proper skill will be much more likely to see himself and his passengers through safely.

Vehicle skills are organised in a different way than other skills. There are four vehicle skills: ground vehicles, air vehicles, marine vehicles and military vehicles. Each of these skills is divided into five or six sub-skills, each representing proficiency with a particular type of vehicle in the skill category. As a character increases a vehicle skill, he receives Experience Points to assign to its sub-skills. The following vehicle skills and sub-skills are available to the characters:

AIR VEHICLES

9 Levels/Limit: None

The character is familiar with the theories of atmospheric flight and the operation of all types of air vehicles, broken into the following sub-skills:

Direct Lift. Any jet-powered craft designed for point take-off and landing.

Glider. Any air vehicle powered only by air currents or human strength. Also includes "mechanical birds," such as an Ornithopter.

Helicopter.

Jet Plane.

Propeller Plane.

Shuttle. A rocket-powered vehicle designed to fly from a planet surface to low orbit and back. A character with pilot skill is considered to have this skill at the same level.

GROUND VEHICLES

9 Levels/Limit: None

The character is experienced with all unarmed ground vehicles, broken into the following sub-skills:

All-Terrain Vehicle.

Animal Drawn. Includes all vehicles drawn by horses, oxen, and alien beasts of burden, and the riding of any such animals.

Automobiles.

Sled. Any powered or non-powered vehicle designed for travelling over snow and ice.

If an animal-drawn sled is being used, the driver uses the lowest of his Animal Drawn and Sled Skill Levels.

Tractor.

Truck. Any vehicle, designed for road use, with more than two axles.

MARINE VEHICLES

9 Levels/Limit: None

The character is familiar with all aspects of maritime transport and the operation of a wide range of marine vessels, broken into the following sub-skills:

Motorboat. Any small engine-powered craft.

Oar boat. Any craft powered by human strength.

Sailing ship. A craft of any size powered by wind.

Submarine. Any submersible vessel.

Supervessel. Any large engine-powered ship, such as an Ocean Liner, Supertanker, or aircraft carrier.

MILITARY VEHICLES

9 Levels/Limit: None

The character is familiar with the operation of a wide range of military vehicles, broken into the following sub-skills:

Armed All-Terrain Vehicle. A character with this sub-skill may operate an unarmed ATV at the same skill level. When doing so however, any Experience Points gained must be applied to the Ground Vehicles Skill, not to Military Vehicles.

Armoured Personnel Carrier.

Half Track.

Self-propelled Artillery.

Tank.

[11.1] Each level a character achieves in a vehicle skill allows him to increase his sub-skills by a number of points equal to the new Skill Level.

For example, a character at Skill Level 1 in Ground Vehicles could assign 1 point to the automobile sub-skill. When he achieves Level 2, he could assign 1 point to the truck sub-skill. Upon reaching Level 3, he assigns 3 more points to any of the ground vehicle sub-skills, and so on until he reaches Level 9, when he receives 9 points to assign to any of the sub-skills (he would then have a total of 45 points assigned to all the ground vehicle sub-skills). Points received when reaching a new Skill Level may be assigned to sub-skills in any manner as long as a single sub-skill does not exceed Level 9, and as long as points are assigned only to sub-skills for vehicles that have been used by the character in some capacity since the last Skill Level increase.

Note: When choosing a vehicle skill during character generation, the player receives and assigns points to sub-skills as follows: At Skill Level 1 he receives 1 sub-skill point; at Level 2 he receives a total of 3 points; at Level 3, a total of 6 points; and at Level 4, a total of 10 points.

[11.2] When a potential vehicle accident is imminent, the character driving the vehicle may attempt to overcome the hazard, using his vehicle skill.

The base chance to avoid an accident is **25%, 50%, or 75%** (see 38.0). The Performance Modifier of the vehicle is added to the base chance. The character's *Dexterity Rating* and the *square* of his *Sub-Skill Rating* are added to the base chance. If an unskilled character is driving the vehicle, nothing is added to the base chance.

1. The character driving the vehicle rolls percentile dice. If the dice result is less than or equal to the modified chance, no accident occurs at all, and this procedure is concluded (the GM might wish to describe some sort of "close call" to the players). If the result is greater than the chance, an accident occurs and the following steps are conducted.

2. The GM subtracts the modified chance from the dice result and locates the difference on the Hit Table (30.9) to secretly determine the type of damage incurred by the vehicle. He does not add a die roll to the difference (as is stated on the table). The GM should then describe the nature of the accident to the players in colourful terms.

3. If the vehicle incurs *heavy* damage or worse as a result of the accident, any characters aboard may be hurt. Each character must roll one die, applying the following modifiers: subtract the character's Agility Rating; add **10** if the vehicle is partially destroyed; add **20** if the vehicle is totally destroyed. Locate the modified die result on the Hit Table and apply any hits incurred by the character as explained in 30.2. Characters are not hurt in a vehicle accident resulting in *superficial* or *light* damage.

[11.3] A character who rolls a 0 or 1 on either die when attempting to avoid a vehicle accident receives one Experience Point.

The character may also check for Experience Point gain after every 30 hours (or so) of driving time in which no accident check occurs. The GM and/or the driving character should keep track of "safe" driving time since the last accident check for this purpose. After 30 hours have passed, the player rolls percentile dice and gains an Experience Point if a **0** or **1** appears on either die. The dice roll has no purpose aside from checking for Experience Point gain.

[11.4] The type of vehicle sub-skill used for a specific vehicle is listed on the Vehicle Chart.

Two sub-skills are listed for certain vehicles on the chart. In this case, the driver must use the one sub-skill that applies to the current use of the vehicle. If the GM introduces a vehicle into play that is not covered by the Vehicle Chart (21.1, 21.2, or 21.3), he must assign one (or two) of the applicable sub-skills to it, and announce this to the players.

[12.0] Scientific Skills

Scientific Skills allow a character to attempt a wide variety of analyses, syntheses, studies and treatments that will often be of vital importance to the party.

A character may undertake a scientific task only if he possesses the appropriate skill, or if he is eligible to acquire the skill (that is, if there is an **X** in the Skill Level space on his Character Record, see 7.6). **Exception:** Any character may attempt to *diagnose* an ailing person.

Unless otherwise stated, all scientific tasks require a particular lab, scanner, or other piece of equipment. Some of these devices provide the character with a temporary increase in his Skill Level (as explained on the Personal Equipment Table). This increase is not applied if the character does not possess the skill required for the task. **Exception:** An unskilled character attempting *treatment* may receive an increase when using a Mediscanner (his Skill Level is considered to be **0** for this purpose).

Each task requires a certain amount of time to perform. In most cases the time required is listed with the description of the equipment that must be used. If the task requires no equipment other than for its primary function, the time required is listed in the task description. The time required to perform a task may be reduced or increased, as explained in the chapter introduction.

The GM may have an NPC or service that the party has encountered attempt a task that the party previously failed. The GM should discourage repetitive use of a task (such as scanning for geological resources every 50 meters) by informing a character doing so that he is not eligible to receive Experience Points.

ASTRONOMY

6 Levels/Limit: Intelligence

The character is learned in the study of celestial bodies and the geography of known space. His services are required when attempting to locate an unexplored planet or when attempting to locate one's own position after a Hyperjump error. All spaceships contain equipment necessary to survey the stars. A Civ Level 8 spacecraft or Explorer Pod increases a character's Astronomy Skill Level by **1**. A survey pod increases the Level by **2**.

- T** Locate unexplored planet (when in system space): **90%**.
- T** Locate uncharted planet (when in system space): **70%**.
- T** Locate own position after minor jump error: **60%**.
- T** Locate own position after major jump error: **40%**.
- T** Locate own position after randomised jump: **20%**.

The time required for any of the above tasks is 6 hours. A dice result for any of the above tasks that is no more than **10** above the modified chance indicates success with a **20%** increase in the time required for each extra percentage point. A dice result that is more than **10** above the modified chance indicates failure.

BIOLOGY

9 Levels/ Limit: Intelligence

The character is familiar with the science of living matter in all its forms, and is learned in botany, zoology, biochemistry, and Astrobiology (the study of alien life). By observing a creature, he may discover its unique attributes, the danger it presents (if any), how it eats, and where it fits into its ecological "niche." By examining a creature with a Bioscanner, the character may learn details of its inner structure (it could be edible or of commercial value). A character's biology skill is reduced by **2** (to a minimum of **1**) when dealing with non-carbon creatures (in some cases this fact is known only by the GM).

T During a creature encounter, when a character gets his first sight of the creature, he may attempt to perceive information about it (see 28.1): **10%**. A Bioscanner is not required for perception, nor is time expended. For every **10** percentage points or fraction thereof that a dice result for perception is greater than the modified chance, the information is revealed to the character one Action Round (10 seconds) later. Thus, if the dice result were **22** higher than the chance, the GM would reveal the information three Rounds after perception was attempted, or when the Action Rounds are concluded (whichever comes first).

T Perceive a creature with a Bioscanner: **20%**.

Same as preceding; however, the character must be within five meters of the creature (in the same hex) and must spend one Action Round at the task (this time may not be reduced). This task may be performed after the above task against a given creature, if the information has not yet been revealed.

T Examine creature with a Bioscanner: **30%**. Requires one hour. This task may be performed only if the creature is dead, unconscious, or safely restrained. If examination is successful, the GM reveals the appropriate information about the creature to the character (see 35.0). A dice result for examination that is no more than **10** above the modified chance indicates success with a **20%** increase in the time required for each extra percentage point. A dice result that is more than **10** above the modified chance for examination indicates failure.

Biology skill is also required to diagnose and/or treat ailments suffered by an alien life form (see diagnosis and treatment).

CHEMISTRY**9 Levels/Limit: Intelligence**

The character is knowledgeable in all aspects in the study of chemical substances and elements. If he has a Chemlab, he may analyse atmosphere, soil samples, or liquid samples for all chemical elements and compounds. If the character has a Chemsynthesizer and the proper raw materials, he may attempt to synthesize any chemical compound. A dice result for chemical *analysis* that is no more than **10** above the modified chance indicates successful analysis with a **10%** increase in the time required for each extra percentage point. A dice result that is more than **10** above the modified chance for analysis indicates failure. A dice result for chemical analysis that is above the modified chance at all indicates failure.

- T** Analyse sample to find all abundant chemicals: **70%**.
- T** Analyse sample to find all abundant and trace chemicals and complex compounds: **25%**.
- T** Synthesise simple compound (water, oxygen, explosives, acids): **20%**.
- T** Synthesise complex compounds (such as drugs or edible proteins): **- 5%**.

DIAGNOSIS**9 Levels/Limit: Intelligence**

The character is familiar with the theories of medicine and the nature of all ailments suffered by humans. His services are essential before a patient may be healed. If the character has a first aid kit or a Mediscanner, he may attempt to diagnose injury or disease suffered by another person (not himself) and thus allow and aid the medical treatment of that person.

- T** Diagnose ailing being for treatment: **90%**.

From this chance the GM *subtracts* (3 x the total number of hits received by the patient); **7** hits would be a subtraction of **21**. If the patient is suffering from something other than hits to his physical characteristics (such as poison or disease), the GM secretly determines how much is subtracted from the chance. The modified chance may exceed **100%** after adding to it for the character's skill. No time is required to perform this task. The time listed on the Equipment Chart to use a first aid kit or Mediscanner is for treatment only.

A dice result for diagnosis that is above the modified chance indicates that diagnosis has failed; treatment may *not* be conducted by the characters at all. If the dice result is *less* than the modified chance by *more than 20*, the Skill Level of the character that will treat the patient is *increased by 1* (this may be the diagnosing character or any other with treatment skill). If the dice result is less than the modified chance by *more than 40*, the Treatment Skill Level is *increased by 2*. If the dice result is less than the modified chance by *more than 70*, the Treatment Skill Level is *increased by 3*.

A character without diagnosis skill may attempt to diagnose. When doing so, the **90%** chance (with the subtraction for the ailment) may not be increased at all. Successful diagnosis by an unskilled character may not increase a character's Treatment Skill Level.

When attempting to diagnose an ailing alien life form, a character uses the *lower* of his *Diagnosis* and *Biology Skill Levels*. If he does not possess both of these skills, he is considered unskilled at the task. The GM may also apply this rule when a character is diagnosing a human with an alien disease.

GEOLOGY**7 Levels/Limit: Intelligence**

The character can identify all known types of rocks and minerals and has studied the forces that compose and control planetary crusts and mantles. If he has a Geolab or Geoscanner, he may analyse a sample for mineral and resource content. If he has a Geoscanner, on a planet surface, he may also survey the area for minerals, other resources, fissures, or volcanic activity. A dice result for any geology task that is no more than **10** above the modified chance for the task indicates success with a **10%** increase in the time required for each extra percentage point. A dice result that is more than **10** above the modified chance indicates failure.

- T** Analyse sample to find all abundant minerals and resources: **70%**.
- T** Analyse sample to find all abundant and trace minerals and resources: **30%**.
- T** Scan area to locate three minerals or resources that the Geoscanner is set for: **60%**.
- T** Scan area to locate all tunnels and fissures at least three meters wide: **50%**.
- T** Scan area to locate all tunnels and fissures: **20%**.
- T** Scan area to locate volcanic activity: **60%**.

All resources listed on the World Resource Table (25.8) may be found with geology skill and geological equipment, except for light-fibre plants, wood, arable land, edible plants, and edible game. If a character has declared that he is scanning an area for a resource that is located only at a site, the resource is found only if the dice result is more than **30** less than the modified chance to locate resources.

PHYSICS**6 Levels/Limit: Intelligence**

The character is educated in the study of matter, energy, motion, and force. If he has an energy scanner, he may analyse an object, an area or an occurrence for the type of forces and energy that caused or might affect it. Unlike most other scientific tasks, the time required to conduct a physics task depends on the task itself, not on the attributes of the energy scanner. A dice result for any physics task that is above the modified chance at all indicates failure.

T Determine the type, intensity, and possible danger of energy picked up by the energy scanner in an area: **80%**. Time required: 1 Action Round (no reduction possible).

T Determine the type of energy powering an unknown device or a non-protein based creature: **70%**. Time required: 1 Action Round (no reduction possible).

T Determine, the type of force or energy that caused a phenomenon (such as a blast crater or some other unobserved act of destruction): **50%**. Time required: 1 hour.

T Determine in advance what the application of a given force or energy might do to an object: **40%**. Time required: 1 hour.

T Tap an energy source for use by the party: **20%**. Time required: 2 hours. When attempting this task, a character uses the lower of his Physics and Energy Tech Skill Levels.

If he does not possess both of these skills, he is considered unskilled at the task. The kit that would normally be used to repair the object that the character is attempting to provide power for is also required. The character must identify the energy source (with one of the above tasks) before he may attempt to tap it. Whether or not an energy source may be tapped is left up to the GM. This task is not required in order to use a common energy source, such as an electrical outlet or battery pack. The physics skill is also required in order to attempt repair of a force field (see Energy Tech, 13.0).

PLANETOLOGY**7 Levels/Limit: Intelligence**

The character is well versed in the geography, meteorology, and other general physical features that make up a world. If he is orbiting a world in a spaceship capable of carrying *at least 4 pods*, or that has an *explorer* or *survey* pod, he may analyse the world to gain information about its climate, atmosphere, geographical layout, and natural resource distribution. When the character wishes to analyse a world, he chooses one of the following tasks. That task, and all listed above it (if not already known), may be determined in a single analysis attempt. If the character's analysis dice result is greater than the modified chance listed for the chosen task, analysis is still successful, but the time required is increased by **10%** for each percentage point over the chance the dice result indicates.

T Determine hydrograph percentage and distribution of land and liquid masses on entire world: **86%**

T Determine temperatures of all environs of world: **75%**

T Determine atmosphere of world: **65%**

T Determine general resources of world (all those resources that exist throughout two or more environs, not number of environs per resource or environ location): **50%**

T Determine the contour of all environs individually (peaks, mountains, hills, or flat): **40%**.

T Determine the dominant terrain feature of each environ individually (such as barren, forest, craters, ice,): **20%**.

T Determine the presence of general resources in all environs individually (all resources except those that exist only at a *site* in an environ, see 00.00): **10%**.

T Determine the detailed geography/ geology of all environs individually, including the presence of resources found only at a *site* (the GM may provide the character with a detailed environ map or maps, if available): **-5%**

An **Explorer** or **Survey Pod** is required for any world analysis with less than a **40%** base chance. A survey pod is required for any analysis with less than a **10%** base chance. The GM may wish to reduce some of these percentages if the world has thick cloud cover, or has a side that never receives light from its star. The GM should provide the players with a world log that varies in detail, depending on how much of the world they have analysed. Survey of a world from orbit will not reveal the exact location of any resource, and will not reveal the presence of the following resources at all: spices, light-fibre plants, wood, edible plants, and edible game.

PROGRAMMING**8 Levels/Limit: Intelligence**

The character is familiar with the dynamics and operation of computers and robots. A character with programming skill may always use a computer or robot that he owns to its full potential (no chances are assigned and no dice rolls are made). He may use a robot that he does not own in the same way, as long as he has the robot's *controller* (see 16.2). If the character has access to a computer or robot owned by another person, company, or government agency, he may attempt the following tasks. When dealing with a robot, a character's Programming Skill Level is *reduced by 2* (to a minimum of **1**).

T Gain control of robot not controlled by character (without controller): **30%**. Time required: 1 hour. An Electrokit or robot kit is necessary, although neither provides a Skill Level increase.

T Call up unrestricted information in computer: **90%**.

T Call up restricted information in computer: **30%**.

T Call up top-level secrets in computer: **10%**.

T Alter protected information in computer: **10%**.

A dice result for any of the preceding tasks that is above the modified chance indicates failure. A dice result that is more than ten above the modified chance may cause the computer or robot to alert its owners (openly or secretly) that the character is using the device in a way that may not be to their liking. The repercussions of such an occurrence are left up to the GM. A character must have the *compu/robot tech* skill in order to attempt any task not listed above that involves computer or robot *hardware*, or he must work with a character who has the tech skill (as ruled by the GM).

TREATMENT**9 Levels/Limit: Intelligence**

The character is familiar with all forms of paramedical and surgical procedures. If he has a first aid kit or a Mediscanner, *and successful diagnosis has been performed*, the character may treat an ailing person, thus speeding his recovery Or even saving his life.

T Treat an ailing being: **1%**.

Effects of treatment (whether successful or not) are explained in 12.3. A character's Treatment Skill Level may be increased if diagnosis was successfully performed (in addition to any increase for using a Mediscanner; see diagnosis, above). A character who is eligible to acquire treatment skill but has not *may* attempt to treat a patient. When doing so, his Skill Level (**0**) may be increased by successful diagnosis and use of a Mediscanner (unlike most tasks performed by an unskilled character). However, treatment by an unskilled character is not as effective (see 12.3).

When attempting to treat an alien life form, a character uses the lower of his Treatment and Biology Skill Levels. If he does not possess both of these skills, he is considered unskilled at the task.

[12.1] A character who is skilled in any scientific task he is attempting adds his Intelligence Rating and the square of his Skill Level to the base chance.

An eligible unskilled character who is attempting a scientific task adds nothing (not even his Intelligence Rating) to the base chance.

[12.2] A character receives an Experience Point when attempting a scientific task as follows:

- If he rolls a **0** or **1** on either die for a *chemistry, geology, or biology* task.
- If he rolls a **0**, **1**, or **2** on either die for a *diagnosis, treatment, programming or energy* task.
- If he rolls a **0**, **1**, **2** or **3** on either die for a *planetology or astronomy* task.

Note: A character that is unskilled at a scientific task receives an Experience Point for attempting the task only if it is successful *and* fulfils the preceding requirements.

[12.3] The rate at which a character heals from wounds incurred depends on his Endurance Rating and the quality of treatment he receives.

- A wounded character who receives *no* treatment or who receives *unsuccessful* treatment from an *unskilled* character regains lost Physical Characteristic points at the rates indicated on the **Treatment Results Table** (see below).
- A wounded character who receives *successful treatment* from an *unskilled character* has the time required to regain each characteristic point divided by *one half his full* Endurance Rating (rounded down). Thus, a character with a full Endurance Rating of **6** (regardless of his current rating) who had lost five points from his Strength Rating would regain one point every two days.
- A wounded character who receives *unsuccessful treatment from a skilled character* has the time required to regain each characteristic point divided by his full Endurance Rating.
- A wounded character who receives *successful treatment from a skilled character* has the time required to regain each characteristic point reduced as follows: the number of percentage points below the modified treatment chance the dice result shows is added to the full Endurance Rating of the character. The time required for the character to regain each characteristic point is then divided by this sum. Example: A character with a full Endurance Rating of **6** has lost **5** points from his Strength Rating. A skilled character that is treating him with a **60%** chance of success rolls a **40** (a difference of **20**). The base time required to regain each lost point (**6** days) is divided by **26**, so that one point is regained approximately every **5%** hours.

A character that is regaining points lost from more than one characteristic must regain points for each characteristic as evenly as possible. Thus, a character that has lost points from his Endurance and Agility must regain a point in each before regaining a second point in either (until one or the other has returned to its full rating).

If one or more of a wounded character's Physical Characteristics are at **0**, a check must be made every *game hour* to determine if permanent, untreatable damage occurs. Every hour (beginning one hour after the character incurred the wounds) he rolls percentile dice for each characteristic at **0**. If the dice result is **10** or less, the full rating for the characteristic is *permanently reduced by 1*. If the Endurance Rating is currently at **0**, and the dice result is a **01** or **02**, the character *dies*. These checks are made every hour until all Physical Characteristics are increased above **0** by healing. As long as a character's Endurance Rating remains at **0**, he is considered unconscious (see 30.2).

A character whose healing time is reduced by treatment begins healing at the new rate when the time required for treatment has passed.

[12.3] TREATMENT RESULTS TABLE

TOTAL POINTS LOST	DAYS OF RECUPERATION TO REGAIN ONE CHARACTERISTIC POINT
1, 2	1 Day
3, 4	3 Days
5-7	6 Days
8-10	10 Days
11-14	16 Days
15 or more	24 Days

[13.0] Technical Skills

Technical skills allow a character, to repair weapons, robots, vehicles, and other equipment damaged during play.

When a device is damaged (as a result of weapon fire, other combat actions, or accident) the GM secretly determines the extent of damage (superficial, light, heavy or partially destroyed; see 30.5) and informs the players how the damage appears to them, without actually letting them know the category of damage. Any character may volunteer to repair a damaged device, but unless he has the appropriate Tech Skill, he will rarely be able to repair anything more than superficial damage to small items.

A character with a Tech Skill is familiar with the technology, materials, and operation of all devices related to the area of his skill. Aside from repair work, the GM may allow a character's Tech Skill to come into play in such other situations, as when the party is inspecting unknown equipment or, if the proper materials are available, when the character is attempting to build a device related to his Tech Skill.

A party may attempt to repair an item only if it has the requisite *kit*. A *basic repair kit* usually allows repair of superficial damage to any item smaller than a large ground vehicle, and superficial or light damage to any item that may be held by a character. Certain exceptions to this rule, and the type of kits required for repair of more extensive damage are listed with the appropriate Tech Skill description. Certain kits may increase a character's Tech Skill Level for purposes of a given repair attempt. In such instances, the increase is applied to the Skill Level before any reductions are made for especially difficult repair jobs (as noted in certain Tech Skill descriptions). Detailed explanations of the attributes of all kits can be found in 22.2.

COMPU/ROBOT TECH

9 Levels/Limit: Intelligence

The character may repair all types of computers, portable and installed. He may also repair robots with a reduction of two to his Skill Level (to a minimum of 1). An Electrokit is required for repair of a computer that has incurred more than superficial damage. A robot kit is required for repair of a robot that has incurred more than superficial damage.

CONSTRUCTION

6 Levels/Limit: None

The character is familiar with the construction of houses, shelters and buildings sealed from harsh environments. He may repair any such structure. Building materials (made available at the GM's discretion) are required for repair of any small structure (survival hut, storage shed) that has incurred more than superficial damage, and any large structure (office building, barracks) that has incurred *any* damage. Certain kits may be used in specialised repair of structures (such as an armour kit for a damaged pill box).

ELECTRO TECH

8 Levels/Limit: Dexterity

The character may repair all types of handheld, non-weapon devices, including scanners, portable labs, cameras, Holographers, radios, and all other types of small electronic equipment. The Electro tech skill may not be used to repair interstellar commlinks, psionic equipment, and computer systems. A character's Electro Tech Skill Level is reduced by 2 (to a minimum of 1) when repairing or inspecting any Civ Level 8 device. An Electrokit is required to repair any of these items that has incurred more than light damage. Electro Tech also allows a character to operate a two-way radio skilfully.

ENERGY TECH

6 Levels/Limit: Dexterity

The character is familiar with all types of power systems. He may repair heating and cooling systems, electrical systems, air systems, and all non-combustion drive systems (including spaceship engines). The kit required for repair depends on the type of system undergoing repair. An Electrokit would be used for most portable systems, a vehicle kit for damage to a vehicle climate-control system or engine, and a spaceship kit would be used for a spaceship engine or other spaceship system. A basic repair kit may not be used to repair power systems at all. The character may also attempt to repair a damaged force field. When doing so he uses the lower of the *Energy Tech* and *Physics* Skill Levels. If he does not possess both of these skills, he may not attempt repair. An Electrokit is required to repair a personal force field. A vehicle or spaceship kit (as appropriate) is required to repair a larger force field.

PSION TECH

8 Levels/Limit: Dexterity

The character may repair interstellar commlinks, Psionic Rigs, and other psionic equipment. He may also repair psionic navigation equipment in the jump pod of a spaceship with a reduction of 2 to his Skill Level (to a minimum of 1). An Electrokit is required to repair psionic navigation equipment that has incurred *any* damage. -

SPACESHIP TECH

9 Levels/Limit: Intelligence

The character may repair damage incurred by spaceship hulls and pods (including Battlecraft). Each damaged part of a spaceship must be repaired separately. When repairing damage to spaceship engine or to spaceship armour, the character's Skill Level is reduced by 2 (to a minimum of 1). Psionic equipment may not be repaired with the spaceship tech skill. Repair of superficial damage requires a Civ Level 6 spaceship kit, light damage a Civ Level 7 spaceship kit, and heavy damage a Civ Level 8 spaceship kit. A partially destroyed part of a spaceship may only be repaired at a Class 4 spaceport.

SUIT TECH

8 Levels/Limit: Dexterity

The character may repair all types of expedition suits, respirators, respirator helmets, and body armour. He may also repair armour on small vehicles. However, when repairing armour his Skill Level is reduced by 2 (to a minimum of 1). A character that is repairing body armour may declare that he is repairing punctures only. If he does so, his Skill Level is not reduced, but any reductions to the projectile and beam defence strength of the armour may not be repaired. A suit kit is required to repair an expedition suit or body armour that has incurred more than superficial damage. A suit kit may not be used to repair the projectile and beam defence strength of armour. An armour kit is required to do full repair work on body armour and vehicle armour.

VEHICLE TECH**8 Levels/Limit: Dexterity**

The character may repair all types of vehicles listed in 21.0. When he is repairing a military vehicle, an air vehicle, or armour on any vehicle, his Skill Level is reduced by **2** (to a minimum of **1**). A vehicle kit is required in order to repair a small vehicle that has incurred any damage, or a large vehicle that has incurred any damage.

WEAPON TECH**8 Levels/Limit: Dexterity**

The character is familiar with the workings of projectiles and beam weapons, both handheld and mounted. He may repair any type of weapon listed in 19.0. He may also repair artillery and spaceship missile, laser and particle fire systems with a reduction of **2** to his Skill Level (to a minimum of **1**). A weapon kit is required to repair any hand-held weapon that has incurred more than light damage and any larger weapon that has incurred more than superficial damage. A spaceship kit is required to repair any damage incurred by spaceship weapon systems.

[13.1] One character may attempt to repair an item that is damaged, whether or not he possesses the appropriate Tech Skill.

When a character declares that he wishes to do so, and announces the type of kit he is using, the following steps are undertaken:

1. The GM secretly determines the *base repair chance*, depending on the type of damage incurred by the item, as indicated on the **Damage Repair Table** (see below).
2. The GM secretly determines the *maximum repair time* by multiplying the *Base Repair Time* (listed in the description of the item under repair) by the appropriate *Repair Time Multiplier* listed above.
3. The GM determines the *actual repair chance* using the following formula:

$$\text{Base Repair Chance} + \text{Tech Skill Level}^2 + \text{Intelligence Rating}^2$$

A character's Tech Skill Level may be increased (before squaring) for this purpose if the appropriate kit is being used. The actual repair chance may exceed **100%**.

4. The character attempting repair rolls percentile dice. If the dice result is greater than the actual repair chance, the attempt fails; conduct **A** below. If the dice result is equal to or less than the actual repair chance, the attempt succeeds; conduct **B** below.

A. The GM determines how much time is spent in the futile attempt to repair the item. He divides the maximum repair time (as calculated in Step 2) by the character's Tech Skill Level (plus any increase the kit allows) *squared*, or by his *Intelligence Rating* (not squared), whichever is higher. The amount of time derived from this calculation passes as the party waits for the repairer to realise that he cannot do the job. If this period of time is long, an encounter may even occur.

B. The GM determines how much time is spent successfully repairing the item. The dice result obtained in Step 4 is subtracted from the *actual* repair chance. The difference is applied as a percentage reduction to the maximum repair time to determine the *actual* repair time. **Example:** The actual repair chance to repair an item with a maximum repair time of **24** hours is **70%**. The player rolls a **30**, which is less than the actual repair time by **40** (this can also be expressed as **60%** of the maximum repair time). The actual repair time is then **14** and ½ hours.

If the dice result in a successful repair attempt is less than the actual repair chance by more than **90%**, the maximum repair time is reduced by **90%** only.

A character without the appropriate Tech Skill may only attempt to repair superficial or light damage to an item. When doing so, his actual repair chance is equal to the base repair chance. He receives no adjustments for his Intelligence Rating or the kit he is using.

The GM may implement the passage of time when a character is attempting to repair an item in one of two ways: he may announce the amount of time at the outset and skip directly to the point in time that repair is accomplished or failure is realised; or he may allow time to pass normally and not reveal the result of the repair attempt until the moment of realisation is reached. If he chooses the latter, and repair is successful but lengthy, he should inform the players that the attempt will be successful and how long it will take well before the repair is accomplished. The amount of time that passes before revealing successful repair may be calculated as in Step **A** above, except of course, that the GM announces success instead of failure.

[13.1] DAMAGE REPAIR TABLE

TYPE OF DAMAGE	BASE REPAIR CHANCE	REPAIR TIME MULTIPLIER
Superficial	50%	x1
Light	20%	x2
Heavy	-10%	x4
Partially Destroyed	-40%	x8
Totally Destroyed	Repair Impossible	

[13.2] A character who rolls a 0, 1, or 2 on either die when attempting repair receives an Experience Point.

The GM may also give a character an Experience Point in this manner when the character is rolling percentile dice for some other use of his tech skill.

[13.3] A damaged item that the characters are unable to repair may be taken to a repair service.

A town or suburb area on a planet is considered to have services for repairing any item of a Civ Level equal to or less than that of the planet. An urban area is considered to have services for repairing any item of a Civ Level up to **1** greater than that of the planet.

Exception: Spaceships and spaceship parts may be repaired only at a spaceport. A Class **2** spaceport has facilities for repair of superficial and light damage, a Class **3** spaceport for heavy damage, and a Class **4** spaceport for partially destroyed spaceships. Psionic equipment may be repaired only at a Psionic institute (see 10.5).

An item taken to a repair service is automatically repaired. The repair time is always equal to the *Base Repair Time* multiplied by the *Repair Time Multiplier*. This product, when expressed in hours, also represents the *cost* to repair the item in 100's of Mils. Thus, an item with a Base Repair Time of **6** hours that has suffered heavy damage would take **24** hours of work time to repair and the job would cost **2400Mils (2.4Trans)**. The price of repair service may not be haggled over.

[14.0] Interpersonal Skills

Interpersonal skills are used by the character when dealing directly with society, in business, leisure, legal, and communication matters. More so than with other skills, the GM should consider the *player's* actual interplay with NPC's or authorities when using one of these skills. For example, a character may have a high Diplomacy Skill Level, but if the player blatantly insults the individual that he is conversing with, the skill should not do him much good.

DIPLOMACY

6 Levels/Limit: Empathy

The character is experienced in all manner of official conversation and negotiation, and is generally well-spoken and tactful. He will be most effective when dealing with those from the *local establishment* or a higher social standing (see 5.7).

When a character is acting as party *spokesman*, he may use his streetwise and/or diplomacy skill to aid the establishment of friendly communications with an NPC or group of NPC's (see 28.7). During Step 4 of the NPC Encounter Procedure, the chance of successful communication is calculated by the GM: To the base chance of 40% is added *twice* the spokesman's *Empathy Rating*. The spokesman declares whether he is using his *streetwise* or *diplomacy* skill. If he declares use of the skill that the NPC's *social standing* responds to, the *square* of the Skill Level is added to the chance. If he declares the skill that the NPC's social standing does *not* respond to, the Skill Level (not squared) is added to the chance. If the spokesman is unskilled in both streetwise and diplomacy, his Empathy Rating (not doubled) is added to the base chance *only*. The GM rolls percentile dice and applies the outcome to the NPC Reaction Table (28.8) in terms of *shifts*, as explained in the NPC Encounter Procedure.

In addition to the communications task, the GM should take a character's streetwise and/or diplomacy skill into account when the character is participating in any sort of extended dialogue with NPC's. These skills do not aid a character in financial negotiations (the *trading* skill is used for money matters).

A character who rolls a **0**, **1**, or **2** on either die when using his streetwise or diplomacy skill receives an Experience Point.

DISGUISE

8 Levels/Limit: Dexterity

The character can control his voice, mimic a wide variety of postures, and alter his facial appearance through the use of make-up, latex, skin injections and dyes. It is assumed a character with this skill possesses the requisite materials to alter his appearance; however, accessories such as clothing and insignia must be acquired by the character when necessary. The base time required to prepare a disguise is four hours. The character's *Dexterity Rating* and the *square* of his *Skill Level* are added to the base chance of the following tasks.

T Disguise self to resemble person that has been extensively observed: **50%**.

T Disguise self to resemble person that has been seen briefly or in pictures only: **25%**.

The GM rolls percentile dice secretly and compares the dice result to the modified chance:

Result under chance by more than 20: The disguise fools all except those intimately familiar with the subject. If the character is unskilled, the next outcome is used instead.

- *Result equal to or under chance by 20 or less:* The disguise fools those who do not have everyday contact with the subject.
- *Result over chance by 30 or less:* Anyone who gets a good look at the disguise, or hears the character say more than a few words will not be fooled. If the character is skilled, he is informed of this fact. If he is not skilled, he is told that the disguise looks fine.
- *Result over chance by more than 30:* The character fails his attempt and is told that it will not work.

A character that rolls a **0**, **1**, or **2** on either die when attempting disguise receives an Experience Point.

ECONOMICS

8 Levels/Limit: Intelligence

The character understands the complex economic systems of the future; how the resources, shipping schedules and laws of supply and demand on the worlds of the federation affect the value of any item from place to place. If he has a business computer, the character may attempt to predict the price of any declared item in the future at a declared location. If the location is another star system, he must have access to an interstellar commlink. The base time required for price prediction is **12** hours.

T Determine price of an item at a declared time and location: 35% minus the number of weeks (or fraction thereof) in the future the price is requested for. The character's *Intelligence Rating* and the *square* of his *Skill Level* are added to the base chance.

The GM rolls percentile dice. If the dice result is equal to or less than the modified chance, the attempt succeeds; the GM immediately uses the Actual Price Table (18.0) to determine the price and announces it to the character. A dice result above the modified chance indicates failure (after **12** hours have passed). If a failing dice result is even, the character is told that the prediction is unsuccessful. If a failing dice result is odd, the GM reads the player a random result from the Actual Price Table as if it were a correctly predicted price.

A character who rolls a **0**, **1**, or **2** on either die when attempting to predict a price receives an Experience Point.

FORGERY/COUNTERFEITING**8 Levels/Limit: Dexterity**

The character is experienced in the art of forging documents used for identification, shipping, and other business and government transactions. If he has the requisite materials (as determined by the GM) and a model to work from, the character may attempt to copy a document or piece of currency. The character's *Dexterity Rating* and the *square* of his *Skill Level* are added to the base chance of the following tasks. The time required for each task is determined by the GM, depending on the complexity of the document.

T Forge commercial document: **50%**.

T Forge world or local government document: **30%**.

T Forge federal document: **10%**.

T Counterfeit 100 Mil note: **25%**.

T Counterfeit 1 Tran note: **0%**.

The GM rolls percentile dice secretly and compares the result to the modified chance:

Result under chance by more than 20: The document passes all inspections (visual and electronic). **Exception:** If the character is unskilled and/or the world has a Law Level of **4**, the next outcome is used instead.

Result equal to or under chance by 20 or less: Document passes all visual inspection. **50%** chance that the document will be found false each time it undergoes electronic inspection.

Result over chance by 30 or less: Document found false by any electronic inspection. When undergoing visual inspection, the GM rolls percentile dice; if the result is less than or equal to the inspector's *Intelligence Rating* plus the *square* of his *Forgery/Counterfeit Skill Level*, the document is found false. **Note:** A character with forgery/counterfeit skill may attempt to detect false documents made by others in the same way.

Result over chance by more than 30: Document will not fool anybody. If the forger is skilled, he is told of this fact.

Any repercussions of character's forged documents being found out are left up to the GM.

A character who rolls a **0**, **1**, **2** or **3** on either die when attempting forgery receives an Experience Point.

GAMBLING**6 Levels/Limit: Intelligence**

The character is familiar with all common games of chance. If he is at a casino, some other gaming establishment, a bar or inn with an informal game, or with another character or NPC who wishes to play against him, the character may gamble. He must state his *bet size* (if playing against another character or NPC, both agree on a bet size). The bet size is not the total amount to be risked, but rather an amount that will be continuously risked over the four or five hour period that each gambling attempt represents. The character's *Intelligence Rating* and *Gambling Skill Level* (*not squared*) are added to the base chance.

T Gamble at a casino or established gaming house: **35%**. Minimum bet size: **10 Mils**; Maximum bet size: **1 Tran**.

T Gamble at an informal gathering in public place: **40%**. Minimum bet size: **1 Mil**; Maximum bet size: **100 Mils**.

If the dice result is less than the modified chance, character wins an amount equal to the difference multiplied by the bet size. If the dice result is greater than the modified chance, the character loses the amount.

When gambling against another character or **NPC**, both individuals roll percentile dice separately, adding their *Intelligence Rating* and *Gambling Skill Level* to the dice result. The difference between the dice results is multiplied by the bet size, and the character with the lower dice result must pay the product to the character with the higher result.

A character may declare that he is *cheating* in any gambling attempt. If he does so, his *Skill Level* is *doubled*, 'but if his dice result is *even*, the GM checks for detection by his opponent. He rolls two dice. If the result is *less than* the opponent's *Intelligence Rating* plus his *Skill Level*, minus the cheating character's *Skill Level*, the character's cheating is revealed. A casino is considered to have a combined *Intelligence* and *gambling skill* of **18**, and an informal gathering of **15** for this purpose. The consequences of revealed cheating and/or a character's inability to pay a gambling debt are up to the GM.

A character who rolls a **0** or **1** on either die when gambling receives an Experience Point.

LAW**8 Levels/Limit: Intelligence**

The character is learned in the structure of most federal and local laws and judicial systems. He is a skilful speaker and is eligible to practice law in court. The character may attempt any of the following tasks, adding his *Intelligence Rating* and the *square of his Skill Level* to the base chance. The chances of all these tasks assume that a basically honourable legal system is being dealt with; the GM should apply modifiers if the system is corrupt.

T Bribe authority to ignore trespassing, illegal possessions or other criminal act: **20% plus 1** for every **100 Mils** offered, **minus 10** x the *Law Level* of the world. In addition, the GM should secretly reduce the chance by anywhere from **0** to **50**, based on the loyalty of the individual being bribed toward his employer or government. **Example:** **50** would be subtracted for an elite federal soldier while a local security guard might cause no subtraction at all.

T Convince authority that a criminal act is not illegal or that the party is exempt: **10% minus** the authority's *Intelligence Rating* and **minus 10** x the *Law Level* of the world.

T Successfully defend innocent party in court: **35% plus 10** x the *Law Level* of the world.

T Successfully defend guilty party in a court: **35% minus 10** x the *Law Level* of the world.

Any dice result under the modified chance indicates success. Any dice result over the modified chance indicates failure. If a bribery attempt fails by more than **10** percentage points, the authority will either accept the bribe and report the party anyway, or will report the party's bribe attempt as well as their original transgression, at the discretion of the GM.

A character who rolls a **0**, **1**, or **2** on either die when attempting a law task receives an Experience Point. An unskilled character may not defend a party in court.

LINGUISTICS**8 Levels/Limit: Intelligence**

The character is fluent in other languages other than Universal. He can speak, read, and write in a number of additional languages equal to his Skill Level. A character that receives the linguistics skill during character generation should choose any languages from among those listed in 1.0 and note them on the back of his Character Record. **Exception:** A language written in a non-roman alphabet may not be chosen until Skill Level **3** is reached. All characters are considered fluent in Universal.

When the party must speak with an NPC in an unknown language, a skilled character may attempt to comprehend the NPC and make himself understood. A *translator* (see 23.3) is not required to use the linguistics skill, but the device does increase the user's Skill Level (even if he is *unskilled*). A translator does not increase the number of languages a character may speak. The chance of successful communication equals the sum of the NPC's *Intelligence Rating*, the character's *Intelligence Rating*, (if skilled) and the *square of the character's Skill Level*. The GM secretly rolls percentile dice and compares the result to the chance:

- **Result under chance by more than 20:** All information that the NPC and characters wish to exchange is understood.
- **Result equal to or under chance by 20 or less:** Simple direction, numerical and identification information is exchanged.
- **Result over chance by 20 or less:** Names and small numbers may be exchanged only.
- **Result over chance by more than 20:** Absolutely nothing is understood by either party or, if the GM wishes, one side totally misunderstands the information or intent of the other.

The linguistics skill may also be used to attempt communication with certain creatures, once the desire to communicate has been established. See 28.6, Procedure CC.

A character who rolls a **0** or **1** on either die when attempting to communicate in an unknown language receives an Experience Point. Each time a character attains a new level in linguistics he may choose a new language. The new language should be one he attempted to use since his last Skill Level increase. A character *never* receives an Experience Point for a language he already understands.

RECRUITING**6 Levels/Limit: Empathy**

The character is skilled in the administrative and personnel side of business. When the party seeks NPC's to aid in any venture they are undertaking, the character may attempt to hire individuals with good qualifications. The character declares how many NPC's he wishes to hire and the pay he is offering. Two hours must be spent recruiting for each NPC declared, with a minimum time of 6 hours. The character's Empathy Rating and the square of his Skill Level are added to the base chance.

T Hire NPC's in a Starport or urban area: **50%**

T Hire NPC's in a suburban area or town: **35%**

The GM may modify the base chance, depending on the pay offered, skills requested, the danger and legality of the job, and the means of seeking new employees (working through an employment agency would be helpful). A decent weekly salary for an individual is **100** Mils x the Civ Level of the equipment he will be dealing with. If the job is dangerous, the pay should be increased by **500** Mils to **1** Tran per week. An average individual for hire possesses a Mental Power of **1** and an Aggression of **6**. His other characteristics average **4**. He has a skill level of **3** in his home environ, of **1** in his home gravity, and has eight Skill Points distributed among all other skills by the GM.

If the dice result is equal to or less than the modified chance, the declared number of NPC's are found. The attributes of the NPC's may be improved by the GM as follows: For every percentage point below the modified chance the result indicates, each NPC is improved by one Skill Point of one Characteristic Point. The GM should apply these increases to characteristics and skills that would be helpful in the upcoming job. If the dice result is greater than the modified chance, fewer NPC's than requested are found and/or their attributes are reduced, at the discretion of the GM.

A character who rolls a **0, 1, 2 or 3** on either die when attempting to recruit receives an Experience Point. Only one recruitment attempt is allowed in a single area for a given purpose.

STREETWISE**4 Levels/Limit: Empathy**

The character is up on the slang and friendly expressions used among the common folk throughout the federation. He will be most effective when dealing with those from the skilled tech class or a lower social standing. The streetwise skill is used for the *communications* task (see diplomacy skill description).

TEACHING**6 Levels/Limit: Empathy**

The character has experience teaching and/or tutoring and is able to pass knowledge he has acquired onto others. He may attempt to aid another character (hereafter called the student) increase his expertise in any skill that the teacher possesses at a *higher level* than the student. One week of both characters' time is required to teach a skill. This time may not be reduced but may be increased, as explained below.

When the teacher and student have declared the particular skill they wish to study together, the chance of successful teaching is calculated: To the base chance of **30%** is added the student's *Intelligence Rating*, the teacher's *Empathy Rating* and the *square* of the teacher's *Teaching Skill Level*. The teacher rolls percentile dice. The student receives **1** Experience Point in the studied skill for every **10** percentage points (or fraction thereof) below the modified chance the dice result indicates (for example, if the modified chance were **55%** and the teacher rolled a **31**, the student would immediately gain **3** EP's for the declared skill). However, a student may never increase a *Skill Level* by more than **1** in a single "study session" (any excess EP's are lost). If the dice result is no more than **10** above the modified chance, the student gains **1** EP and the teaching time is increased by **10%** for each percentage point over the chance the result indicates. A result that is more than **10** above the modified chance indicates failure; one week is expended and the student gains no EP's.

No more than one student may be taught at a time, and any equipment necessary to use the skill being taught must be available (such as a weapon, vehicle, or tech kit). A teacher may attempt to teach a specific student a specific skill once only. An unskilled character may attempt to teach (using the base chance of 30% only); however, his student may receive no more than **1** EP from the study session. A psionic skill may be taught only if both the teacher and the student possess a Mental Power Rating of **4** or higher and the student has or is eligible to acquire the skill. A character with teaching skill may charge any fee he can get for his teaching services. Conversely, the GM may have an NPC offer to teach a character a skill as a favour or for pay.

A character who rolls **0, 1 or 2** when attempting to teach receives an Experience Point.

TRADING**6 Levels/Limit: Empathy**

The character is a skilled bargainer. He can get the most out of a transaction through his understanding of commerce and his ability to negotiate. When the GM is using the Actual Price Table (18.0) to determine the price of an item or service that a character is attempting to purchase or sell, the character may attempt to alter the price in his favour by bargaining. Any purchases from a federal establishment may not be bargained; such prices are set.

The base chance of successful bargaining is **20%**. To this is added the character's *Empathy Rating* and the *square* of his *Skill Level*. The character rolls percentile dice. If the dice result is greater than the modified chance, the attempt fails; **10** is *added* to the GM's *Actual Price* roll. If the dice result is less than the modified chance, the difference is *subtracted* from the GM's *Actual Price* roll.

One character should check for bargaining each time such a situation arises. If the character is unskilled, nothing is added to his base chance.

A character who rolls a **0** or **1** on either die when bargaining receives an EP.

[15.0] Environmental Skills

AGRICULTURE

8 Levels/Limit: None

The character is skilled at farming tillable soil and in the science of hydroponics (growing without soil). Breakthroughs in fertilizers and genetic research also enable the growth of crops to be greatly accelerated. When working with a hydroponic farm, **2** is *subtracted* from the character's skill level (to a minimum of **1**). A skilled character may always grow any plant (as long as he has the proper shoots or seeds) in an environ with arable land or in an established hydroponic garden. If the character wishes to grow a plant in a more exotic location or wishes to accelerate the growth of a crop, the GM should assign a base chance to the declared task. The character's *Intelligence Rating* and the *square* of his *Skill Level* are added to the base chance. As a guideline, the simplest of agriculture tasks would have a base chance of 95% while an attempt to grow a fruit tree in an arctic environment with a poisonous atmosphere would have a base chance of **-5%**. A robot with an agriculture system increases a character's skill level by **2**.

A character who rolls a **0**, **1**, or **2** on either die when attempting an agriculture task receives an Experience Point.

ASTEROID MINING

6 Levels/Limit: None

The character is familiar with the business and techniques of mining and processing resources from asteroids and small planetoids. The tasks and procedures of this skill are identical to those of the *mining* skill.

ENVIRONS

6 Levels/Limit: None

As explained in character generation, each character receives positive or negative Skill Levels in all 33 environs shown on the Environ Skill Display. A character's Skill Level in the environ he is in is used during an encounter for the following:

Twice the highest Environ Skill Level among the characters in the party is *subtracted* from the awareness chance during a creature or NPC encounter (see 28.2).

The character chosen as the party's *leader* during an Action Round (see 19.1) adds his Environ Skill Level to his *initiative die roll*.

A character's Environ Skill Level is added to his chance to perform an *ambush* task (see the ambush skill, 9.0).

The Experience Point system explained in 8.0 is not used to improve Environ Skill Levels. Instead, the GM "hands out" Environ Skill Level increases. If a character spends one week (give or take a day, at the GM's discretion) adventuring in a particular environ away from urbanized areas, the GM should reward him with a Skill Level increase of one in that environ. No single environ skill may be increased beyond Level 6.

GRAVITY

5 Levels/Limit: None

As explained in character generation, each character receives positive and negative Skill Levels in all four gravity types shown on the Gravity Skill Display. A character's Skill Level in the gravity type he is in is added to his *Action Round Movement Rate* (see 29.2).

A character's Gravity Skill Level also affects his chance of avoiding a gravity-related accident (see 38.0).

Experience Points are not used to improve Gravity Skills Levels. If a character spends eight weeks (give or take a week, at the GM's discretion) adventuring in a particular gravity type, the GM should reward him with a Skill Level increase of **1** in that gravity type. No single gravity skill may be increased beyond Level **5**.

MINING

6 Levels/Limit: None

The character is familiar with the business and technique of planetary mineral and metal mining and processing. After a minable resource has been found in an environ (see the geology skill, 12.0), the character may attempt to separate a quantity of it from the ground in raw form. Simple digging tools, a *rock blaster* or a robot with a *miner* system are required. The latter two items provide the character with a Skill Level increase. After raw ore has been mined, the character may refine it if he has a robot with a miner system (the Skill Level increase applies). The character's *Intelligence Rating* and the *square* of his *Skill Level* are added to the base chance.

T Mine raw ore from an identified source: **25%**.

T Refine previously mined raw ore: **0%**.

Each of these task requires **12** hours to attempt. This time may be reduced if the attempt is successful (see the task procedure in the chapter introduction). For every percentage point *over* the modified chance the dice result indicates, the amount of ore mined or processed is reduced by **5%** (the time required is not increased). If the dice result is greater than the chance by **20** or more, the attempt fails completely.

The GM determines the quantity of ore that a character may mine in a single attempt as follows: locate the ore on the World Resource Table (25.8) and note the number of environs the Table states that the ore may appear in (if the ore is abundant on the world, double this number). The *square* of the number represents the number of *kilograms of refined ore* that may be mined in a single attempt (its actual weight in its raw form will be considerably more).

Exception: If the World Resource Table states that the ore exists at a *site* only, *one gram* of the ore may be mined in a single attempt.

These tasks are not used when the character is dealing with larger mining facilities. In such a case, his Skill Level would effect the administration of the factory and the efficiency with which it operates.

A character who rolls a **0**, **1** or **2** on either die when attempting to mine or process ores receives an Experience Point.

SURVIVAL**8 Levels/Limit: Intelligence**

The character is experienced in "living off the land" and staying alive with a minimum of supplies in the wild. If the character is in a party that has exhausted its supply of food and water, he may attempt to forage for the basic necessities to sustain himself and his comrades. The survival skill will *not* aid a party that has exhausted its oxygen supply. A survival task takes **6** hours to conduct and if successful, lasts for one full day (including the time spent foraging). The character chooses the most favourable task listed below that applies to the party's situation. He adds his *Survival Skill Level* to the *highest Environ Skill Level in the party* and *squares the sum* (a negative sum is considered 0 for this purpose). The result of this calculation *and his Intelligence Rating* are added to the base chance.

T Survive in environ with edible game and/ or plants: **90%**

T Survive in environ with arable land: **60%**

T Survive in environ with any type of vegetation: **30%**

T Survive in environ that contains water: **0%**

T Survive on world that contains water: **-50%**

T Survive on world that contains no water: **-150%**

For every **10** (or fraction thereof) below the modified chance the dice result indicates, one character may be kept alive and well. If the dice result is over the modified chance at all, no characters receive the basic necessities of life. The GM determines the effect of lack of food and water, depending on the party's current situation.

A character who rolls a **0**, **1** or **2** on either die when using his survival skill receives an Experience Point.

URBAN**6 Levels/Limit: None**

A character may receive an Urban Skill Level during character generation. A character's urban skill is used and improved when the character is in a built-up area (an area where the natural features have been entirely replaced with artificial structures and technology) exactly as an environ skill is used and improved.

IV. Robots

Robots may function as either mechanical aides and/or thinking companions for characters. Robots may be used to increase characters' Skill Levels when performing a given task, and sometimes they, can replace a character for minor jobs. They will often be able to provide information to the characters, which would otherwise be unavailable.

Within society, robots are regarded with little overt concern, yet doubts exist over the degree of independent thought, which they should be given. Therefore, some legal restrictions have been placed on the actions and available systems of all robots, to avoid any problems with these thought systems. Robots with artificial intelligence occasionally go "insane" and the GM may implement an incident of this kind when an accident is generated on the Encounter Table (see 27.0). The specific descriptions of robot thought systems detail the likelihood of breakdowns such as these.

[16.0] Robot Attributes

Robots are controlled by their owners, but others may illegally gain control through use of programming and compu/robot tech skills. When purchased, a robot consists of a *chassis*, a variable number of *systems* of the owner's choice, and two *controllers*: a headset and a hand-held version.

The GM and the players should record each robot's characteristics and systems on an index card for use during play. Robots may be purchased with a one-week waiting period at the prices listed on a world of a Civ Level equal to or higher than the Civ Level of the robot. Upon placing the order for the robot, a character must declare which systems he wants.

If attempting to purchase a Civ Level 8 robot on a Civ Level 7 world, the price is doubled; on a Civ Level 6 world, the price is multiplied by **10**. Below Civ Level 6, Level 8 robots would be very scarce and only available through the black market. These price relationships hold true for purchasing a Civ Level 7 robot on lower Civ Level worlds. The names given on the Robot Chassis Chart are model names only; the characters should invent individual names for their robots.

[16.1] A robot chassis contains its central processor and any appendages necessary for full function.

A robot chassis with no systems may move and pick up and carry objects. It can see and hear as well as a human, but cannot synthesize the information it receives, and will reveal this information in an absolutely non-analytical manner. It will remember nothing, and will only do something when commanded. It will attempt to do what it cannot possibly do without any hesitation. Each chassis comes complete with whatever systems the owner wishes and which can fit into the unit. The chassis are rated for both Hardware Points and Software Capacity, and the systems are given point and size ratings. A chassis cannot contain more hardware or software than its capacity in either area.

The owner controls a robot through vocal commands or through a controller (see 16.2). These controllers are to every robot as keys are to an automobile; thus, the controller for robot A cannot be used to command robot B. Through these controllers the owner's voiceprint is placed in the robot's central processor, and thereafter the robot will only answer its owner's voice. Civ Level 8 robots may have three other voices encoded in addition to the owner, but will always give the owner's voice priority. This programming of the additional voices is accomplished via the controller itself.

When in audible range, the robot may be commanded verbally without the use of the controller. The robot will answer and speak to the owner in a normal vocal range. The volume can be altered with the controller.

Robots will never object to being turned off by anyone, which is a simple matter of flipping a switch on the controller. A chassis may operate for 2 weeks before exhausting its energy. The batteries then need replacement or recharging. Any vehicle with a range of 2,000 km or greater may be used to recharge a robot's battery, and any city will have recharging facilities. A normal fee for this service is 100 Mils. Extra batteries may be purchased for 500 Mils per battery.

A chassis has a standard vocabulary, and understands the meaning of all distance and time measurements.

[16.2] A controller is a device used to operate a robot.

This device allows communication with a robot's central processor. Controllers come in three configurations: hand-held (pocket calculator size), headset (fits inside a respirator helmet), and wrist mount (twice the size of a normal watch). The hand-held, headset, and wrist mount versions all have a TV screen, transceiver, and — except the headset — a keypad. The TV screen allows the user to see exactly what the robot sees while the transceiver allows verbal two-way communication. The keypad is used to transmit coded commands to the robot and can at any time be used to operate the robot without verbal communication. The keys are not marked, and only the owner knows which keys issue which commands. This information can be shared with anyone the owner wishes, and this is the only way anyone whose voiceprint is not in the robot's memory may operate it. Anyone with a programming skill may attempt to gain access to a robot through the controller's keypad. If successful, the robot may be given new voiceprints and the keypad new coding.

A controller's range is 10 km, and subject to normal radio interference. The handheld and headset versions (both Civ Level 7) come with the robot, while the wrist mount (Civ Level 8 robots only) cost 5 Trans extra.

[16.3] A robot may be used to engage in combat.

A robot with a weapon may fire it at a specified target by receiving an order to do so. It must have a weapon target system *and* a weapon system to engage in fire combat. The robot may fire as many times in an Action Round as a human could. If a robot is firing a recoil weapon, it does not suffer adverse modifications due to the recoil. A robot will not fire a weapon (unless malfunctioning) without a specific command.

To engage in close combat, the robot must have a close attack system and be ordered to engage.

Exception: A robot with a creative thought system may engage in close combat by its own choice.

Movement of robots in an Action Round is detailed in 29.2. A robot may travel a number of kilometres per hour equal to its Agility Rating, and it is affected by terrain as detailed in 26.4. **Note:** This means a robot with an Agility Rating less than **5** cannot keep up with humans travelling on foot.

[16.4] The Robot Chassis Chart lists the various types of robots and their characteristics.

[16.4] ROBOT CHASSIS CHART

ROBOT TYPE CIV LEVEL 7	AVAILABILITY	STRENGTH	DEXTERITY	AGILITY	PORT CAPACITY	PROJECTILE ARMOUR	B EAM ARMOUR	HARDWARE POINTS	SOFTWARE POINTS	WEIGHT	BASE REPAIR TIME (HOURS)	COST TRANS	Port Capacity is in kilograms and represents the weight that may be carried.
Brummagen I	R	17	5	1	350	2	2	2	1	180	3	75	Cost (in Trans) includes cost of the listed hardware and software systems.
Brummagen II	O	8	2	3	35	1	1	3	1	110	3	110	
Manner 31b	R	20	3	5	200	4	4	1	1	250	3	70	
Manner 36sd	O	9	8	8	90	2	1	2	2	170	3	125	
Manner 38sdf	O	5	1	10	8	2	3	1	2	150	3	90	
Frazette Blue	O	1	6	11	3	0	0	1	1	120	3	50	Weight – is the estimated weight in kilograms of the robot before additional hardware. <i>(Additional: Ian Taylor)</i> Availability is the estimated restrictions of purchase and the requirement of permits based on the robot's potential danger to the public in strength and armour. <i>(Additional: Ian Taylor)</i>
CIV LEVEL 8													
Brummagen II	R	38	12	2	450	5	4	5	6	200	6	600	
Manner 44	R	33	4	5	900	5	5	5	4	190	6	450	
Manner 50sd	R	20	12	6	60	4	4	2	4	130	6	200	
Manner 51sdf	O	18	7	9	15	4	2	5	7	135	6	770	
Frazette Green	R	22	9	10	250	4	5	6	4	160	6	600	
Frazette Amber	R	18	14	12	150	3	3	4	4	150	6	280	
Soidistant RAR	R	21	11	13	550	2	1	6	6	170	6	850	
Soidistant V-201	O	8	13	14	5	2	3	3	6	110	6	400	
Soidistant V-202	M	32	15	15	700	5	5	6	7	240	6	1200	

[17.0] Robot Systems

Robot systems are self-contained units, which augment the physical or logical capacities of the robot. Each system details what abilities it confers on the robot, how much it costs (if purchased independent of a robot), and how many Hardware Points or how much Software Space it occupies. Hardware adds to the physical capabilities of a robot; Software contributes logic systems, which allow various thought processes. Certain systems are available to Civ Level 8 robots only.

When deciding upon systems for a robot, the total Hardware Points and/or Software Sizes may not exceed the capacity of the robot. Extra systems may be purchased, but may only be interchanged by a skilled individual who has access to and can operate the robot's controller. An individual with programming skill can interchange one Software Point in half an hour; an individual with compu/robottech may interchange one Hardware Point in half an hour.

All systems that include a weapon are bound by the same legal restrictions governing ownership of firearms by humans (see 19.0).

The following list of systems includes the abilities the system confers, their cost, and their Hardware Point total and Software Size. Availability, Civ Level and new Systems. For clarification a Skill Bonus is noted, for systems that have capabilities the Skill bonus is not available (i.e. '...repair capabilities of Civ 8 Vehicle Kit' does not yield a +2 Vehicle Tech bonus. *(Additional: Ian Taylor)*

Aerodynamic

Allows flight via a modified jetpack as per 29.3. Flies in all respects as a character with Skill Level 4.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 1 **Price:** 25

Agriculture

Functions just like a character with agriculture Skill Level 5.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 15

Anti-Bio

Includes all attributes of the bio system (Aids a character with biology skill; +2 to Biology Skill Level. Includes a catalogue of all known creatures, a Civ Level 8 Bioscanner, and a Civ Level 8 Neuroscanner), *plus* stun pistol, needle pistol, and a full supply of drugs and poison for use against creatures. Weapon target system for those weapons *only* also included.

AVAILABILITY: Restricted **CIV LEVEL:** 8 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 1 **Price:** 40

Aquatic

Allows robot to swim above and beneath water. Robot's speed in liquid in an Action Round is twice its Agility in hexes; long distance movement is twice Agility in kilometres per hour. Maximum depth is 50 meters.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 0 **Price:** 35

Arc Gun

Includes arc gun and weapon target system that may be used only for that weapon.

AVAILABILITY: Military **CIV LEVEL:** 8 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 30

Bio

Aids a character with biology skill; +2 to Biology Skill Level. Includes a catalogue of all known creatures, a Civ Level 8 Bioscanner, and a Civ Level 8 Neuroscanner.

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 40

Chemical

Aids a character with chemistry skill; +2 to his Chemical Skill Level. Includes a Civ Level 7 Chemlab and a Civ Level 8 Chemsynthesizer.

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 25

Close Attack

Allows robot to engage in close combat during an Action Round. The robot's Close Combat Strength is determined by adding together its Strength, Dexterity, and Agility Ratings. If any of these is greater than its Strength, that rating is considered *equal* to its Strength when calculating this sum. A robot, which does not have this system, may never *attack* in close combat and, if defending, uses its Strength Rating only. Unless a robot possesses the creative thought system, it will never attack unless commanded to do so

AVAILABILITY: Restricted **CIV LEVEL:** 8 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 1 **Price:** 50

Compu/Robot Tech

Federation prohibits robots with this system.

AVAILABILITY: Forbidden **CIV LEVEL:** Forbidden **HARDWARE POINTS:** Forbidden **SOFTWARE POINTS:** Forbidden **Price:** Forbidden

Construction

Functions in all respects as a character with a construction Skill Level of 4.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 15

Creative Thought

Includes all features of self-activation, information, language, and learning systems. The robot can interact with humans in all manner of conversation and intellectual activity. An always operating logic sub-system allows the robot to make conclusions and connections concerning any data it has in its memory. The robot may make observations the origins of which may elude the characters. The robot always speaks in deference to humans, but does not like being shut down. Movement is greatly improved by this system; if a robot's movement in an Action Round is 0 or less, it may always move one hex (like a character).

Note: Robots with this system may suffer mental malfunction due to a common, rare, or unique accident. This system may only be mounted on Civ Level 8 robots.

AVAILABILITY: Restricted **CIV LEVEL:** 8 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 5 **Price:** 100

Driver

Functions in all respects as a character with a Vehicle Skill Level of 4; generic vehicle type (military, ground, air, or marine) must be chosen by the purchaser who must also allocate 10 Sub-Skill Points to specific vehicle types.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 1 **Price:** 30

Electro Tech

Functions in all respects as a character with an Electro tech Skill Level of 5 with repair capabilities of a Civ Level 8 Electrokit.

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 25

EVA

Allows robot to conduct operate in Zero Gravity. Equipped with Zero G propulsion devices, grapple fittings and tethers for working in that environment. Functions in all respects as a character with an EVA Skill Level of 6.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 15

(Additional - Ian Taylor)

Force Field

Robot has a force field. Unless robot also has a self-activation system, it must be commanded to turn on the field. Any one character standing immediately next to the robot is also included in the field; both robot and character are subject to normal force field restrictions.

AVAILABILITY: Restricted **CIV LEVEL:** 8 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 0 **Price:** 65

Geo

Includes all attributes of the miner system and has a Civ Level 8 Geoscanner. Aids character with miner skill, + 2 to his Geo Skill Level. Includes mining laser (equivalent to Civ Level 6 laser pistol), scooper/digger, rock blaster, and ore refiner. This system is required to refine ore.

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 1 **Price:** 30

Grenade Launcher

Functions in all respects as a character with grenades Skill Level of 5. Requires weapon target system to fire. Includes two dozen grenades of any kind; refills must be provided by owner

AVAILABILITY: Military **CIV LEVEL:** 7 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 0 **Price:** 15

Gunnery

Functions in all respects as a character with a Gunnery Skill Level of 6.

AVAILABILITY: Military **CIV LEVEL:** 7 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 2 **Price:** 50

Heightened Vision

Robot can see twice as far as a human and may see in the dark (at normal range) as if it were light.

AVAILABILITY: Open **CIV LEVEL:** 7 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 1 **Price:** 15

Holographer

Equips robot with Holographer. If robot also has self-activation system, this does not take up any Software Space.

AVAILABILITY: Open **CIV LEVEL:** 7 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 15

Information

Enables robot to remember all data, which it is exposed to. The robot will not analyse or draw any conclusions from this data; will discuss anything it knows impartially and uncreatively. The robot's memory is an open book; it will build a library of knowledge once activated.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 1 **Price:** 30

Language

Allows the robot to interpret and communicate fluently with languages besides Universal. Civ Level 7 robots have provision for one additional language while in Civ Level 8 robots may have four additional languages. The modified onboard Translator aids in communication between human beings who speak a foreign language with the robot acting as interpreter. If the robot has the language installed it will converse with an individual using the language it was addressed with. The system can also read and translates written languages. Language packages must be specified.

AVAILABILITY: Open **CIV LEVEL:** 7 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 1 **Price:** 30

Learning

Enables robot to gain Experience Points for using any of its systems, which involve a Skill Level. A robot may never exceed the maximum Skill Level obtainable by a character. This system includes all features of the information system.

Note: Robots with this system may suffer mental malfunction due to a *unique* accident. This system may be mounted only on Civ Level 8 robots.

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 2 **Price:** 75

Medical

Aids a character with diagnosis or treatment skills. +3 to his Diagnosis and Treatment Skill Levels and includes attributes of a Civ Level 8 Mediscanner with a full complement of drugs and medicines.

AVAILABILITY: Restricted **CIV LEVEL:** 8 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 2 **Price:** 50

Miner

Aids character with Miner skill, +2 to his Miner Skill Level. Includes mining laser (equivalent to Civ Level 6 laser pistol), scooper/digger, rock blaster, and ore refiner. This system is required to refine ore.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 0 **Price:** 25

Missile Guidance

Functions in all respects as a character with a Missile Guidance Skill Level of 6.

AVAILABILITY: Restricted **CIV LEVEL:** 7 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 2 **Price:** 50

Pilot

Functions in all respects as a character with a pilot Skill Level of 6.

AVAILABILITY: Open **CIV LEVEL:** 7 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 2 **Price:** 55

Recorder

Equips robot with a Visual / Audio Recording unit. Enables it to make an audio/visual recording of whatever it sees.

AVAILABILITY: Open **CIV LEVEL:** 6 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 0 **Price:** 10

Self-Activation

Enables robot to take actions without commands. The robot will use any of its abilities and equipment as the owner wishes without specifically commanding it to.

Note: Robots with this system may suffer mental malfunction due to a *rare* or *unique* accident. This system may be mounted only on Civ Level 8 robots.

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 2 **Price:** 75

Spacecraft Tech

Functions in all respects as a character with a Spaceship Tech Skill Level of 7 with repair capabilities of a Civ Level 8 Spacecraft kit.

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 3 **SOFTWARE POINTS:** 1 **Price:** 110

Suit Tech.

Functions in all respects as a character with a Suit Tech Skill Level of 7 with repair capabilities of a Civ Level 7 Armour Kit.

AVAILABILITY: Open **CIV LEVEL:** 7 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 30

Valet/Secretary

Enables robot to perform all functions of a gentleman's gentleman, combined with a live-in maid.

AVAILABILITY: Open **CIV LEVEL:** 7 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 1 **Price:** 30

Vehicle Tech

Functions in all respects as a character with a Vehicle Tech Skill Level of 5 with the repair capabilities of a Civ Level 8 Vehicle Kit

AVAILABILITY: Open **CIV LEVEL:** 8 **HARDWARE POINTS:** 2 **SOFTWARE POINTS:** 1 **Price:** 35

Weapon

Functions in all respects as a character with a weapon Skill Level *two* less than the maximum allowed for the weapon with which the robot is equipped. Weapon choices include paint gun, laser pistol, rifle, submachine gun, machine gun (owner must choose which and add the weapon cost). Requires weapon target system to fire. A Civ Level 7 robot takes as much time to reload as a human; a Civ Level 8 robot can reload in the same Action Round it fires. The system includes the chosen weapon; a robot may be equipped with more than one weapon system

AVAILABILITY: Restricted **CIV LEVEL:** 7 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 0 **Price:** 10

Weapon Target

Required to fire weapon. May target any number of weapons, one at a time.

AVAILABILITY: Restricted **CIV LEVEL:** 7 **HARDWARE POINTS:** 0 **SOFTWARE POINTS:** 1 **Price:** 20

Weapon Tech

Functions in all respects as a character with a Weapon Tech Skill Level of 6 with the repair capabilities of a Civ Level 8 Weapon Kit.

AVAILABILITY: Restricted **CIV LEVEL:** 8 **HARDWARE POINTS:** 1 **SOFTWARE POINTS:** 1 **Price:** 20

[17.0] ROBOT SYSTEMS CHART

System	AV	CIV	HP	SP	Skill	Equipment	Skill +	Price	Notes
Aerodynamic	Open	6	1	1	Jetpack 4	Modified Jetpack		25	
Agriculture	Open	6	1	1	Agriculture 5			15	
Anti-Bio	Restricted	8	2	1		Civ 8 Bioscanner Civ 8 Neuroscanner Catalogue of Life forms Stun Pistol Needle Pistol	+2 Biology	40	
					Handgun 3 Handgun 3				
Aquatic	Open	6	2	0				35	7
Arc Gun	Military	8	1	1	Arc Gun 5	Arc Gun		30	4
Bio	Open	8	1	1		Civ 8 Bioscanner Civ 8 Neuroscanner Catalogue of Life forms	+2 Biology	40	
Chemical	Open	8	1	1		Civ 7 Chemlab Civ 8 Chemsynthesizer	+2 Chemistry	25	
Close Attack	Restricted	8	0	1				50	
Construction	Open	6	1	1	Construction 4			15	
Creative Thought	Restricted	8	2	5				100	1
Driver	Open	6	0	1	Vehicle 4			30	
Electro Tech	Open	8	1	1	Electro Tech 5	Civ 8 Electrokit		25	
EVA	Open	6	1	1	EVA 6	Zero G Propulsion		15	
Force Field	Restricted	8	2	0				65	
Geo	Open	8	2	1		Civ Level 8 Geoscanner Mining Laser Scoop Digger Rock Blaster Ore Refiner	+2 Geology +2 Miner	30	
Grenade Launcher	Military	7	1	0	Grenade 5	Grenade Launcher 24 Grenades		15	3
Gunnery	Military	7	0	2	Gunnery 6			50	
Heightened Vision	Open	7	0	1				15	
Holographer	Open	7	1	1		Holographer		15	2
Information	Open	6	0	1				30	
Language	Open	7	0	1		Translator		30	5
Learning	Open	8	0	2				75	1
Medical	Restricted	8	1	2		Civ 8 Mediscanner	+3 Diagnosis +3 Treatment	40	
Miner	Open	6	2	0		Mining Laser Scoop Digger Rock Blaster Ore Refiner	+2 Miner	25	
Missile Guidance	Restricted	7	0	2	Missile Guidance 6			50	
Pilot	Open	7	0	2	Pilot 6			55	
Recorder	Open	6	1	0		Recorder		10	
Self Activation	Open	8	0	2				75	1
Spacecraft Tech	Open	8	3	1	Spacecraft Tech 7	Civ 8 Spacecraft Kit		110	
Suit Tech	Open	7	1	1	Suit Tech 7	Civ 7 Armour Kit		30	
Valet / Secretary	Open	7	0	1				30	
Vehicle Tech	Open	8	2	1	Vehicle 5	Civ 8 Vehicle Kit		35	
Weapon	Restricted	7	1	0	See note			10	3
Weapon Target	Restricted	7	0	1				20	6
Weapon Tech	Restricted	8	1	1	Weapon Tech 6	Civ 8 Weapon Kit		20	

NOTES:

AV: Availability. **CIV:** Civ Level **HP:** Hardware Points **SP:** Software Points **Skill:** Inherent Skill **Skill +:** Skill Bonus

1. Robots with this system may suffer mental malfunction due to a *rare* or *unique* accident. This system may be mounted only on Civ Level 8 robots. 2. Software Point cost is 0 if the robot has the Self Activation System. 3. Requires the Weapon Target System to be installed also. A Civ Level 7 robot takes as much time to reload as a human; a Civ Level 8 robot can reload in the same Action Round it fires. The final weapon Skill level is 2 less than the maximum skill level permitted for the weapon. 4. Has the Weapon Target System for use with the specified weapons only. 5. Additional onboard languages; Robot is Civ 7: 1, Civ 8: 4. 6. Required to fire any and all onboard weapons. 7. Robot's speed in liquid in an Action Round is twice its Agility in hexes; long distance movement is twice Agility in kilometres per hour. Maximum depth is 50 meters.

V. Equipment

In order to adventure on the vast and varied worlds of known space, the characters must take advantage of the technology of the federation. Equipment is a loose term encompassing all weapons, protective attire, vehicles, and scientific, technical, and personal equipment the characters may purchase or receive. Most items of equipment and their pertinent specifications are presented on the equipment charts. Additional information about particular items and other items not mentioned on the charts are included in the appropriate Sections.

The hostile environments in which characters will often operate demand the use of costly equipment. If characters do not receive what they need from their professional benefits and do not have the funds to purchase such things as an expedition suit or simple vehicle, the GM should see that they are provided with those items necessary for survival at the least (even if on loan from an employer).

[18.0] Economic Guidelines

The basic costs of every piece of equipment are listed on the equipment charts. These prices may vary, depending on many factors.

If the price of an item is **1 Tran** or less, the basic price is used when purchasing the item on a world that has the same (or a higher) Civ Level as the item. If the item's Civ Level is one higher than the world of purchase, the price is *doubled* and the item will be available only in urban areas (concentrated population of 200,000 or more). If the item's Civ Level is two higher than that of the world of purchase, the price is *multiplied by 10* and the item will be available only in urban areas, if it is available at all. In such a case, the GM rolls one die; if the result is 4 or less, the item is available in that area. A separate check may be made for each distinct urban area on the world.

If an item costs more than **1 Tran**, the **Actual Price Table** (see below) is used to determine the price of the item on a given world. The table lists modifiers that are applied to the percentile dice roll. These include a modifier for any resources used in manufacturing the item (see the World Resources Table and attached explanation, 25.8). For example, if a character wished to purchase a Holographer, a modifier of **-20** would be applied if the world had *abundant caesium*, a modifier of **+20** would be applied if the world had *no caesium*, and no modifier would be applied if the world had *limited caesium*. Other modifiers take the Civ Level of the world into account. A character may use his *trading skill* to modify the Actual Price Table dice result (see 14.0). The general availability of an item costing more than **1 Tran** that is of a higher Civ Level than the world of purchase is subject to the same restrictions as items costing less than a Tran.

An item with a Civ Level of *more than two* above the Civ Level of a given world is *illegal* on that world. If the item can be found at all (at the GM's discretion), its cost is multiplied by **10 times the Law Level** of that world. A weapon that is classified as *military* is illegal (see 19.0). A weapon that is classified as *restricted* is illegal unless the purchaser has received a permit from the authorities (if he was going to an area populated with dangerous creatures, for example). The GM may make an illegal weapon available to the characters, but if he does so, he should multiply its price by the Law Level of the world (and should also apply modifiers based on the Civ Level and the other variables discussed above).

Even though robots and spaceships are not included in this Chapter, their price is affected by all these variables. The GM should always use the Actual Price Table and these modifiers for a character that is buying or 'selling large amounts of goods or resources (such as a merchant or interstellar trader). A character may use his *economics* skill to determine the price of items or resources that he wishes to buy or sell on other worlds at a future time (see 14.0). The base price for all types of resources in bulk are listed on the World Resource Table.

The basic costs of living are not discussed in detail. As a guideline, a week's room and board of mediocre quality in a spaceport or city costs **300 Mills (50 Mills per day)**. A day's travel rations (tang and space food sticks) costs **5 Mills**. A seven course meal in a first class restaurant costs at least **100 Mills**.

[18.0] ACTUAL PRICE TABLE

PERCENTILE DICE RESULT	ACTUAL PRICE OF GOODS (x listed Price)
0 or less	50%
1-10	65%
11-20	75%
21-30	85%
31-40	90%
41-50	95%
51-60	100%
61-70	110%
71-80	125%
81-90	145%
91-100	170%
101 or more	200%

MODIFIERS:

- 20** if goods contain resources that are abundant on the world.
- +20** if goods composed only of resources not found on the world at all.
- +50** if item is one Civ Level higher than that of the world.
- Multiply percentage by **10** if item is two Civ Levels higher than that of the world.
- Multiply percentage by the Law Level of the world if the item is illegal (or restricted, if the purchaser does not have a permit).
- Variable modifier may be applied when using Trading Skill.

[19.0] Weapons

Personal weapons range from a simple dagger to the arc gun, a duo-laser beam military assault weapon. The federation prohibits the ownership of military weapons by the general public. Other weapons are available with permit, for scientific use and personal protection (if cause can be shown to authorities). Archaic personal weapons may be owned by anyone. The following list of weapons is divided into three categories (open, restricted, and military). All information necessary for use of each weapon is provided on the **Weapon Chart** (see below), Some of this information includes:

- **Rate of Fire.** The maximum number of fires that may be conducted per Action Round (see 29.5). Also represents the number of fires in a single clip (one load) for the weapon.
- **Hit Strength.** The force with which a single fire from the weapon strikes a target.
- **Base Hit Chance.** The percentage chance of a single fire from the weapon hitting a target. This chance varies depending on how many hexes away the target is (*range in hexes*). A hex equals **5 meters**. The Terrain Value of the area is multiplied by the *Terrain Multiplier* (which varies with the range); this product also affects the Base Hit Chance. See also 29.6.

No cost or availability is given for ammunition used in these weapons. Aside from the time required to reload during Action Rounds (see 29.5), it is assumed that a character with a weapon has plenty of ammunition. If the GM wishes to keep track of ammunition, he should have the players note the expenditure of one clip each time they fire a number of shots equal to the weapon's *Fire Rate* (cumulative from Action Round to Action Round). The GM is responsible for determining the price, weight, and availability of each type of clip if he is keeping track of ammunition.

OPEN

Musket, short bow, long bow, crossbow, dagger, and sword.

RESTRICTED

Paint Gun (Civ Level 6). A rifle-shaped laser weapon using a low intensity laser as an aiming device. Once the target is spotted, the intensity is increased. This version is very bulky due to the need for a power pack.

Laser Pistol (Civ Level 6). A single shot laser weapon. Requires reloading after each shot.

Stun Pistol (Civ Level 7 & 8). A pistol shaped weapon emitting a subsonic pulse temporarily deadening the target's nervous system, stunning it (see 30.4). Does not work in a vacuum.

Needle Rifle (Civ Level 5 & 7). A longarm, which fires needles; the -needles do no damage, but any substance they contain may (see 30.7). Also, rifles, smoke grenades, illumination grenades, and gas grenades.

MILITARY

Paint Gun (Civ Level 8). Same as Civ Level 6 version except with improved rate of fire and much less bulky power source.

Arc Gun (Civ Level 8). A rifle shaped twin beam weapon using a sighting mechanism similar to a single lens reflex camera. The energy beams are harmless except at the point of intersection, which is adjusted by a slider on the barrel. The beams are not activated until the trigger is depressed. Ideal weapon for fighting inside spaceships due to its exact targeting. Requires a great deal of skill to use.

Plastic Pistol (Civ Level 6). Made of a high-density synthetic resin, this weapon is constructed entirely of non-metal parts and will not register on a metal detector if unloaded.

Needle Pistol (Civ Level.8). Similar to the needle rifle, but in a pistol configuration.

Laser Pistol (Civ Level 8). These power packs will allow three fires.

Fragmentation Grenade (Civ Level 4). The hit strength is applied to the target hex and every surrounding hex. Also, pistols, machine guns, submachine guns, and carbines.

[19.0] WEAPON CHART

CIV LEVEL	AVAILABILITY	WEIGHT IN KG	PRICE IN (TRANS)	RATE OF FIRE	HIT STRENGTH	BASE REPAIR TIME (HOURS)	TERRAIN MULTIPLIER	0	2	4	6	8
							RANGE IN HEXES	0	1-4	5-13	14-25	26-40
3	O	4	0.5	1	1	1	Crossbow	0	30	10	-15	P
1	O	0.2	0.01	1	6	1	Dagger ⁶	P	10	-30 ¹¹	P	P
1	O	3	0.6	2	6	1	Long Bow ^{2,10}	P	20	10	5 ¹¹	-55 ¹¹
2	O	5	0.3	2	4	1	Musket ¹⁰	P	0	-20	-40	P
1	O	1	0.2	3	4	1	Short Bow ^{2,10}	15	25	0 ¹¹	P	P
1	O	2	0.3	na	10	1	Sword ⁶	P	P	P	P	P
5	R	3	0.6	4	6	1	Carbine ¹⁰	45	35	15	-5	-25
5	M	12	3	15	7	1	Machine Gun ¹	P	40	20	0	-20
5	R	2	0.08	4	5	1	Pistol ¹⁰	60	40	0	P	P
5	M	1	0.2	4	5	1	Plastic Pistol ^{9,10}	60	40	0	P	P
5	R	3	0.8	6	7	1	Rifle ¹⁰	30	35	20	0	-15
5	M	5	2	10	5	1	Submachine Gun ¹⁰	40	35	10	0	P
6	M	4	1	1	6	1	Laser Pistol	60	40	20	0	-20
8	M	2	2	3	6	2	Laser Pistol	60	40	20	0	-20
8	M	2	12	4	10	2	Arc Gun	20	15	5	-10	-25
6	M	12	7	2	8	1	Paint Gun	35	25	10	-10	-25
8	M	3	9	6	8	2	Paint Gun	35	25	10	-10	-25
8	M	2	2	2	1	2	Needle Pistol ^{3,10}	55	35	-10	P	P
5	R	5	2	1	1	1	Needle Rifle ^{3,10}	40	30	10	-20	P
6	R	3	3	2	1	2	Needle Rifle ^{3,10}	40	30	10	-20	P
7	R	2	1	1	8	2	Stun Pistol ⁴	65	30	P	P	P
8	R	1	2	2	9	2	Stun Pistol ⁴	65	30	P	P	P
4	M	0.5	0.1	1	25	1	Grenade: Fragmentation	P	50	-10	-60 ¹¹	P
4	R	0.5	0.1	1	4	1	Grenade: Gas ⁵	P	50	-10	-60 ¹¹	P
4	O	0.5	0.1	1	4	1	Grenade: Illumination ⁸	P	50	-10	-60 ¹¹	P
4	R	0.5	0.1	1	4	1	Grenade: Smoke ⁷	P	50	-10	-60 ¹¹	P

NOTES: AVAILABILITY: M: Military, R: Restricted, O: Open.

1. Must be emplaced before first fire. 2. May not be fired by a prone character. 3. The target may be affected by substance in needle; See 30.7. 4. The strength of weapon used to check for stun only; see 30.4 (Terrain Value considered 0). 5. Target hex and all adjacent hexes are filled with gas for six Action Rounds; all beings there which do not have their own air supply suffer the effects of the appropriate poison (See 30.7). 6. Hit Strength is used in close combat; Hit Strength is 3 if thrown. 7. Target hex and all adjacent hexes are treated as if it were dark for six Action Rounds. 8. Target hex and all adjacent hexes are treated as if it were light for six Action Rounds. 9. Will not be detected by metal detector. 10. Weapon produces recoil with each shot (See 29.6). 11. Strength Rating of firing (or throwing) character added to hit percentage. P: Prohibited.

[20.0] Protective Equipment

The **Protective Attire Chart** (see below) summarises the attributes of suits, body armour, and other devices the characters may wear to protect themselves when in a hostile environment and/or when involved in combat. Some of the attributes listed on this chart are:

- **Price.** Certain prices include a waiting period between the time the item is purchased and the time it is ready for use. The item is being contoured to fit the wearer's body during this time.
- **Air Supply.** After the listed time, the oxygen supply must be replenished. This may be done from any vehicle or structure with its own oxygen supply. Oxygen produced by a Chemsynthesizer may replenish the supply at a rate of 1 hour's oxygen for every **10** minutes of use.
- **Encumbrance.** A quantification of how much the item impedes the wearer's movement; the higher the rating, the slower the wearer may move. An *Encumbrance Rating* may be overcome by the wearer's EVA or Body Armour Skill Level. Certain types of body armour are augmented; the outfit is powered and may increase the strength and mobility of a wearer with body armour skill. The effects of encumbrance and augmentation are detailed in 26.4, 26.5, and 29.2.
- **Projectile and Beam Armour Defence Ratings.** Used in combat to defend against enemy fire, as explained in 30.6. The Projectile Defence Rating may also protect the wearer from blows and accidental impact.
- **Hit Strength.** Used to attack or defend in close combat (see 29.9).

Protective Attire

The following material features additional information about the items on the chart and other items not listed.

Armour Vest. Protects the chest, trunk, and groin like body armour. When wearer is hit, check *Hit Table* die roll. If the *unmodified* roll is **4, 5, 6, or 7**, the Armour Defence Ratings of the vest are used.

Battle Sleeve. Protects and increases the strength of the wearer's hand, arm, and shoulder. Its Hit Strength is used in close combat like body armour. When wearer is hit by fire, check the *Hit Table* die roll. If the *unmodified* roll is **1 or 2**, the Armour Defence Ratings of the sleeve are used.

Body Armour. Suit constructed of high-impact metals and ceramics. Includes all attributes of an expedition suit (see following). May withstand most corrosive atmospheres. Various production methods make some body armour more effective against projectiles (impact armour) and others more effective against beams (reflective armour). Much practice is required to use augmented armour, which electronically accentuates all movement by the wearer.

EnvioRig (Expedition Suit). Provides complete protection from a vacuum, water, or contaminated or poison atmosphere. Contains two-way headset radio in helmet. Audio system allows wearer to hear and speak normally.

Filter Mask. Filter covering the mouth and nose, providing complete protection from contaminated atmospheres. Must be replaced after 10 days' use. Civ Level: 5. Weight: Negligible. Price: **40 Mils**.

Force Field. Wire rig worn about the shoulders. When activated, an energy field surrounds the wearer providing excellent protection from projectiles and any other solid objects. Does not stop light. Wearer may not attack or be attacked in close combat. Energy pack allows one hour of continuous protection. Pack costs **1 Tran** to replace.

Respirator. Filter mask connected to oxygen tank (worn on the back). Allows character to function underwater, in a contaminated atmosphere, and in some poisonous atmospheres. Civ Level: **6**. Weight: **3 kg**. Price: **1 Tran**. Air Supply: **12 hours**.

Respirator Helmet. Covers the head, shoulders, and upper chest. Includes all attributes of a respirator (see preceding). Contains two-way headset radio. Audio system allows wearer to hear and speak. When wearer is hit by fire, check *Hit Table* die roll. If the *unmodified* roll is an **8, 9, or 10**, the helmet's Armour Defence Ratings are used.

[20.0] PROTECTIVE ATTIRE CHART

w: Waiting period of one week required upon purchase. *Exception:* Waiting period for Battle Sleeve is two days.

a: Movement of wearer may be augmented, depending on Body Armour Skill Level.

p: Provides partial protection only.

Imm: Wearer may not move at all. He may not attack or fire any type of weapon except a beam weapon.

TYPE ARMOUR	CIV LEVEL	WEIGHT (Kilograms)	PRICE (TRANS)	AIR SUPPLY (Hours)	ENCUMBRANCE	PROJECTILE DEFENCE	BEAM DEFENCE	BASE REPAIR TIME (HOURS)	HIT STRENGTH
Reflective	6	11	15w	12	2	1	3	2	2
Reflective	8	9	28w	24	1	2	5	2	5
Impact	5	22	9	None	5	2	1	2	9
Armour Vest	6	2	1.5	None	None	2p	2p	2	None
Battle Sleeve	8	4	15w	None	None	5p	5p	2	25

POWERED ARMOUR

Impact	7	18	31w	18	3a	4	2	3	18
Reflective / Impact	7	20	31w	18	4a	3	4	3	11
Reflective / Impact	8	16	46w	24	2a	5	5	3	20

RESPIRATORS

Respirator	6	3	1	12	None	0	0	1	None
Respirator Helmet	6	6	4	12	None	2p	2p	1	None
Respirator Helmet	8	4	10	24	None	4p	4p	1	None
Filter Mask	5	na	0.04	0	None	0	0	1	None

FORCE FIELD

Force Field On	8	2	55	None	Imm	6	0	2	Imm
Force Field Off	8	2	55	None	None	0	0	2	None

EXPEDITION SUIT

Expedition Suit	6	11	6	12	2	1	1	2	None
Expedition Suit	7	7	11w	24	1	1	1	2	None
Expedition Suit	8	5	11w	30	1	1	1	2	None

[21.0] Vehicles

In addition to travelling between worlds and stars, characters will need to traverse the surface of worlds. On land, above or beneath the surface, vehicles are needed for transportation. The vehicles listed on the charts and those detailed in this Section do not represent all the vehicles of the universe. They are intended as a guide from which the GM should borrow to invent others.

The vehicle charts detail important data for each individual vehicle type, including the following information:

- **Range in 100 km.** Maximum range vehicle can travel before refuelling. Refuelling costs: (Range in **100 km**) x Mils.
- **Performance Modifier.** A quantification of the vehicle's responsiveness and structural integrity. Applied to the chance to avoid an accident, in accordance with 11.2.
- **Repair Time in Days (or Hours).** Base time required to repair the vehicle (see 13.1).

Every vehicle Civ Level 6 or higher which carries more than one person comes equipped with a planetary short wave radio. All vehicles with an air lock come with an oxygen supply equal to twice the vehicle's Civ Level in days. An airlock holds one or two people at a time (GM's discretion). Civ Level 8 vehicles may, at the GM's discretion, come equipped with an oxygen synthesizer which will recycle breathable air for a period of three months, at which time the system must be cleaned and recharged at a cost of 1 Tran.

[21.1] Land vehicles are used to traverse the solid surface of a world.

The **Land Vehicle Chart** (see below) lists various land vehicle types. Listed for each is a *Terrain Value Limit* and a *Terrain Value Modifier*. The Terrain Value Limit indicates the maximum Terrain Value the vehicle may traverse (see Terrain Effects Chart). The Terrain Value Modifier affects the actual speed with which a vehicle may travel through an allowable terrain. To calculate this speed, add the Terrain Value Modifier to the Terrain Value of the environ. If the sum is less than 1, treat it as 1. Divide the listed speed in km/hour or hexes per Action Round by this sum (round down). This is the maximum number of km or hexes the vehicle may move in that terrain. Treat a road as having a Terrain Value of 1; a trail as having a Terrain Value of 2 (when in a higher Terrain Value). The car, horse cart, and tractor all are similar to vehicles the players and GM are familiar with. The others are detailed below:

Scout Car.

A small non-enclosed vehicle using eight multi-celled tyres for movement; petroleum powered. No air lock.

Crawler. An enclosed ATV using either balloon tires or telescoping legs for movement; nuclear powered. Has an air lock. Three Action Rounds (45 seconds) are required to change from wheels to legs.

Rover. A non-enclosed ATV with balloon tires and dynamic suspension for ease of movement; nuclear powered. No air lock.

Mobile Lab. A three-sectioned ATV with normal tires for movement. Each section is independent of the others and connected (like train cars) by accordion bags. The first section is for the driver and crew; the second is the lab; the third is for holding creatures and can adapt its atmosphere to match those suitable to its occupants. The whole lab is enclosed and air tight; nuclear powered. An air lock connects sections 2 and 3; another connects section 1 with the outside.

Amphibian. Truly an all-terrain vehicle, this ATV can travel on land, on the surface of water, or submerged. Uses semi-balloon tires for land movement and is propeller-driven in water. Enclosed and airtight; has an air lock. Applicable driver's skill depends on mode of operation. Maximum depth in water of **75** meters.

Van Rig. A large truck with sleeping quarters for the driving team; designed for continuous travel. Enclosed and air tight; nuclear powered. Has an air lock.

AutoSled. Uses skis and treads to propel it through snow and over ice; petroleum powered and not enclosed.

Half-Track. Uses treads in rear and wheels in front; not enclosed. Petroleum powered.

Loricare. An armoured personnel carrier using treads for movement. Enclosed, air tight, and nuclear powered. Has an air lock.

Armoured ATV. An armoured ATV using treads for movement; armed with a machine gun. Enclosed, air tight, and petroleum powered. Has an air lock.

Tank. Similar to tanks the players know except uses sophisticated laser aiming to achieve accurate fire of either anti-personnel or piercing-piercing shells. Petroleum powered, not air tight.

Self-Propelled Artillery. An artillery gun on treads; not enclosed; petroleum powered.

[21.1] LAND VEHICLE CHART

VEHICLE ASSOCIATED SUB-SKILL	CIV LEVEL	PRICE (TRANS)	RANGE (100x Kilometres)	SPEED (km / H)	SPEED (Hexes / AR)	TERRAIN VALUE LIMIT	TERRAIN VALUE MODIFIER	PASSENGERS	CARGO CAPACITY (x100Kg)	PERFORMANCE MODIFIER	BASE REPAIR TIME (Hours)	ARMOUR (Projectile / Beam)	LENGTH (Meters)
Scout Car ATV	5	35	12.5	25	15	3	0	5	4	-10	6	2/2	5
Crawler ATV	8	200	200	45	25	3	-1	8	5	+25	24	4/3	7
Wheeled Legs	8	200	100	10	5	N	N	8	5	+25	24	4/3	7
Rover	8	150	300	75	45	4	-2	2	1	+25	24	3/3	5
Mobile Lab ATV	8	250	100	50	30	2	+1	9	25	+15	24	4/3	10
Amphibian TRUCK	6	180	20	25	15	3	+1	4	3	-15	24	3/2	5
Van Rig TRUCK	6	240	24	100	65	1	+2	5	150	-10	12	3/2	8
Car AUTOMOBILE	5	40	10	200	120	1.5	0	3	1	-25	6	1/1	5
Horse Cart ANIMAL DRAWN	1	1	U	10a	15a	2	+2	6	2	-15	2	1/1	4
Auto Sled	6	60	15	25	15	3	0	2	1	0	6	2/2	4
Tractor	5	35	5	15	10	4	-1	1	100	-20	6	1/1	5
Half-Track	7	1000	50	25	15	2	-2	8	4	0	24	4/4	7
Loricat APC	6	700	50	50	30	1.5	+1	12	6	+5	24	5/4	8
Armoured ATV	6	200	15	75	45	3	-1	6	1	+15	24	5/5	5
Tank	6	2000	50	50	30	3	0	4	2	+20	24	6/6	6
Self-Propelled Artillery	5	2000	10	25	15	2	+1	3	1	0	24	6/5	7

a: Speed in Km/h represents a pace which the animal may maintain over a long period of time.

SPEED (Hexes / AR) represents the maximum speed which can be maintained for a short period of time.

m: See Marine Vehicle Chart for further details.

U: Unlimited range.

N: None.

[21.2] Marine vehicles are used to travel either on or under the surface of water.

A sailing ship and all other types of wind or man powered water craft are familiar to the players and the GM, and are among those summarised on the **Marine Vehicle Chart** (see below). Others include:

Mini Submarine. A propeller driven submersible with a maximum depth of 100 meters. Petroleum powered; has an air lock.

Flexi craft. Traverses the surface with an eel-like motion; uses no propellers. Enclosed with an air lock; nuclear powered.

Reef Walker. Much as its name implies, this submersible has a set of telescoping legs for travel along the bottom of the ocean. Nuclear powered, it has a maximum depth of two kilometres.

Water Scooter. A propeller driven one-seater; not enclosed. Runs on electric batteries similar to a robot's.

Amphibian. See land vehicles (21.1) for details on this vehicle.

[21.2] MARINE VEHICLE CHART

VEHICLE ASSOCIATED SUB-SKILL	CIV LEVEL	PRICE (TRANS)	RANGE (Kilometres)	SPEED (km / H)	SPEED (Hexes / AR)	PASSENGERS	CARGO CAPACITY (x100Kg)	BASE REPAIR TIME (Days)	ARMOUR (Projectile / Beam)	LENGTH (Meters)
Sailing Ship	6	90	U	10	5	8	4	1	3/2	12
Mini Submarine SUBMARINE	8	300	15	25	15	3	1	1	3/2	4
Flexicraft MOTORBOAT	5	1000	150	100	60	20	50	6	2/4	40
Reef Walker SUBMARINE	7	600	20	20	10	6	15	2	3/3	18
Water Scooter MOTOR BOAT SUBMARINE	7	5	1	15	10	1	0.2	1	1/1	2
Amphibian ^L MOTORBOAT SUBMARINE	8	180	20	25	15	4	3	1	3/2	5

L: See Land Vehicle Chart for further details.

U: Unlimited range.

Where more than one associated sub-skill is listed, use the one appropriate to the current use of the vehicle.

[21.3] Air vehicles are used to fly above the surface of a world.

All propeller driven and jet planes are familiar to the players and the GM, and are among those summarized on the **Air Vehicle Chart** (see below). Others include:

Dragonfly. A small man-powered craft with wings which are driven by the arms and legs; very light and fragile.

Ornithopter. A large flying vessel using the actual beating of its wings for lift. Enclosed, air tight, and with an air lock, the example given is the largest and most powerful of its type. Nuclear powered.

Air Car. The common man's transportation; powered by an electrical turbine which uses the atmosphere as a propellant. Powered by batteries similar to a robot's.

Levigator. An anti-gravity craft using magnetic monopoles to repel the gravity field; maximum altitude is one kilometre. Enclosed with an air lock.

Floater. Similar to a Levigator with a maximum altitude of 500 meters.

Skimmer. Similar to Levigator and floater except it has no air lock and cannot rise above 5 meters in altitude.

Shuttle. Similar to the shuttle of the 1980's except it needs no rocket boosters (lifts off like an airplane) and is nuclear powered.

Jetpack. Rocket powered backpack (solid fuel propellant) allowing wearer to fly in any atmosphere (or vacuum). Wearer uses jet-pack skill (not air vehicle skill). Civ Level: 7. Cost: 75 Trans. Range: 200 km. Speed (km/hr): 200. Repair Time: 12 hours. Weight: 40 kg.

[21.3] AIR VEHICLE CHART

VEHICLE ASSOCIATED SUB-SKILL	CIV LEVEL	PRICE (TRANS)	RANGE (100x Kilometres)	SPEED (x100 km / H)	TRACE OR NONE*	THIN*	OTHERS*	PASSENGERS	CARGO CAPACITY (x100Kg)	PERFORMANCE MODIFIER	BASE REPAIR TIME (Days)	ARMOUR (Projectile / Beam)	LENGTH (Meters)
Dragonfly GLIDER	6	5	1	0.1	P	3	5	1	.1	-25	0.5	1/1	2
Ornithopter GLIDER	8	300	200	1.5	P	4	7	12	12	0	1	1/1	20
Propeller Plane	5	200	40	5	P	3	7	5	25	-5	0.5	2/2	8
Jet Plane	7	1000	600	9	P	3	9	8	50	+25	2	3/3	25
Air Car JET	8	1300	10	7	P	6	9	3	2	+20	1	3/2	5
Levigator DIRECT LIFT	7	4000	U	0.3	6m	6m	6m	100	100	0	10	4/4	40
Floater DIRECT LIFT	8	400	U	0.4	6m	6m	6m	10	5	+25	6	1/1	8
Skimmer DIRECT LIFT	8	500	U	0.6	7m	7m	7m	5	3.5	+10	7	1/1	5
Helicopter	6	150	20	1	P	3	6	6	5	-20	1	2/3	5
Shuttle SHUTTLE or PILOT	7	8000	640	20	8	8	8	40	200	+10	5	4/4	120

* **MAXIMUM WORLD SIZE** the Air Vehicle may operate by **ATMOSPHERE**

P: Prohibited.

U: Unlimited Range; overhaul required once per year at a cost of 100 Credits.

m: Cannot be used on a world Size 3 or less.

[22.0] Personal Equipment

Representative personal scientific equipment, tech kits, communications gear, and miscellaneous equipment is summarized on the **Personal Equipment Chart** (see below).

[22.1] Scientific equipment enables a character to undertake specific scientific tasks.

Three kinds of equipment are available:

labs, which require a piece of the item to be analysed; *scanners*, which allow remote analysis up to a certain range; and *synthesizers*, which require input of raw material to produce usable substances.

Geo Lab. Allows geology *analysis* tasks only (see 12.0).

Geo Scanner. Allows any geology task; has a range of **50** times its Civ Level in kilometres. Will give direction of item being scanned if task is successful; gives distance only if item is within **50km**.

Mediscanner. Allows diagnosis and treatment tasks. Must touch the being to be activated.

Bio Scanner. Must be within 5 meters of the entity being scanned in order to operate.

Neuroscanner. Can detect the electromagnetic waves emitted by any living thing within **300** meters. Will reveal the number and type of every living thing within range and also their general direction. If the population is very dense, this scanner is virtually useless. No skill required for use.

Chemlab. Allows chemistry *analyse sample* tasks (see 12.0).

Chemsynthesizer. Allows chemistry *synthesis* tasks. Amount synthesized will be small (one kilo for simple compounds, one gram for complex compounds). Synthesis of a gas (oxygen, for example) will yield abundant amounts.

Energy Scanner. Used for all physics tasks except energy tapping. Range is **100** meters.

[22.0] SCIENTIFIC EQUIPMENT CHART

SCIENTIFIC EQUIPMENT	CIV LEVEL	WEIGHT (Kilograms)	PRICE (TRANS)	SKILL BONUS	TIME NEEDED FOR USE	BASE REPAIR TIME (Hours)
Geo Lab	5	15	1	0	2	1
Geoscanner I	6	25	6	0	1	1
Geoscanner II	8	7	15	+2	0.5	2
First Aid Kit	4	5	1	0	1	1
Mediscanner I	6	10	12	+1	0.5	1
Mediscanner II	8	5	10	+2	0.3	2
Bioscanner	7	7	8	0	(a)	1
Bioscanner	8	2	12	+1	(a)	2
Neuroscanner	8	5	18	Na	None	2
Chem Lab I	5	20	2	0	1	1
Chem Lab II	7	15	7	+1	0.5	1
Chem Synthesizer I	6	25	2	0	4	1
Chem Synthesizer II	8	22	6	+2	2	2
Energy Scanner	7	5	10	0	(a)	1

na: Not Applicable.

AR: Activation takes One Action Round.

(a): See 12.0 for explanation.

(b): See 13.1 for explanation.

[22.2] Tech kits enable a character to attempt to repair various types of damage to specific equipment.

The kits include replacement parts, troubleshooting equipment, tools, and other items of repair. Unless otherwise stated, a kit may be used to repair any type of damage to the appropriate item (even if the item is partially destroyed).

Basic Repair Kit. Allows repair of superficial damage to any item smaller than a large vehicle, and of light damage to any item weighing less than **15 kg**.

Suit Kit. Allows repair of environment suits and respirators. Also allows repair of punctures to body armour.

Armour Kit. Allows repair of environment suits, body armour, and all other items listed on the Protective Attire Chart, except the force field. May repair projectile and beam armour on body armour, vehicles, and armoured structures. The Civ Level 7 kit does not allow repair of a partially destroyed item.

Weapon Kit. Allows repair of all weapons except those mounted on a spaceship. The Civ Level 6 kit does not allow repair of a partially destroyed item.

Electro Kit. Allows repair of all types of small electronic equipment (scanners, labs, etc.). Partially destroyed equipment weighing more than **15 kg** may be repaired only with the Civ Level 8 version of the kit.

Robot Kit. Allows repair of all types of damage to all robots.

Vehicle Kit. Allows repair to all types of vehicles. Does not repair any damage done to the armour of these vehicles. The Civ Level 6 version of this kit will not repair a partially destroyed vehicle.

Spaceship Kit. Allows repair to all facets of spaceships, one compartment at a time. No spaceship kit will repair anything that is partially destroyed.

[22.0] REPAIR EQUIPMENT CHART

TECH KIT EQUIPMENT	CIV LEVEL	WEIGHT (Kilograms)	PRICE (TRANS)	SKILL BONUS	TIME NEEDED FOR USE	BASE REPAIR TIME (Hours)
Basic Repair Kit	5	5	1	0	(b)	na
Suit Kit	7	2	2	0	(b)	na
Armour Kit I	7	15	20	+1	(b)	na
Armour Kit II	8	15	30	+2	(b)	na
Weapon Kit I	6	7	2	+1	(b)	na
Weapon Kit II	8	7	4	+2	(b)	na
Electro Kit I	7	5	11	+1	(b)	na
Electro Kit II	8	5	15	+2	(b)	na
Robot Kit	8	15	30	+1	(b)	na
Vehicle Kit I	6	30	25	+1	(b)	na
Vehicle Kit II	8	30	35	+2	(b)	na
Spacecraft Kit I	6	100	60	0	(b)	na
Spacecraft Kit II	7	100	75	+1	(b)	na
Spacecraft Kit III	8	100	100	+2	(b)	na

na: Not Applicable.

AR: Activation takes One Action Round.

(a): See 12.0 for explanation.

(b): See 13.1 for explanation.

[22.3] Communications gear allows characters to converse over distances or translate speech.

Any communications device relying on the transmissions of radio waves will be subject to the normal vagaries of that medium. The GM should feel free to allow occurrences such as solar flares, magnetic deviations, and signal jamming to interfere with the characters' transmission. Amongst other communication devices, there are:

Headset Radio. Installed inside a respirator helmet, this has a range of **2km**.

Planetary Shortwave. Allows communication anywhere on any world and also into orbit, if the two radios are on the same side of the world.

Interplanetary Radio Dish. Allows communication anywhere within a star system.

Interstellar Commlink. Psionic device available to the public allowing instantaneous communication between star systems. Puts character in contact with Psion who will transmit short message anywhere in settled space. In addition to purchase cost, there is a charge for each use of **50Mils** plus **5Mils** per light year message is sent. *Exception:* No charge for thinker or psionic navigator.

Translator. Aids in communication with beings who speak a foreign language. The Civ Level 7 version simply translates what the other being is saying; the Civ Level 8 version may allow the character to speak in that language also. In this version, it will yield a phonetic version of the phrases to be uttered.

[22.0] COMMUNICATIONS EQUIPMENT CHART

COMMUNICATIONS EQUIPMENT	CIV LEVEL	WEIGHT (Kilograms)	PRICE (TRANS)	SKILL BONUS	TIME NEEDED FOR USE	BASE REPAIR TIME (Hours)
Headset Radio	5	1	0.2	+1	na	1
Planetary Short-wave	5	20	0.4	0	na	1
Interplanetary Radio	7	5	2	0	na	1
Planetary Headset	8	1	2	+1	na	2
Interstellar Commlink	8	1	2	na	na	2
Translator	7	2	16	+1	None	1
Translator	8	1	48	+2	None	2

na: Not Applicable.

AR: Activation takes One Action Round.

(a): See 12.0 for explanation.

(b): See 13.1 for explanation.

[22.4] Miscellaneous equipment includes recording equipment, cages, vision equipment, and any other devices the characters may use.

Superoid Camera. Produces a holographic still image; all developing is done within the camera. Price of the film (20 images) is one fourth of the camera.

Holographer. Produces a holographic still or moving picture; developing is done in the camera. Price of the film (one hour of images) is one fifth of the camera.

Force Cage. A cage used to hold creatures utilizing a force field instead of bars. One force cage may hold a large creature. Force cages may be joined together to hold larger entities.

Night Glasses. Allow vision- in the dark through infrared emissions. The item resembles binoculars.

Rocket Flare. A flare which, when shot from any pistol, rises to a height of **1 km** and explodes, sustaining the light for **½ hour**, floating on a small set of rockets.

Super Cage. A non-metallic, entirely sealed container. Buffered walls protect fragile life-forms.

Rock Blaster. Shock absorbing jackhammer/compressor. May hold ore it extracts. Increases mining and asteroid mining Skill Levels by 1. Price: **15 Trans.** Weight: **25 kg.** Civ Level: 6.

Anaerobic Torch. Hand-held, electrical/ chemical light source. Provides daylight in **20** meter radius for **100** hours. Works in any atmosphere or a vacuum.

Computer Time. Available to characters in any urban environment of Civ Level 5 or above. *Library data* time will be found at a Data Centre, and most unclassified information concerning the world, star system, and federation will be easily found. It is very rare that information of a classified nature will be obtainable (even through use of programming skill) at a terminal of this type. One hour of time costs **10** times the Civ Level of the world in Mils. The sophistication of the information obtained increases with the Civ Level of the computer used.

Programming time is obtained differently. This includes all official commercial use of computers by the characters. All small business and record keeping procedures the characters may wish to carry out can be accomplished on a small portable business computer. Often, however, the GM will decide the task which the characters need to accomplish will require a larger machine. One hour of time is available through large corporations at a cost of **20** times the Civ Level of the world in Mils.

Audio Sealed Case. An attaché case with the voice print of the owner encoded within the locking mechanism. Also has projectile Armour Rating of 2. Price: **15 Trans.** Weight: **10 kg.** Civ Level: 7.

False Identity. A full set of false ID papers, photos, fingerprints, retinal patterns, etc. Price: **25 Trans.** Weight: Negligible. Civ Level: 6.

Business Computer. A small portable computer capable of performing many menial calculations and record keeping. Comes in many different sizes and I/O configurations. Price: **5 Trans.** Weight: Varies; approximately 10 kg. Civ Level: 6.

Plastic Explosives. Produces explosions of varying intensities; the GM must adjudicate their effects. Price: **1 Tran.** Weight: **1 kg.** Civ Level: 5.

This list by no means exhausts all the equipment the characters will wish to purchase. The GM must create these items within the framework of the guidelines shown in this Section; he should feel free to be as creative as he desires. This particular area will personalize a GM's campaign more than any other.

[22.0] MISCELLANEOUS EQUIPMENT CHART

MISCELLANEOUS EQUIPMENT	CIV LEVEL	WEIGHT (Kilograms)	PRICE (TRANS)	SKILL BONUS	TIME NEEDED FOR USE	BASE REPAIR TIME (Hours)
RECORDING						
Still Camera	4	5	0.1	na	AR	1
Superoid Camera	5	7	0.4	na	AR	1
Holographer	7	25	3	na	AR	1
VISION						
Night Glasses	7	0.3	3	na	na	1
Rocket Flare	5	0.5	0.1	na	AR	na
Anaerobic Torch	6	0.5	0.1	na	AR	na
Flash Light	4	0.5	0.1	na	AR	1
Binoculars	5	1	0.1	na	na	1
AUDIO						
Audio Recorder	5	2	0.1	na	AR	1
RESTRAINT						
Metal Cage 0.5m ³	2	2	0.1	na	na	1
Metal Cage 8.0m ³	2	50	0.5	na	na	1
Super Cage 0.5m ³	5	1	0.2	na	na	1
Super Cage 0.5m ³	5	30	1	na	na	1
Force Cage	8	3	20	na	AR	2
MINING						
Rock Blaster	6	25	15	+1 Mining +1 Asteroid Mining		

na: Not Applicable.

AR: Activation takes One Action Round.

(a): See 12.0 for explanation.

(b): See 13.1 for explanation.

VI. World Generation

Once the GM has introduced the players to the game with the enclosed adventure, he must create other star systems. The world generation system is designed to provide the GM with only as much information about a world as he wants, and the process is accordingly punctuated with convenient stopping places.

If, while creating a world, the GM decides to finish the details himself without rolling dice, he is encouraged to do so. This chapter is intended as a guide for the creation of a world; the GM need not let the dice determine his universe. Logic and creativity, in proportions, should be injected into this system.

Generating each star system may yield planets, with each planet's size, type, and position determined. Moons may be similarly generated. At this point, the GM will have a graphic layout of the whole system and enough information to give the players if they are examining the system from above or below the ecliptic. It is up to the GM to name the stars and worlds. The names of the stars listed on the Stellar Display are sometimes very dry and technical; the GM should feel free to invent interesting names.

Generating the geographic features of each world yields the atmosphere, mean temperature, hydrographic percentage, distribution of land and water, and the specific gravity of each environ. At this point, the GM will have an actual map of each world to show the players if they are in orbit around the world.

Generating the population and technology of each world yields the total population, type of settlement. Law Level, Spaceport Class, Civ Level, distribution and development of resources, and the distribution of the population. At this point the GM will have enough information to referee any adventure involving the world.

GLOSSARY

The following terms are used throughout this chapter:

Binary or Trinary Star. Two or three stars revolving around a common centre of gravity; may limit the number of possible planets.

Biosphere. The most habitable zone (for humans) of a star system; affects the type of planet or moon within it.

Civilisation (Civ) Level. A number from 1 to 8 measuring a world's economic contribution to the federation.

Environ. One of a variable number of areas on a world's surface. Each environ is a square 4,000km to a side. An environ may be drawn at a scale of 100km per hex on an Environ Hex Map.

Hostile Zone. The most inhospitable zone (for humans) of a star system; affects the type of planet or moon within it.

Kuiper Belt. A disk shaped region of heavier bodies orbiting the outer limits of the Star system. For Sol this region is considered to start outside the orbit of Neptune and is where Pluto has thought to have originated. The region contains planetesimals and icy asteroids.

Law Level. A number from 1 to 5 measuring the quality and degree of law enforcement on a world.

Moon. A body which orbits a planet; also referred to as a world.

Neutral Zone. The area of a star system not in the biosphere or hostile zone; affects the type of planets or moons within it.

Oort Cloud. A spherical region of space at the limits of a star's gravitational influence. For Sol this extends out to about 3 light years and contains the flotsam and jetsam of the solar system particularly comets.

Planet. A body orbiting a star; also referred to as a world.

Resource. A natural feature of value found on a world.

Settlement Status. A term summarising the type and extent of human settlement on a world.

Site. A small location within an environ of special interest; natural sites are not usually noticeable without extensive exploration.

Spaceport Class. A number from 0 to 5 measuring the quality of facilities available at a spaceport.

Spectral Class. A standard astronomical term quantifying a star's luminosity. Used in *Universe* to determine a star's likelihood of having planets.

Star System. A star with its orbital bodies, including planets, moons, asteroids, and comets. Graphically represented in *Universe* on a Star System Log.

World. Any planet, moon, asteroid belt, or other heavenly body on which an adventure may take place; graphically represented on a World Log.

[23.0] Star Systems

The GM is responsible for choosing a star to generate. The Interstellar Display shows every known star within 30 Light Years of Sol, each star's Spectral Class, and whether it is able to support planets. Some stars form binary or trinary systems; their peculiarities are detailed in 23.2. The Star System Log is used to record the information concerning the star and its planets. To generate a complete star system, the GM conducts the following steps:

1. Choose a star from the Interstellar Display. Note the star's co-ordinates, its distance from Sol, and its Spectral Class on the Star System Log.
2. Determine the number and positions of the planets in the system, and record them on the Log.
3. Determine the size and type of each planet in the system.
4. Determine the number of moons for each planet and record the results on the Log. The size and type of each moon are determined, and that information is also recorded.
5. Note the gravity of each world.

[23.1] The GM chooses a star from the Interstellar Display.

Each star listing includes its Cartesian co-ordinates **(X, Y, Z)**, its name, Spectral Class, and whether or not it can sustain planets. When choosing 'a star system to generate, the GM should keep in mind that the farther a star is from Sol, the less its chance of having a highly developed civilisation and quality interstellar trade routes. Also, the farther away from Sol the greater the chance of undiscovered resources and life forms. The Spectral Class of the star affects the number of planets and the habitability of each planet. The GM would do well to spend time examining all the charts and tables detailed in this Chapter before picking a star.

[23.2] The binary and trinary star systems contain abnormalities.

These systems have exceptions to the normal distribution of planets. The anomalies are due to a number of factors including the stars' Spectral Classes and the distance between the stars. The types of restrictions limit the planet positions that can be rolled (for instance, **1-7** indicates that only the first seven positions can be rolled for). Star systems restricted in this manner are listed in the **Binary/Trinary Star System Summary** (see below).

[23.2] BINARY / TRINARY STAR SYSTEM SUMMARY

STAR	Pos	STAR	Pos	Pos: Roll only for Planets in the indicated positions for these stars.
Alpha Centauri A: -2, -1, -4	1-2	CD -8° A: -6, -20, -3	2-12	
61 Cygni A:	1-6	Rho Eridani A:	1-2	
61 Cygni B: +6, -6, +7	1-5	Rho Eridani B: +11, +5, -18	1-2	
Jim: +6, -6, +7	1-10	41 Arae A: -3, -18, -19	1-2	
Eta Cassiopeiae A: +10, +2, +15	1-7	Gamma Leporis A:	1-11	
WX Ursae Majoris A: -13, +4, +13	1-8	Gamma Leporis B: +2, +25, -10	1-8	
BD+53° 1320:	1-7	CD -36° 13A: +8, -13, -12	1-2	
BD+ 53° 1321 -9, +8, +16	1-7			

[23.3] The GM should familiarize himself with the use of the Star System Log.

Space is given on this log to record the star's Spectral Class, name, and distance from Sol. Also listed are the biospheres, neutral zones, and hostile zones for all five Spectral Classes. Each planetary position (**12** in all) gives the Planet Size Modifier and the distance from the star in Astronomical Units (AU's).

The GM records the information concerning the star on the log. As each planet is generated, he notes the name, size, type, and number of moons for the planet. Below these listings is additional space to note detailed information about the worlds (both planets and moons).

The log is also used to record general information concerning the system itself, such as interworld and interstellar trade routes, governmental types, amount of federal intervention. This information is derived from 25.0, 32.0, and 33.0.

[23.4] The GM determines the number of planets in the system.

Refer to the **Planet Creation Table** (see below) and roll two dice. for each possible planet position shown on the Star System Log. If the result matches the range listed, a planet exists at the position. If a planet does not exist, put an X through the circle at the position. The circles of all the existing planets are left blank for the time being. A total of 12 dice rolls are made (unless using a restricted binary or trinary system).

If a position has no planet, this does not mean there is no world of any kind there; but that there is no world of any interest there. The GM is free to place dead worlds (gas giants, volcanic worlds, etc.) wherever he wishes in order to fill out a star system.

[23.4] PLANET CREATION TABLE

SPECTRAL CLASS	PLANET RESULT	PLANET RESULT:
A (0 – 4)	2-5	Planet exists at position if the sum of 2-dice is between the range listed next to the spectral class of the star.
A (5 – 9)	2-7	
F (0 – 4)	2-8	
F (5 – 9)	2-9, 17	
G (0 – 4)	2-11	
G (5 – 9)	2-10	See 23.4 for explanation of use.
K (0 – 4)	2-9	
K (5 – 9)	2-7, 17	
M (0 – 4)	2-6	
M (5 – 9)	2-3	

[23.5] The GM determines the size and type of each planet.

For each existing planet, refer to the **Planet Size and Type Table** (see below).

Roll one die twice to determine the planet's size, habitability, and resource category. One or both die results may be modified, as listed on the table and on the Star System Log. For each Spectral Class listed in the upper left-hand corner of the log, there is a line reading across the planet listings. This indicates which positions for that Spectral Class are within the biosphere, neutral zone, or hostile zone. The biosphere gives a **-2** modifier, and the neutral zone a **+2** both to the second die roll only. The hostile zone indicates the second die is not rolled; the roll is treated as a **10** and that row is used to locate the result. Record all attributes derived from the table on the log. The GM should invent a name for each planet and record it on the log.

The abbreviated attributes are defined as follows:

E: Earth-like; similar to Earth in most natural features.

T: Tolerable; can be inhabited with a certain amount of technological aid.

H: Hostile; habitation is very difficult and very expensive.

A: Asteroid belt; possibly a broken up planet such as exists in the Sol system. Treated as a size 4 planet for purposes of resource determination.

r: Resource rich; abundant resources in easily accessible locations.

p: Resource poor; resources are either scarce or very inaccessible.

1 through 9: Planet size; affects gravity (see 23.7), number of environs, and determines which World Log is used.

[23.5] PLANET SIZE AND TYPE TABLE

FIRST DIE
SECOND DIE

	1	2	3	4	5	6	7	8	9	10
1	3: Er 4: Ep	4: Er 4: Er	4: Er 4: Er	4: Er 4: Er	4: Er 4: Er	5: Er 5: Er	5: Er 5: Er	5: Er 5: Er	7: Ep 7: Er	7: Er
2	3: Ep 3: Ep	4: Er 4: Er	4: Er 4: Er	4: Er 4: Er	4: Er 4: Er	5: Er 5: Er	5: Er 5: Er	8: Er 8: Er	8: Ep 8: Ep	8: Ep
3	4: Er 4: Ep	5: Ep 5: Er	5: Er 5: Er	5: Er 5: Er	5: Er 5: Er	5: Er 5: Er	5: Er 5: Er	5: Er 5: Er	7: Er 7: Er	7: Ep
4	2: Tr 3: Tp	3: Tp 3: Tp	3: Tr 6: Er	6: Er 6: Er	6: Er 6: Er	6: Er 6: Er	6: Er 6: Er	6: Er 6: Er	6: Ep 6: Ep	6: Ep
5	2: Tp 3: Tr	3: Tr 4: Tr	4: Tr 4: Tr	4: Tr 4: Tr	4: Tr 4: Tr	5: Tr 5: Tr	5: Tr 5: Tr	5: Tr 5: Tr	8: Tr 8: Tr	8: Tp
6	1: Hr 3: Tp	3: Tp A: Hr	4: Tp 4: Tp	5: Tr 5: Tp	A: Hp 8: Tp	8: Tp	8: Tp	8: Tp	8: Tp	8: Tp
7	1: Hr 2: Hr	4: Hr A: Hr	5: Tp 5: Tp	A: Hp A: Hr	6: Tr 6: Tr	6: Tr 6: Tr	6: Tr 6: Tr	6: Tr 6: Tr	6: Tr 6: Tr	6: Tr
8	1: Hr 2: Hr	3: Hr A: Hr	4: Hp A: Hr	5: Tp 4: Hp	A: Hr 6: Tp	A: Hr 6: Tp	A: Hr 6: Tp	A: Hr 6: Tp	A: Hr 6: Tp	6: Tp
9	1: Hr 2: Hr	2: Hr 2: Hr	3: Hr 3: Hr	6: Tr 6: Tr	8: Tr 6: Tp	8: Tr 6: Tp	8: Tr 6: Tp	8: Tr 6: Tp	8: Tr 6: Tp	6: Tp
10	1: Hp 2: Hp	3: Hp A: Hp	5: Hp 6: Hr	7: Hp 8: Hp	7: Tr 9: Hr	9: Hr	9: Hr	9: Hr	9: Hr	9: Hr

#: Planet size.

E: Earth-Like;

T: Tolerable;

H: Hostile;

A: Asteroid Belt;

r: Resource Rich,

p: Resource Poor.

Modifiers:

Add or Subtract Planet Size Modifier (See Star System Log) from first die result. **Subtract 2** from second die result if planet is in biosphere.

Add 2 to second die result if planet is not in biosphere and not in hostile zone.

Do not roll second die if planet is in hostile zone (See Star System Log); use **10** row or the table to obtain planet size and type.

Treat all modified rolls of less than **1** as **1**, and all modified die rolls of more than **10** as **10**.

See 23.5 for detailed explanation of use.

[23.6] The GM determines the number of moons for each planet.

Use the **Moon Creation Table** (see below) for each planet created; size 1 and 2 planets cannot possess moons. Cross reference one die roll with the planet size to find the number of the planet's moons; record the number on the System Log.

Determine each moon's size and type using the **Moon Type Table** and **Moon Size Table**. The concepts used in this procedure are similar to those in 23.5. The GM should realize here the only distinction for game purposes between a planet and a moon is the body, which they orbit. Also, it is possible to generate a size 0 moon, but a size 0 planet cannot be generated.

[23.6] MOON TABLES**Moon Generation Table**

PLANET SIZE								
DIE	3	4	5	6	7	8	9	
1, 2	0	0	0	0	0	0	0	0
3, 4	0	0	0	0	1	1	1	
5, 6	0	0	1	1	2	2	3	
7, 8	0	1	1	2	3	4	5	
9	1	1	2	3	4	5	6	
10	1	2	3	4	5	6	7	

Results are number of moons orbiting planet. A Size 1 or 2 Planet or moon may not possess moons. See 23.6 for explanation.

Moon Size Table

MOON SIZE	
1 DIE + PLANET SIZE	MOON SIZE
4-8	0
9-12	1
13-15	2
16-17	3
18	4
19	5

Moon Type Table

MOON SIZE				
DIE	0, 1	2	3	4, 5
1	Hr	Tr	Er	Ep
2	Hp	Tp	Ep	Ep
3	Hr	Op	Tr	Er
4	Hp	Hr	Tp	Tr
5	Hr	Hp	Op	Tp
6	Hp	Hr	Op	Tr
7	Hr	Hp	Hr	Or
8	Hp	Hr	Hp	Hp
9	Hr	Hp	Hr	Hp
10	Hp	Hr	Hp	Hr

E: Earth-Like. **T:** Tolerable. **H:** Hostile.
O: Ring. **r:** Resource Rich. **p:** Resource Poor.

Subtract 2 or add 2 to die result depending on whether moon's planet is in or out of the Biosphere.
 If moon is in hostile zone of star system, do not roll; cross-reference moon size with **10** row to yield moon type.

Treat all modified rolls of less than **1** as **1** and all rolls of greater than **10** as **10**.

[23.7] The gravity of each world is determined by the size of the world.

On each World Log, the gravity is listed for that size world. Gravity is expressed in G's, with Earth's gravity equalling **1.0G**. The gravity types range from **none** to **2.5G**; see **World Gravity Table**, see below, for summary.

On worlds with a "trace" gravity, objects will slowly settle to the surface. However, any object propelled with a velocity equal to or greater than that of a pitched baseball will escape the gravitational field.

[23.7] WORLD GRAVITY TABLE

WORLD SIZE	GRAVITY	CLASS
0	None	NW
1	Trace	NW
2	0.2	NW
3	0.4	NW
4	0.7	LT
5	1.0	LT
6	1.3	HY
7	1.7	HY
8	2.0	EX
9	2.5	EX

[24.0] Geographical Features

The generation of geographical features for a world will yield not only factual information but an actual pictorial representation of the world as it would be seen from orbit. This is accomplished by use of the World Log, which is a graphic layout of the world as viewed from the poles. The information generated in Section 23.0 and the features determined in this Section are recorded on this log. It is recommended that the GM use coloured markers or pencils when drawing the world map. To generate the geographical features, the GM conducts the following steps and records the information generated on the World Log corresponding to the appropriate world size:

1. Determine the world's atmosphere.
2. Determine the world's mean temperature.
3. Determine the hydrograph percentage.
4. Note the number and type of land/water environs for the world and distribute them amongst the environs of the World Log.
5. Draw in the land masses and water bodies on the world map, creating continents, oceans, rivers, islands, etc.
6. Determine the environ type for each environ on the log. Record this information or draw out the environ type using markers or pencils.
7. Determine the day length (optional).

[24.1] The GM should familiarize himself with the use of the World Log.

There are, in this booklet, **10** World Logs, which represent variously sized worlds.

Each World Log is a graphic representation of a world as it is viewed from the poles. The size 0 log has only one view due to its small size. These views are divided into environs, which represent areas on the surface 4,000 km across. Each environ is numbered, and each ring of environs represents a different temperature ring on the world. Each ring contains a temperature modifier, which is applied to the mean temperature generated for the world to determine the mean temperature of that ring.

Each log has space to list the world's name, type, atmosphere, temperature, hydrograph percentage, day length, population, Civ Level, Law Level, Spaceport Class, and resources. The size and gravity of each world is already listed at the top.

The map of the world is divided into environs. The GM should examine the log carefully to note which environs are adjacent to one another. Special attention should be paid to how the rings, which form the outer circumference of the north and south views, connect with each other.

The GM should create two logs, one containing all the fine detail for himself, and one which is mainly pictorial in nature for the players. Record all the raw data on a piece of scrap paper or an extra copy of the log and make the final copy only after all information has been determined. For each environ, the land/water distribution, environ type, resources, and population must be recorded.

[24.2] The GM determines the atmosphere for the world.

Referring to the **World Atmosphere Table** (see below), the GM rolls one die and adds the world size to the result (a world of size 0 or 1 automatically possesses no atmosphere). The modified die result is cross-referenced with the world type and the atmosphere is recorded on the World Log. The atmosphere types and their effects follow:

None. Full expedition suit required at all times. All structures must be airtight with air-lock door systems.

Thin. Respirator required. Survival without respirator possible for up to 2 hours (or up to GM's discretion). Higher quality structures are airtight; most structures have air compressors.

Thin, Contaminated. Respirator required. Small possibility of disease. Higher quality structures are airtight. All structures must have air compressors and filter doors.

Normal. No special equipment or structures are required.

Normal, Contaminated. Filter mask required. All structures have filter doors and small compressors.

Poison. Respirator required; expedition suit recommended. All structures are airtight with oxygen supply. Disease, deterioration, and frequent storms are possible; low visibility is common.

Corrosive. Full expedition suit required;

body armour recommended. All structures must be airtight with air-lock door systems. Higher quality structures are armoured. Constant storms are possible; no visibility. Deterioration and disease are likely.

[24.2] WORLD ATMOSPHERE TABLE

DIE + WORLD SIZE	EARTH-LIKE	WORLD TYPE TOLERABLE	HOSTILE	A world of size 0 or 1 automatically possesses no atmosphere. (C) : Contaminated.
3-5	Thin	None	None	
6	Thin (C)	Thin (C)	None	
7	Normal	Thin	None	
8	Thin (C)	Poison	None	See 24.2 for explanation.
9	Thin	Thin (C)	Poison	
10	Thin	Poison	Corrosive	
11	Normal	Thin	Poison	
12	Normal (C)	Corrosive	Corrosive	
13	Poison	Thin (C)	Poison	
14	Normal	Poison	Corrosive	
15	Normal (C)	Normal (C)	Poison	
16	Normal	Normal (C)	Corrosive	
17	Normal	Poison	Poison	
18	Normal (C)	Poison	Corrosive	
19	Normal	Normal (C)	Poison	

[24.3] The GM determines the mean temperature of the world.

Using the **World Temperature Table** (see below), the GM rolls one die and applies modifiers listed on the table. The result is cross referenced with the world type and the temperature is recorded on the World Log. This temperature is the mean for the entire world; the actual temperature varies from one environ ring to another. All temperatures are in Fahrenheit.

Each World Log lists the temperature modifier for each ring of environs on the world. This modifier is added to the mean temperature of the world to determine the average temperature of all environs in that ring. For example, a size 4 world has a mean temperature of **50°**. Reference to the World Log shows environs **1** and **14** will have a temperature of **25°**; **2** through **5** and **15** through **18** will have a temperature of **50°**; and **6** through **13** will have a temperature of **75°**. The specific temperature of an environ is used with the **Environ Type Table** when determining the nature of an environ.

When creating a world with an odd axial tilt (for instance, pointing toward the star) or with no rotation, the GM should change the distribution of the temperature modifiers on the World Log and/or widen the range of modifiers. The modifiers are designed for a world with an axis nearly perpendicular to the plane of the star system ecliptic and with axial rotation. The GM should feel free to alter them to fit the individual pattern.

[24.3] WORLD TEMPERATURE TABLE**WORLD TYPE**

ONE DIE	EARTH-LIKE	TOLERABLE	HOSTILE
-5, -4	125	175	200+
-3, -2	100	150	200
-1, 0	100	125	175
1, 2	75	125	175
3, 4	75	100	150
5, 6	50	25	-25
7, 8	50	0	-25
9, 10	25	0	-50
11, 12	25	-25	-50
13, 14	0	-25	-75
15, 16	0	-50	-75-

Results represent average temperatures of the world; all temperatures are expressed in °F.

See 24.3 for explanation.

Die Roll Modifiers:

If the planet is closer to the star than the star's biosphere, *subtract 6* from the die result.

If the planet is further from the star than the star's biosphere, *add 6* to the die roll.

[24.4] The GM determines the hydrograph percentage of the world.**[24.4B] LAND AND WATER DISTRIBUTION CHART**

WORLD SIZE	HYDROGRAPH PERCENTAGE	WATER	WATER/ MINOR ISLANDS	WATER/ MAJOR ISLANDS	WATER / LAND	LAND/ MAJOR WATER	LAND/ MINOR WATER	LAND
2	20	0	0	0	0	2	2	2
3	20	0	0	0	1	3	2	4
3	40	0	0	3	2	2	2	1
4	20	0	0	0	1	6	4	7
4	40	0	0	5	4	4	4	1
4	60	1	4	6	4	2	1	0
4	80	7	6	4	1	0	0	0
5	20	0	0	0	3	8	5	10
5	40	0	1	6	6	5	5	3
5	60	3	5	7	5	3	3	0
5	80	10	8	5	3	0	0	0
5	100	23	3	0	0	0	0	0
6	20	0	0	0	4	11	8	15
6	40	0	1	8	9	8	8	4
6	60	4	8	10	8	4	4	0
6	80	15	11	8	4	0	0	0
6	100	34	4	0	0	0	0	0
7	20	0	0	1	4	14	11	20
7	40	0	1	13	11	10	10	5
7	60	5	11	14	10	5	4	1
7	80	20	16	9	4	1	0	0
7	100	45	5	0	0	0	0	0
8	20	0	0	1	6	19	14	26
8	40	0	1	18	14	13	13	7
8	60	7	14	18	13	7	6	1
8	80	26	21	12	6	1	0	0
8	100	60	5	1	0	0	0	0
9	20	0	0	1	7	24	17	33
9	40	0	1	23	17	17	16	8
9	60	8	17	24	17	8	7	1
9	80	33	26	15	7	1	0	0
9	100	75	6	1	0	0	0	0

The GM refers to the **World Hydro-graph Table** (See 24.4A and B) Using the world's size and mean temperature to ascertain which column to look in, the GM rolls one die and records the hydrograph percentage on the World Log. Note that worlds which possess no atmosphere or whose temperature is below **0°** or above **125°** automatically have no freestanding water.

The GM then refers to the **Land and Water Distribution Chart** (page 46). Seven types of land-water distribution which might exist in an environ are listed across the top of the chart (see explanation following). Using the line, which corresponds to the world size and hydrograph percentage, the GM reads across to find how many environs of each type exist on the world. Note the total of all the numbers on a single line equals the number of environs on the world. The following seven types are included:

Water. All liquid with no land.

Water with Minor Islands. 90 percent water with scattered small islands.

Water with Major Islands. 75 percent water with islands or land masses possibly connecting to a larger land mass out of environ.

Water with Land. 50 percent water and landmasses.

Land with Major Water. 75 percent land with water; such as a coast line or major lake within the land mass.

Land with Minor Water. 90 percent land with small water; a small part of a coastline, a river network, small lakes, etc.

Land. Land with no bodies of water.

These descriptions are intended as guides only; the GM should decide what elements make up the distribution type. See the Adventure Guide for visual examples of these distributions.

The GM should actually draw these environs on the log, assigning them to whichever environ seems consistent, logical, or aesthetically pleasing. Many water-only environments could be combined adjacently to form a large ocean. Coastlines from environ to environ should be contiguous, and the GM should be constantly aware of which environs are actually adjacent although graphically separated on the log. This drawing process should be done roughly in pencil at first, with a final coloured version executed when all decisions are finalized.

See 24.4 for detailed explanation of use.

[24.4A] WORLD HYDROGRAPH TABLE

ONE DIE	WORLD TEMPERATURE 50, 75 WORLD SIZE					0, 25, 100, 125 WORLD SIZE				
	3	4	5	6-9		2	3	4	5	6-9
1	0	0	20	20		0	0	0	0	0
2	0	20	20	40		0	0	0	0	20
3	0	20	40	40		0	0	0	20	20
4	20	20	40	40		0	0	0	20	20
5	20	40	60	60		0	0	20	20	40
6	20	40	60	60		0	20	20	40	40
7	20	40	60	80		0	20	20	40	60
8	40	60	80	80		20	20	40	40	60
9	40	60	80	100		20	40	40	60	80
10	40	80	100	100		20	40	60	60	80

Results represent percentage of the world's surface covered with water.

This table is not use for worlds, which possess no atmosphere, or possess average temperatures below **0** or above **125**. Such worlds automatically have no water.

See 24.4 for detailed explanation of use.

[24.5] The GM determines the terrain feature and contour of each environ.

Using the **Environ Type Chart** (see below), the GM determines the topography of each environ with some land. He locates the column containing the correct land/water distribution and the correct temperature of the environ (remembering that temperatures vary from environ to environ, see 24.3). The GM rolls percentile dice and reads down the column until locating the numerical result, which most nearly equals the dice result without being less than the roll. The environ type corresponding to the numerical result is the predominant terrain feature and contour of that environ (for example, a roll of **34** in the first column would yield a result of barren/peaks). Repeat this procedure for every environ on the world until all have been determined. The GM should graphically depict in each environ the predominant terrain feature and contour.

After generating each environ's type, the GM should look at the world and feel free to juggle environs around to form a cohesive whole. For example, if ice is generated in a non-polar environ and there is no ice at the pole, the GM should swap the environs to make up for the anomalies created by the random dice system.

For each environ type listing, the first feature is the terrain feature, and the second is the contour.

CONTOURS:

Flat. Land is perfectly flat and provides no cover whatsoever.

Hills. Gently rolling hills, very little hindrance to travel; provides some cover at long range.

Mountain. Heights which erosion has smoothed over, some hindrance to travel. Cover fairly easy to find except at extremely close range.

Peaks. Jagged mountains with precipices, travel almost impossible; cover is available virtually everywhere.

TERRAIN FEATURES:

Volcanic: Active volcanoes exist throughout the environ; travel is possible with care; cover varies. Note that it is impossible to have volcanoes in a flat environ.

Crater. Land is churned up, travel is difficult; cover is easy to find.

Barren. Totally featureless cracked dry earth; no hindrance to travel; no cover.

Light Vegetation. Sparse grass, lichen, brush; travel unaffected; no cover.

Woods. Widely dispersed trees with undergrowth; travel possible with care; no cover except at long range.

Forest. Dense trees with undergrowth; travel slowed; cover easy to find.

Jungle. Land is, choked with foliage and undergrowth; travel except on foot is nearly impossible; cover very easy to find. **Marsh.** Bits of vegetation; some trees and undergrowth; travel slowed greatly; some cover available on occasion.

ICE ENVIRONS:

Ice/Flat. Treat as barren/flat; travel with care is possible; no cover.

Ice/Hills. Very jagged ice formations; travel almost impossible; cover available at all except close range.

The following environ types are included in the World Logs in the Adventure Guide. Refer to them for possible methods of drawing and colouring them.

On the Planet *Titus*:

n02 Water with minor islands; woods/hills.

n03 Land/water; light veg/mountains;

n05 Water with minor islands; volcanic/hills.

n09 Water with major islands; forest/mountains.

n12 Water with major islands; jungle/mountains.

n20 Land/water; barren/mountain.

s01 Water; ice/flat.

s04 Water with major islands; marsh/hill.

s13 Water with major islands; barren/peaks.

On the Planet *Kryo*:

n01 Land/water; ice/hill,

n03 Land with major water; woods/mountains.

s02 Land with major water; light veg/flat.

s03 Land with minor water; barren/peaks.

On the Planet *Laidley*:

n02 Land only; barren/mountain,

n05 Land only; crater/flat.

s05 Land only; volcanic/ mountains.

When the GM has finished drawing out the world on the log, he will have a picture he may show to his players, which will represent the world as they might see it through their view screens.

[24.5] ENVIRON TYPE CHART

LAND / LIQUID DISTRIBUTION	WATER WITH MINOR OR MAJOR ISLANDS				WATER / LAND OR LAND WITH MAJOR WATER BODIES				LAND WITH MINOR WATER BODIES				LAND ONLY (WATER ELSWHERE ON WORLD)				LAND ONLY (NO WATER ANYWHERE ON WORLD)		
TEMPERATURE	0 100 to to				0 100 to to				0 100 to to				0 100 to to				0 25 100 to 50 to		
ENVIRON TYPE	25	50	75	125	25	50	75	125	25	50	75	125	25	50	75	125	25	75	125
See Note	1	1	2	3	1	1	1	2	1	2	2	3	2	3	3	4	3	5	7
Volcanic / Hills	3	4	6	9	2	3	3	4	3	5	6	7	4	7	8	10	8	12	17
Volcanic / Mountains	4	6	9	14	3	4	5	6	5	7	9	10	6	9	11	14	13	19	26
Volcanic / Peaks	5	8	11	17	4	5	-	7	6	8	10	12	7	10	13	16	14	21	28
Crater / Flat	-	-	-	-	-	-	-	-	7	9	11	13	9	12	15	18	24	31	37
Crater / Hills	-	-	-	-	-	-	-	-	8	10	12	14	11	14	17	20	39	46	52
Crater / Mountains	-	-	-	-	-	-	-	-	9	11	13	15	13	16	19	22	51	58	64
Crater / Peaks	-	-	-	-	-	-	-	-	10	12	14	16	14	17	20	23	53	60	66
Barren / Flat	11	10	12	26	9	6	6	16	20	19	22	34	29	27	34	42	62	69	74
Barren / Hills	23	15	15	42	18	8	7	32	32	27	31	54	49	40	52	66	75	82	86
Barren / Mountains	33	20	17	55	25	10	8	45	40	33	37	66	59	48	61	79	84	91	94
Barren / Peaks	36	22	18	59	27	11	-	47	44	36	40	71	63	52	65	84	86	93	96
Light Veg / Flat	41	28	22	67	36	18	14	57	48	43	47	77	67	61	72	87	87	94	97
Light Veg / Hills	46	33	27	75	46	25	20	68	54	52	55	84	72	71	80	91	88	95	98
Light Veg / Mountains	56	40	32	83	53	31	25	78	58	58	61	88	76	78	86	93	89	96	99
Light Veg / Peaks	59	42	34	85	55	33	26	80	60	61	63	90	77	81	88	94	90	97	00
Woods / Flat	62	46	38	90	60	39	32	87	64	66	68	93	80	85	92	95	-	-	-
Woods / Hills	65	51	42	95	66	46	38	94	68	73	74	97	83	91	96	97	-	-	-
Woods / Mountains	71	58	49	99	70	52	44	99	71	77	78	99	85	97	99	99	-	-	-
Woods / Peaks	73	60	52	00	71	54	46	00	72	79	79	00	86	99	00	00	-	-	-
Forest / Flat	75	64	55	-	73	60	52	-	74	82	83	-	-	-	-	-	-	-	-
Forest / Hills	77	70	59	-	76	69	58	-	76	86	87	-	-	-	-	-	-	-	-
Forest / Mountains	80	72	67	-	78	75	64	-	78	88	89	-	-	-	-	-	-	-	-
Forest / Peaks	81	79	69	-	79	77	66	-	79	89	90	-	-	-	-	-	-	-	-
Jungle / Flat	-	82	76	-	-	81	74	-	-	90	92	-	-	-	-	-	-	-	-
Jungle / Hills	-	87	88	-	-	86	83	-	-	91	94	-	-	-	-	-	-	-	-
Jungle / Mountains	-	89	95	-	-	88	90	-	-	92	95	-	-	-	-	-	-	-	-
Marsh / Flat	-	95	98	-	-	95	96	-	-	96	98	-	-	-	-	-	-	-	-
Marsh / Hills	-	99	00	-	-	99	00	-	-	99	00	-	-	-	-	-	-	-	-
Ice / Flat	90	-	-	-	89	-	-	-	88	-	-	-	92	-	-	-	94	98	-
Ice / Hills	00	00	-	-	00	00	-	-	00	00	-	-	00	00	-	-	00	00	-

How to Read the Result: Roll percentile dice and locate the column corresponding to the Land / Liquid/ Temperature combination of the environ. Read down the column until you located the result, which most nearly equals the percentile roll without being less than the roll. Roll example, rolling a 34 in the first column would yield an environ type of Barren /Peaks.

Note: All environs of same water and temperature type which have not yet been assigned an environ type will be the type determined by the next percentile roll. (-): Environ type impossible; proceed down the column. **Peaks:** If the world size is **7** or greater, treat as Hill. **Mountains:** If the World size is **9**, treat as Flat. If the Land / Liquid distribution is water only, this table is not used. However, if the GM wishes to check for ice in water-only environ, roll using the water with minor islands column and ignore all non-ice results.

See 24.5 for detailed explanation of use.

[24.6] The GM may determine the world's day length.

This procedure is optional as there will be complications caused by having worlds with different day lengths. The GM refers to the **World Day Length Table** (see below) and locates the column, which matches the world type. He then rolls one die and records the result on the World Log.

If the GM wishes a simpler-solution, he may ignore the table and assume all worlds have a 24-hour day. The effects of having days of differing lengths must be judged before such a decision can be reached. Many game systems are designed to measure their time expenditures in terms of hours. Thus, if the world's hour does not match the character's hours, two separate tracks must be kept to measure time. Also, the GM must be ready to apply the physical and psychological effects of different day lengths to the characters in order to simulate the problems encountered. One possible answer is to measure all time expenditures according to the spaceship's clock, and let the world's day vary as it might.

[24.6] WORLD DAY LENGTH TABLE (Optional)

ONE DIE	WORLD TYPE			
	EARTH-LIKE	TOLERABLE	HOSTILE	
1	12	6	4	Numbers represent length of day in hours (including daylight and darkness).
2	15	9	6	
3	18	12	8	
4	21	15	N	d: Day measured in Earth days. N: No rotation.
5	24	18	N	
6	24	24	72	See 24.6 for explanation of use.
7	27	36	4d	
8	30	48	6d	
9	33	60	8d	
10	36	72	10d	

[24.7] The GM may decide to create an Environ Hex Map.

When it becomes desirable to enlarge an environ and reproduce it on a hex map, the GM should use the hex map provided with the game. This map is drawn at a scale of 100 km per hex, and on it the GM creates the major land masses and water bodies of the environ as he has indicated on the World Log. The terrain features and contours are added, but in much greater detail than before. The GM may place *sites* on this map in particular hexes. A site indicates a small location not apparent on the World Log of special interest to the area. Sites the GM might wish to consider include the following:

Rain Forests, Roads, Swamps, Trails, Beaches, Cities, Rivers, Mines, Caves, Raw mineral deposits, Alien Ruins, Lakes, Old Settlements, Ponds, Glaciers, Cliffs, Meteor Craters, Volcanoes, Psionic Institutes, Lava Fields, Abysses, Towns, etc.

When drawing in the details of the environ type on the hex map, not only that type should appear. The GM should refer to the Environ Skill Display on the Character Record and locate the box corresponding to the predominant environ type; the eight adjacent boxes indicate environ types which may also occur in the environ. The GM should cover about two-thirds of the Environ Hex Map with details of the predominant environ type, and the rest may be divided up as he sees fit. He may also place terrain features along the edges of the hex map that match those of neighbouring environs on the World Log.

During the character generation process, a home environ skill is determined for every character in a particular environ type. It is to be assumed the character came from an environ in which that type was predominant. The GM may place the character's home on a world which contains the appropriate environ type and has some form of settlement. Due to the detail with which the character would know this environ, the GM may desire to create an Environ Hex Map of that environ and possibly show it to the player, depending how much information the player desires.

Refer to the Adventure Guide for an example of an Environ Hex Map.

[25.0] Population and Technology

The final details of a world include the elements of population and technology. These items will breathe life into an otherwise colourless world. The GM is encouraged to use the information available in this Section as a springboard from which he may fully realize a world's potential for enjoyable play. Each world will be given general indications of total population, Law Level, Spaceport Class, Civ Level, resources available, locations of those resources, and the effects of those resources on prices and economics. These indications should be utilized to guide the GM in reaching his own final conclusions about the world, its inner workings, and how each settlement and citizen fits into the whole.

The GM conducts the following steps to determine a world's population and technology:

1. Determine the settlement status, population total. Law Level, Spaceport Class, and Civ Level.
2. Determine the amount and type of resources and their availability on the world.
3. Assign the resources to various environs.
4. Assign the population to sites in the various environs.

[25.1] The GM uses the World Development Table to determine the settlement status, human population, Law Level, Spaceport Class, and Civ Level.

As explained on the table, the GM determines the Development Value based on the world's atmosphere, temperature, and hydrograph percentage. The GM rolls two dice and adds the Development Value to the result. He then locates this sum on the table and records the listed information on the World Log. For example, a resource rich world with a thin atmosphere, 75° temperature, hydrograph of 40% that is 20 light years from Sol would have a Development Value of **11**. Rolling a **15** on two dice and adding the Development Value of **11** would yield a result of **26**, which indicates a **minor state**, a population of **1 billion**, a Law Level of **4**, a Spaceport Class of **3**, and a Civ Level range of **6-8**. The GM should choose an appropriate Civ Level from the range given.

[25.2] World Development Table

[25.2] WORLD DEVELOPMENT TABLE

TWO DICE	SETTLEMENT STATUS	HUMAN POP.	LAW LEVEL	SPACE PORT	PATROL RATING	SECURITY RATING	CIV LEVEL RANGE
0	Uncharted	0	0	0	0	2	None
1	Unexplored	0	0	0	0	2	None
2	Unexplored	0	0	0	0	2	None
3	Unexplored	0	0	0	0	2	None
4	Explored and Abandoned	10	0	0	0	2	1-2
5	Explored and Abandoned	100	0	0	0	2	1-2
6	Abandoned Pioneer Colony	200	0	0	0	2	1-3
7	Active Exploration	100	0	0	0	2	1-4
8	Active Exploration	1000	1	0	1	3	2-4
9	Active Exploration	2000	1	0.5	2	4	2-4
10	Pioneer Colony	1000	1	0	1	3	1-4
11	Pioneer Colony	10000	1	0.5	2	4	2-5
12	Pioneer Colony	20000	2	0.5	3	5	2-5
13	Subsidized Scientific Colony	10000	1	0.5	2	4	4-6
14	Subsidized Scientific Colony	100000	2	1	3	5	4-6
15	Subsidized Scientific Colony	200000	2	1	3	5	5-7
16	Subsidized Working Colony	100000	2	1	3	5	3-5
17	Subsidized Working Colony	1 Million	2	2	4	6	4-6
18	Subsidized Working Colony	2 Million	3	2	5	7	4-6
19	Self-Sufficient Colony	1 Million	2	2	4	6	4-7
20	Self-Sufficient Colony	10 Million	3	2	5	7	5-7
21	Self-Sufficient Colony	20 Million	3	3	6	8	5-7
22	Full-Tech Colony	10 Million	3	2	5	7	5-8
23	Full-Tech Colony	100 Million	3	3	6	8	6-8
24	Full-Tech Colony	200 Million	4	3	7	9	6-8
25	Minor State	100 Million	4	3	7	9	6-8
26	Minor State	1 Billion	4	3	7	9	6-8
27	Minor State	2 Billion	4	4	8	10	7-8
28	Major State	1 Billion	4	4	8	10	7-8
29	Major State	3 Billion	4	4	8	10	8

MODIFIERS:

WORLD ATMOSPHERE		WORLD TEMPERATURE		WORLD HYDROGRAPH	
0	None	-75, -50	0	0%	-1
2	Thin Corrosive	-25	1	20%	2
3	Normal Corrosive	0	3	40%	4
4	Thin Corrosive	25	4	60%-80%	5
5	Normal	50, 75	5	100%	2
1	Poison	100	4		
-1	Corrosive	125	3		
		150	1		
		175, 200	-1		

Procedure: Take the appropriate number from each of the columns and add them together. If the world is resource rich, double this total (**Exception:** If the total is negative, and the world is resource rich, divide the total by two, rounding toward zero.) Subtract on half (rounded down) of the world's star's distance from Sol from this new total. The result is the Development Value. Roll two dice and add the Development Value to the roll, and apply this result to the Table. **Patrol Rating:** The frequency of Astroguard patrols. **Security Rating:** The probability of enforcement agencies discovering illegal commodities once a spacecraft has landed.

(25.3] The settlement status and population indicate the general extent of human presence in the world.

The human settlement of a world may be in any of the following states:

Uncharted. Never mapped; unnamed.

Unexplored. Charted, but not traversed.

Explored and Abandoned. Surface has been traversed, but colonization never occurred; GM's discretion as to why not.

Abandoned Pioneer Colony. Colonization was started, but environment proved too harsh or resources dried up.

Active Exploration. Extant investigation by one or more groups; no governmental structure as yet.

Pioneer Colony. Just beginning to establish permanent population and develop resources; federation begins to take notice.

Subsidized Scientific Colony. Taking in much more raw material than it produces, but interest in the world's secrets and potentials make the output of knowledge a sufficient payoff. Federal presence exists.

Subsidized Working Colony. Takes in more than it produces, but shows promise of becoming a profitable commercial venture. Federal presence.

Self-sufficient Colony. Stands on its own economically and accordingly draws the attention of the federation consistently.

Full Tech Colony. Commercial hub of a few systems, but has not yet been recognized as a minor state; the federation has not released the control it exercises.

Minor State. Commercial hub of a few systems, but federation has relinquished control to the point where the system operates more or less on its own.

Major State. Major commercial centre of many systems. Federation does little except keep a watchful eye open.

The GM should use the human population figure as a guide. The total number of humans indicated is an approximate figure which the GM should adjust as he sees fit. This population may be divided into any social and/or political factions which are consistent with the world's settlement status.

The languages, which any population may speak, are chosen by the GM. As is mentioned in 1.0, there are a variety of languages, and this choice should be integrated into the overall flavour of the settlement.

It is to be assumed that any official federation representatives will speak Universal, as will most local law enforcement and governmental officials.

[25.4] The degree to which the federal laws are enforced is indicated by the Law Level of the world.

Throughout the universe, the laws have remained the same. The actions which are criminal in one sector are criminal to the same degree in another. What varies is the intensity and quality of enforcement and the way punishment is meted out. The Law Levels and their effects follow:

1. A cavalier attitude toward justice; the maximum punishment for capital offences is incarceration for a short time. Very often a fine is the only penalty prescribed. Illegal weapons or items are simply confiscated. Very few enforcement agents are present.
 2. The quality of justice varies with the individual agent. The maximum punishment for capital offences is heavy fining and incarceration. Illegal weapons or items may result in imprisonment. The number and quality of law enforcement agents rises.
 3. The judicial system is fair and reasonably accurate. The maximum punishment for capital offences varies in proportion to the illegal act. Illegal weapons or items will result in imprisonment. Enforcement agents are seen regularly.
 4. The search for truth and justice supercedes all else. Maximum punishment for capital offences is death. Illegal weapons or items will result in long term imprisonment. Highly intelligent enforcement agents abound.
 5. Strict adherence to judicial codes and practices results in accurate justice meted out swiftly. Maximum punishment for capital offences is death. Possession of illegal weapons or items may be classified as a capital offence. Enforcement is of the highest quality and training. This level occurs only in Class 4 Spaceports and on Earth.
- The Law Level of a world also influences the distribution of encounters concerning law enforcement agents.

The **Enforcer Encounter Table** (see below) indicates how often an encounter should be with a local law enforcer of some type. These agents represent local authorities who will be inspecting parcels, luggage, equipment; looking out for trespassers; protecting the rights of citizens; apprehending criminals; and so forth. See 27.0 and 36.0.

[25.4] ENFORCER ENCOUNTER TABLE

LAW LEVEL	FREQUENCY
0	No Authorities
1	1 out of 8 encounters
2	1 out of 5 encounters
3	1 out of 4 encounters
4	1 out of 3 encounters
5	1 out of 2 encounters

The **Enforcer Encounter Table** indicates how often an encounter should be with a local law enforcer of some type. These agents represent local authorities who will be inspecting parcels, luggage, equipment; looking out for trespassers; protecting the rights of citizens; apprehending criminals; and so forth.

See 27.0 and 36.0.

Patrol and Security Rating. (Optional)

Derived from SPI's Star Trader: **Patrol Rating:** The frequency of Astroguard patrols, the sum of the Spaceport Class and Law Level.

Security Rating: The probability of enforcement agencies discovering illegal commodities once a spacecraft has landed, the sum of the Spaceport Class and Law Level found above, plus 2. Both represent the probability out of 10 and the GM can modify the chance of evasion as he sees fit.

[25.5] The Spaceport Class represents the sophistication of facilities available for spaceship maintenance.

Spaceports orbit around the world they serve, acting much in the same fashion as the 20th Century airport. Worlds with a Spaceport Class of ½, however, have no orbital station; rather, they have a landing strip on the surface. Thus, ships, which are not streamlined, cannot land there. Orbital stations have a shuttle service to the world's surface; the number of flights per day equals the *square* of the Spaceport Class.

The Spaceport Class also affects the degree of trade and commerce a world can engage in. The Spaceport Classes are:

0. No facility whatsoever.

½. Landing strip on the world surface. Energy for emergency use only. No security force stationed. Administered by one or two people. No repair service at all.

1. Energy is sometimes (50% chance) available. No repair service, A small federal detachment administers (10-15 people).

2. Energy is usually (85%) available. May repair superficial or light damage to pods and spaceships; a few used ships and pods may be available. No hyperjump maintenance. A full federal customs and security detachment (50-150 people). If it is the major port in the system, it includes an Astroguard patrol squadron.

3. Energy is always available. May repair superficial, light, or heavy damage to spaceships or pods; many standard ship types and pods are available. Hyperjump maintenance available at a Psionic Institute (see 10.5). Reinforced federal customs security, and administrative force (200-500 people). Astroguard patrol squadron present. If the major port in a system, it also includes a federal navy force.

4. Energy always available. May repair any type of damage; full ship construction available. Hyperjump maintenance is available at a Psionic Institute (see 10.5). It is the centre of federal activity; endless customs, security, and administrative forces (500-2,000 people). Astroguard command post. Federal naval command (fleet headquarters).

5. Earth. Same as Class 4, but also includes the federal headquarters from which all military forces are administered.

If a spaceport is the highest class in a system, it is also considered the centre of the federal administration of the system itself. The population of a world includes the population inhabiting the spaceport.

The Spaceport Class affects the type of trading route existing between the world and other worlds within the system, and between the system and other star systems (see Chapter VIII).

[25.6] The Civ Level of a world indicates the degree of that settlement's contribution to the federation.

The Civ Level of a world corresponds roughly to centuries in Earth's past and indicates the level of industrial output of the world. It does not necessarily indicate the sophistication of the population, nor does it reflect the intelligence of the individuals living on the world. A scientific colony, for instance, would have all the latest equipment, but would not be able to survive if the equipment broke down; they need their technology imported.

The Civ Levels and their corresponding Earth Centuries are:

- Level 1 (1600)
- Level 2 (1700)
- Level 3 (1800)
- Level 4 (1900)
- Level 5 (2000)
- Level 6 (2100)
- Level 7 (2200)
- Level 8 (2300)

Any experimental equipment or scientific breakthroughs developing during play would be considered Civ Level 9.

Most individuals found on any world will be aware that high-tech items exist, and such items may be found on those worlds. However, in order to maintain or produce those items, the world must be of an equivalent or higher Civ Level.

[25.7] The GM uses the World Resource Table to determine the world's resources and then assigns them to various environs.

The GM rolls percentile dice the number of times indicated and applies any modifiers indicated on the Table. Every resource generated should be recorded on the World Log, along with the number of environs in which the resource appears. Note that rolling a resource twice indicates that resource is *abundant*; rolling it once indicates the resource is *limited*. A resource cannot be rolled more than twice; if one is generated a third time, the dice are re-rolled. Rolling a site (S) listing twice equals one environ listing.

After the correct number of rolls have been conducted for the world, the resources are placed in the various environs of the world or at sites as indicated. All placements are the province of the GM. Once the resources are placed, the lettered results of each resource generated are examined. Every lettered result for the world's Civ Level and all lower Civ Levels apply for that resource on this world. These lettered results are explained on the World Resource Table. If no letters exist for a resource at a given Civ Level, that resource has not been discovered.

Example: One of the 13 rolls on an Earth-like size **5**, resource rich world results in chromium existing in one environ. The Civ Level of the world is **5**, so the lettered results **A**, **S**, **R**, and **D** apply to chromium there.

The GM should use the explanation of the lettered results as both factual information and as guidelines concerning the industrial output of the world, in terms of what the world does and does not produce. The explanations will guide the GM in general, and do imply specific incidents in the history of the world. Logic should rule all ambiguous situations, and the world's consistency should be maintained.

For example, using the world generated above, chromium lettered results indicate the resource has been discovered in every environ in which it occurs (as per result **A**); the **D** result is superceded by the A result; chromium has been refined in every environ in which it occurs (result **R**). Also, if iron is available, chromium has been used to manufacture Level 5 impact armour (result **S**). If the world settlement status was that of a subsidized scientific colony, for example, the GM would have to decide how much (if any) impact armour is being manufactured and whether the armour can be repaired there. Given the nature of a subsidized scientific colony, the answer might be that enough is manufactured for repair only.

The resources and Civ Level on a world affect what products are available on the world and what prices are asked for those items (see 18.0). The World Resource Table lists prices for all resources in a refined state. For trading purposes, it is wiser to sell products or resources to worlds where their availability is limited or nil. Prices for resources in a raw state are one-half to one-quarter their price in a refined state.

[25.8] World Resource Table

See next page.

[25.9] The GM assigns portions of the population to various environs on the world.

The GM assigns population to the environs of the world in any way he sees fit, so long as the total population assigned to all the environs equals the population as indicated on the World Development Table. The population of an environ is recorded by placing a number from 0 to 9 in the environ. This number represents a power of **10**. Thus, if a 5 were recorded in a space, its population would be 100,000. A population level between one exponent and the next may be recorded by writing a multiple before the exponent. Thus, 3/5 would represent 300,000. While assigning population to a world, the following restrictions must be adhered to.

- No more than 100 people may be placed in an environ with no vegetation *and* no water.
- No more than 1,000 people may be placed in a 100% water environ.
- No more than 100,000 people may be placed in a water with minor land masses environ.
- No more than 10 million people may be placed in a water with major land masses environ.
- No more than 100 million people may be placed in a water/land environ.
- No more than 1 billion people may be placed in a land with major water environ.
- No more than 10 million people may be placed in a land with minor water environ.
- No more than 10,000 people may be placed in a land with vegetation but no water environ.

The GM should relate the population centres on the world to various resource concentrations of sites of interest in a logical, consistent fashion.

[25.8] WORLD RESOURCE TABLE

PERCENTILE DICE	PRICE	RESOURCE	CIV LEVEL OF WORLD								# OF ENVIRONS		
			1	2	3	4	5	6	7	8	EARTHLIKE	TOLERABLE	HOSTILE
1-8	0.5/T	Iron	A	R	M, JJ	-	-	-	-	-	-	-	7
9-14	2.0/T	Aluminium	-	-	A, R	L, G	-	-	-	-	-	-	6
15-19	40.0/T	Radioactives	-	-	-	D	A, F	-	-	-	-	-	5
20-23	3.5/T	Copper	D, R	-	A	-	-	X	-	KK	-	-	4
24-26	10.0/T	Chromium	-	-	D	S, R	A	NN	-	-	-	-	3
27-29	0.5/K	Silver	D	-	A	P	-	-	-	-	-	3	3
30	1.0/G	Gold	D	-	-	-	-	AA	-	-	-	1	1
31	1.0/G	Platinum	-	D	A	R	C	-	-	-	-	1	1
32-33	10.0/T	Titanium	-	-	-	D	Z, J	A, Y	-	-	-	2	2
34-35	50.0/T	Caesium	-	-	-	D	F, H	A	-	-	-	1	1
36-37	To 21/T	Other Metals ¹	-	-	D	-	-	A, N	-	KK	-	2	2
38-40	15.0/T	Ammonia	A	-	-	K	LL	-	-	-	-	1	1
41	2.0/G	Magnetic Monopoles	-	-	-	-	-	E	D, V	A	-	S	S
42	1.0/G	Crystals	-	D	-	-	-	A, MM	-	-	-	S	S
43-45	1.0/T	Phosphorus	-	-	-	D, R	A, W	-	-	-	-	3	3
46-47	2.0/T	Germanium	-	-	-	D, R	-	A, EE	-	-	-	2	2
48	2.0/T	Silicon	-	-	D	R, CC	A	-	-	-	-	2	2
49-50	To 4/T	Other Non-Metals ²	-	-	-	D, R	BB	-	A, V	-	-	3	3
51-57	0.5/T	Iron	A	R	M, JJ	-	-	-	-	-	4	4	7
58-63	2.0/T	Aluminium	-	-	A, R	L, G	-	-	-	-	3	3	6
64-68	40.0/T	Radioactives	-	-	-	D	A, F	-	-	-	2	2	5
69-72	3.5/T	Copper	D, R	-	A	-	-	X	-	KK	2	2	4
73-75	10.0/T	Chromium	-	-	D	S, R	A	NN	-	-	1	2	3
76-78	0.5/K	Silver	D	-	A	P	-	H, MM	-	-	1	3	3
79	1.0/G	Gold	D	-	-	-	-	AA	-	-	S	1	1
80	1.0/G	Platinum	-	D	A	R	C	-	-	-	S	1	1
81-82	10.0/T	Titanium	-	-	-	D	Z, J	A, Y	-	-	1	2	2
83	50.0/T	Caesium	-	-	-	D	F, H	A	-	-	S	1	1
84-85	To 21/T	Other Metals ¹	-	-	D	-	-	A, N	-	KK	1	2	2
86-88	1.0/T	Phosphorus	-	-	-	D, R	A, W	-	-	-	1	3	3
89-90	2.0/T	Germanium	-	-	-	D, R	-	A, EE	-	-	1	2	2
91-93	2.0/T	Silicon	-	-	D	R, CC	A	-	-	-	1	2	2
94-98	to 4/T	Other Non-Metals ²	-	-	-	D, R	BB	H, MM	A, V	-	2	3	3
99	1.0/T	Exotic Spices	-	A	-	LL	-	-	-	-	S	S	S
100-104	5.0/T	Organic Chemicals CARBON	-	-	D, FF	A, U	-	-	-	-	3	3	S
105-109	1.0/T	Organic Chemicals NITROGEN	-	D	A, HH	-	-	-	-	-	3	3	-
110-113	3.0/T	Light Fibre Plants	D, T	A	-	-	-	-	-	-	2	2	-
114-119	0.8/T	Wood-like Plants	D, Q	A	FF	-	-	-	-	-	3	3	-
120-122	VARIABLE	Arable Land	D	A, GG	-	B	-	-	-	-	7	2	-
123-124	To 5.0/T	Edible Plants	-	D, GG	A, B	-	-	-	-	-	5	1	-
125	To 1.0/T	Edible Game	D, DD	-	A	-	-	-	-	-	3	S	-
126-137	VARIABLE	Arable Land	D	A, GG	-	B	-	-	-	-	7	-	-
138-146	To 5/T	Edible Plants	-	D, DD	A, B	-	-	-	-	-	5	-	-
147-150	To 1/T	Edible Game	D, DD	-	A	-	-	-	-	-	3	-	-

Modifiers: Add **25** if world is Tolerable; add **50** if world is Earth-Like.

Roll a number of time equal to the World Size if resource poor; roll a number of times equal to the World Size **+8** if resource rich.

Price: Given in thousands of Credits per gram, kilo, or Tonne. **To #/T:** Price fluctuates from that figure, down 50%.

Variable: Price varies extremely, depending on availability on the world. **Notes:** **1.** These include such metals as adamantine, beryllium, erbium, gadolinium, lead, manganese, mercury, nickel, potassium, rubidium, strontium, tin, and zinc. **2.** These include such non-metals as argon, barium, chlorine, cobalt, fluorine, helium, iodine, krypton, sulphur, and xenon. **S:** Site.

See 25.7 for detailed explanation of use.

[25.8] WORLD RESOURCE TABLE Explanation of Results

After determining the resources for a world, the Civ Level of the world is used to determine the development of those resources. Any lettered listing under that world's Civ Level or a lesser Civ Level applies to the resource. Results which indicate a product is available do not imply all products of that generic type are readily available; the Civ Level of the item in question must still be less than or equal to the Civ Level of the world. For example, lettered result E indicates psionic equipment is available; however, if the Civ Level of the world was less than 8, an interstellar Commlink would not be available. For some lettered results, the item is readily available only if certain other resources are available. These resources are listed with the item. Also listed with the item is the resource from which it came.

A: The resource is automatically discovered wherever it occurs on the world.

B: Vegetables and Fruit.
Resource: Edible Plants, Arable Land.

C: All chemistry equipment, if Iron is also available.

Resource: Platinum.

D: The resource has been discovered in some (approximately half) of the environs in which it occurred; the GM should decide which environs.

E: Psionic equipment (including Jump Pods, Augmented Jump Pods, Hunter Pods, Explorer Pods, and Psionic Rigs), if Iron is also available.

Resource: Magnetic Monopoles.

F: Fuel for sub-light drives and fission power plants, if Iron is also available.

Resource: Radioactives.

G: All non-jet aircraft (including gliders, propeller planes, and helicopters), if Iron is also available.

Resource: Aluminium.

H: Holographic equipment, if Iron is also available.

Resource: Other Non-Metals, Caesium.

J: Jet air vehicles, if Iron is also available.

Resource: Titanium.

K: Fertilisers.

Resource: Ammonia.

L: Ground and Marine Vehicles, if Iron is also available.

Resource: Aluminium.

M: Machine Tools and Tech Kits.

Resource: Iron.

N: Unarmoured Spacecraft Hulls and Pods, if Iron is also available.

Resource: Other Metals.

P: Recording Equipment with the exception of holographic equipment, See **H**), if Iron is also available.

Resource: Silver.

Q: Wood Products and structures.

Resource: Wood-Like Plants.

S: All Impact Armour, if Iron is also available.

Resource: Chromium.

T: Textiles.

Resource: Light Fibre Plants.

U: Vision equipment and other plastics, if Iron is also available.

Resource: Organic Chemicals CARBON.

V: Robot Hardware and Software if Iron is also available.

Resource: Magnetic Monopoles, Other Non-Metals.

W: Artillery weapons and Explosives, if Iron is also available.

Resource: Phosphorus.

X: Robot Chassis, if Iron is also available.

Resource: Copper.

Y: Armoured Spacecraft, if Iron is also available.

Resource: Titanium.

Z: Armoured ground vehicles, if Iron is also available.

Resource: Titanium.

AA: All Body Armour, if Iron is also available.

Resource: Gold.

BB: Computer Components and Software (including Robot Software), if Iron is also available.

Resource: Other Non-Metals.

CC: Communications equipment, if Iron is also available.

Resource: Silicon.

DD: Meat.

Resource: Edible Game.

EE: All Scientific equipment (except Chemistry equipment, see **C**), if Iron is also available.

Resource: Germanium.

FF: Fossil Fuels.

Resource: Wood-Like Plants, Organic Chemicals NITROGEN.

GG: Grain.

Resource: Edible Plants, Arable Land.

HH: Explosives, Cartridge Ammunition, Grenades, if Iron is also available.

Resource: Organic Chemicals NITROGEN.

JJ: Projectile Weapons.

Resource: Iron.

KK: Force fields of all types, if Iron is also available.

Resource: Copper, Other Non-Metals.

LL: Drugs and Poisons.

Resource: Crystals, Other Non-Metals.

MM: Beam Weapons, if Iron is also available.

Resource: Crystals, Other Non-Metals.

NN: Expedition Suits, if Iron is also available.

Resource: Chromium.

VII. Character Action

Once the players have generated characters and the GM has created at least one star system (or has studied the star system in **Chapter X**), an adventure may be played. The GM must provide some method for the characters to meet and, once gathered, must provide them with a common purpose, enemy, or goal, so that they will be enticed to work together and enter the worlds created by the GM. A group of characters that are setting out together on an adventure are called a *party*, and this term is used in these rules in reference to all the players' characters.

An adventure usually consists of a series of *encounters*, or unusual situations that the GM places the characters in. An encounter provides the party with a source of information, mystery, personal gain, amusement, or straightforward combat against creatures or non-player characters. Through the imaginative use of encounters, the GM weaves an ever-expanding story, written with the help of the characters' actions in those encounters. The adventure in **Chapter X** serves as an example of how an adventure may be created and played.

[26.0] Travel and Record Keeping

As the adventures the GM has created are played, he will have to keep track of the players' actions and positions at all times. This is done to keep an accurate accounting of time passage and to place and resolve encounters.

The GM will need to keep track on his own map of the characters' progress while travelling and record the passage of time in whatever method he finds most convenient. For this purpose, the GM will need to create maps of various scales as need arises. Often a specific site will have to be mapped out at an extremely small scale to facilitate detailed exploration and interaction.

[26.1] The GM keeps track of the party's location on the World Log, on an Environ Hex Map, or on a map of his own devising showing part of the environ in more detail.

A map or log should always be available for the players to refer to, although it may contain much less information than the GM's version of the map.

When the party is travelling through an environ that is not of particular importance to the adventure, the GM need not provide a hex map; the terrain and contour features are considered the same throughout the environ (except for the shape of any land or liquid masses). Remember, each environ represents a square area **4,000km** to a side.

When the party is travelling through an environ with specific points of interest and varying terrains and contours, the GM provides the players with an Environ Hex Map (created in accordance with 24.8). Each hex on the map represents an area approximately **100km** across. When the party is in a particular hex of the map, the contour and terrain features of that hex are used for all game purposes, instead of the overall features of the environ.

If the GM wishes to provide the players with a map that shows a specific hex or site within a hex in great detail, he may use a blank Environ Hex Map. Often an incident within an adventure will involve a building, campsite, spacestation, cavern, spaceship, or other small-scale location. The map of this location should be drawn at a small enough scale to allow easy transfer to an Action Display should any combat need to be resolved. Buildings and other rectilinear structures may be drawn easier on four squares to the inch graph paper and then transferred to the Action Display.

[26.2] The GM is responsible for keeping time during play.

The passage of game time while the characters are on an adventure is measured in three different scales, depending on the needs of the situation.

Action Rounds. Each Action Round represents about 15 seconds. Often a specific task during a combat situation will take a certain amount of time (a 60-second fuse on a time-bomb, for instance), and the GM must keep track of the number of Action Rounds elapsed to measure time and apply these effects.

Hours. Travel overland or in planetary space will often require keeping track of time in hours. This measurement allows calculating movement as well as air supply, repair time, healing time, and other game functions.

Days. Interplanetary travel, supply expenditure, power availability (robot batteries, for instance) all require keeping track of time in days elapsed.

The GM must inform the players at the beginning of an adventure how much time has elapsed since the resolution of the last one. This does not apply if the preceding adventure was left "frozen" to be picked up later. Letting the players know this allows them to calculate any expenses they might have incurred, any healing which needed to be done, and whether any equipment or robots they might have ordered are ready. It is recommended the GM allow at least one week (of game time) to pass between adventures for these purposes.

[26.3] The party will usually travel on the surface of a world in a vehicle.

The vast distances and hostile environments on most worlds make long distance travel on foot nearly impossible, especially when scientific or military equipment must be carried. If the party is not provided with a vehicle by their sponsor for an adventure, they should be given the means to purchase, lease, or borrow one by the GM.

The rate at which a vehicle travels is listed on the appropriate vehicle chart, in kilometres per hour. The speed of a ground vehicle is affected by the *Terrain Value* of the environ it is travelling through (see the Terrain Effects Chart, 21.1). Many vehicles are prohibited from entering heavily vegetated and/or mountainous areas. Often while travelling, the party will come to an area they wish to investigate that their vehicle cannot traverse. The vehicle then becomes a base from which the characters venture, exploring and adventuring, returning for supplies.

[26.4] When the party is travelling by foot, they may traverse 50 kilometres in one day's travel under ideal conditions.

One day's travel is roughly equal to 12 hours of marching, interrupted by a short break, followed by 12 hours of relaxation and sleep. If the party wishes to march for a longer period without rest, or wishes to march at a faster rate, the GM may allow this. However, he should penalize the party's subsequent actions. For example, an exhausted party would be much more likely to be *unaware* of a creature or NPC that they might encounter.

The party's daily movement rate is reduced by the Terrain Value of the environ they are travelling through and the gravity of the world. Refer to the Terrain Effects Chart to find the Terrain Value of the environ. Multiply the Terrain Value by the gravity (in G's) of the world. Divide the ideal movement rate by this product to determine the party's actual movement rate (rounded to the nearest five kilometres, for ease of play). Thus, a party that is travelling through lightly vegetated mountains on a Size 7 world (1.7 G's) may traverse about 15 km in one day.

A character wearing an expedition suit or body armour may be slowed down by its Encumbrance Rating (or he may move faster if in augmented body armour). The suit/ armour movement modifiers in 29.2 apply.

Note: For purposes of calculating daily movement rates, a Size 1 or 2 world is considered to have a gravity of **0.4G** (like that of a Size 3 world). Thus, movement through the same environ on a Size 1, 2 or 3 world is conducted at an identical rate.

[26.5] The number of kilograms of equipment and accoutrements that a character can carry is limited by his Strength Rating.

A character may move unhindered when carrying a number of kilograms *equal to or less than* his Strength Rating. The movement of such a character is not affected during long treks or during an Action Round.

A character may move, but is *hindered*, when carrying a number of kilograms equal to or less than **4 x** his Strength Rating. The daily movement rate of such a character is *divided by two*. He may move a maximum of *one hex* on the Action Display during a single Action Round.

A character may lift, but *may not move*, with a number of kilograms equal to or less than **10 x** his Strength Rating.

All the preceding limits are *divided* by the gravity (in G's) of the world the characters are on. There is no limit *per se* to the number of kilograms a character in a weightless environment or on a size 1 world may carry. However, the GM should consider the bulk of the items the character wishes to carry; would the character actually be able to hold all those things?

The weight of a character's expedition suit or body armour *is* considered when determining how much he may carry.

Exception: If the character's Body Armour or EVA Skill Level is *equal to or greater than* the Encumbrance Rating of the suit or armour (see Protective Attire Chart), the weight is *not* considered. If a character wearing *augmented* body armour possesses a Body Armour Skill Level that is *greater* than the Encumbrance Rating of the armour, the *difference is added* to his Strength Rating when determining how much he can carry.

[26.6] The positions of the characters relative to each other and to any creatures, NPC's, or landmarks they encounter are shown on the Action Display.

Any large Hex grid map may be used as the Action Display; one is not provided with the game (although the spaceship combat maps will suffice if nothing else is available). A sheet with 19mm or 25mm hexes is recommended. The Action Display has a scale of 5 meters per hex.

Any available cardboard counters or miniature figures may be used to represent the characters and other individuals in the adventure. Those pieces representing the characters may be deployed in the hexes of the display at the beginning of the adventure to show their march order; i.e., if the party is on foot, the order in which they will be walking. Each time the party stops to rest or changes their march order, the players alter the relative position of their characters to show their new deployment. When the characters encounter a creature or NPC, the GM places a piece or pieces on the display to show their position in relation to the characters.

If an encounter results in the conduct of an *Action Round*, the involved characters, creatures, and NPC's are moved through the hexes of the Action Display by the players and the GM according to 28.0 and 29.0.

The **GM** may show specific features (such as a crater edge, building, or dense patch of vegetation) on the Action Display by placing additional pieces on it or by drawing on it.

[27.0] Creating Encounters

As the characters travel through the GM's worlds, they will encounter creatures, non-player characters, and other interesting or dangerous situations. The Encounter Table provides the GM with a wide source of encounters he may place the characters in, depending on their current location. Results from the table provide the GM with a type of encounter (spaceship, federal, accident, etc.). The specific nature of the encounter is then determined in accordance with this Section and/or **Chapter X**.

[27.1] The GM uses the Encounter Table three times per game day (once every eight hours).

Exception: When the characters are travelling in a spaceship, the Encounter Table is used *once per day* (every 24 hours). The GM secretly rolls percentile dice and locates the result in the column of the Table corresponding to the current location of the characters. The type of encounter corresponding to the dice result is then carried out. Certain encounters are treated as *no encounter* if the conditions detailed on the table are fulfilled.

Each creature encounter listed on the table is assigned a *Creature Value* ranging from **1** to **6**, which affects the chance of the encounter occurring in each environ type. If the Creature Value listed with the encounter is *equal to or greater than* the Creature Value of the environ (see the **Terrain Effects Chart**, 27.7), a creature is encountered. If the encounter result Creature Value is *less than* the Creature Value of the environ, no encounter occurs. Thus, the *lower* the Creature Value of an environ, the more chance of a creature encounter in that environ. The Creature Value of a given environ is *increased by 1* if the party is travelling faster than **20km** per hour. The GM may reduce the Creature Value of an environ by assigning the entire world a *Danger Level* of **1** or **2**. The Danger Level of a world is subtracted from the Creature Value in every environ on the world. A world without an assigned Danger Level has a Danger Level of **0**.

Example: The party is travelling through a woods/hill environ (Creature Value of 3) in an ATV at a speed of 25 km/hour. The Danger Level of the world is 2; thus, the Creature Value is considered 2 (3 + 1 - 2). If the GM rolls a creature encounter result with a Creature Value of 2 or higher, an encounter will occur.

The Creature Value and Danger Level have no affect on any types of encounters other than creature encounters.

An encounter need not be put into play the moment it is rolled. The GM may wait until an opportune or logical situation arises within a few game hours of the roll. In fact, if the GM makes his use of the Encounter Table too predictable, the players will always be ready for a possible encounter.

[27.2] The Encounter Table is used to determine if the party has an encounter.

[27.2] ENCOUNTER TABLE

		ENVIRON / HUMAN POPULTION							
ENCOUNTER		DEEP SPACE	PLANET SPACE	SPACEPORT	URBAN	SUBURBAN OR TOWN	10 MILLION OR MORE	100 THOUSAND TO 10 MILLION	100 THOUSAND OR FEWER
Spacecraft ¹	C	1-3	1-12	-	-	-	-	-	-
Spacecraft	R	4-5	13-18	-	-	-	-	-	-
Spacecraft	U	6	19-20	-	-	-	-	-	-
Federation ²		-	-	1-15	1-5	1	-	-	-
NPC	C ³	-	-	16-47	6-41	2-31	1-21	1-12	1-3
NPC	R	-	-	48-64	42-59	32-46	22-32	13-18	4-5
NPC	U	-	-	65-70	60-65	47-51	33-35	19-29	6
Creature	C ¹ 1	-	-	-	-	-	36-37	21-24	7-12
	2	-	-	-	-	52	38-39	25-28	13-19
	3	-	-	-	-	-	40-41	29-32	20-25
	4	-	-	-	-	53	42-43	33-36	26-32
	5	-	-	-	-	-	44-45	37-40	33-38
	6	-	-	-	-	54	46-47	41-44	39-45
Creature	R 1	-	-	-	-	-	48	45-46	46-48
	2	-	-	-	-	55	49	47-48	49-51
	3	-	-	-	-	-	50	49-50	52-54
	4	-	-	-	-	-	51	51-52	55-58
	5	-	-	-	-	56	52	53-54	59-61
	6	-	-	-	-	-	53	55-56	62-64
Creature	U 2	-	-	-	-	-	54	57	65-66
	4	-	-	-	-	57	-	58-59	67-69
	6	-	-	-	-	-	55	60	70-71
Accident ³	C	7-9	21-26	71-73	66-71	58-63	56-61	61-66	72-77
Accident	R	10-11	27-29	74-75	72-74	64-66	62-64	67-69	78-80
Accident	U	12	30	76	75	67	65	70	81
No Encounter		13+	31+	77+	76+	68+	66+	71+	82+

NOTES:

C: Common.

R: Rare.

U: Unique.

Note: Creatures are sub-divided into Creature Value categories, which affects their likelihood of occurrence (see 27.1).

1. Treat as no encounter if the characters are not involved in controlling or maintaining the spacecraft, or if within the planet space of a world that has no human population.

2. Treat as no encounter if the Law Level is 0 or 1.

3. Treat as no encounter if the party is in an environ with no known human population, or if the party is travelling faster than 20Km/h and have declared that they are not interested in passers-by.

4. Treat as no encounter if the party has declared no interest in the wild life of the area, or if there is no known life on the world.

5. Treat as no encounter if the characters are travelling in a vehicle which they do not control.

[27.3] Spaceship encounters may occur in planetary space or in deep space.

Planetary space is defined as all space within **300,000km** of any world (this equals 15 hexes on the *Delta Vee* hex maps). *Deep space* is all space outside planetary space. While hyperjumping, a spaceship travels across no space at all, so' no encounters will occur while a ship moves in this manner.

When a spaceship encounter occurs, the GM refers to 37.0 and chooses a common, rare, or unique spaceship encounter (as indicated by the Encounter Table) appropriate to the situation. The few examples given in no manner approach the varied number of different ships which ply the space lanes, and the GM will need to create many others.

The GM should rationalize every ship, which the characters would encounter; space travel is still not an easy task, and any ship encountered will have *some* good reason for being there. This reason need not be obvious to the player characters; indeed, many ship captains will be hesitant to let every passer-by in on his business. Most of the time the ships the characters encounter have simple, logical reasons for going where they are going (resource trade, scientific missions, etc.). Occasionally a ship will have business to conduct it wishes to keep secret (whether or not this business is illegal) and the GM might utilize this kind of encounter to rouse the players' curiosity.

[27.4] Non-player character encounters may occur wherever the player characters find themselves.

When an NPC encounter occurs, the GM refers to 36.0 and chooses a common, rare, or unique NPC (as indicated by the Encounter Table) appropriate to the situation. The examples given cannot possibly cover all the varied types of people the characters would encounter while living in a futuristic society, and the GM should create NPC's of his own.

The GM does not have to create all NPC's in the detail of those in 36.0; most people the characters will meet become mere memories soon thereafter and are never again heard from. This type would include most officials, men-on-the-street, etc., and these should be created as the need arises on the spur of the moment and discarded when the encounter is finished. Others, however, will have a lasting effect, be constantly encountered, or used as a character's companion, and these should be fully fleshed out. The GM may create these using the character generation procedure or dream them up out of his head, whatever he wishes. NPC's should be varied in ability and background, and form a group of both enemies and friends the player characters come to know.

NPC's need not follow the skills, professions, or areas of study player characters must; their development should fill in the areas of society the player characters do not. There are and will be many more non-adventuring individuals with mundane skills in society and the NPC's should reflect this fact.

It is not necessary for the GM to fill out a Character Record for every NPC he fleshes out. This file of NPC's will grow and is often better handled by using 5" x7" index cards and a card file, filling out the NPC's characteristics, skills, possessions, and any other pertinent information on the card.

[27.5] A federal encounter may occur in a spaceport, urban area, or suburban area.

Federal encounters are the major means by which the GM may trouble characters that have committed crimes or that are carrying illegal weapons. A federal encounter may take the form of a customs agent in a spaceport, a civil inspector and entourage on the surface of an underdeveloped world, or a detachment of rangers or Space Troopers operating in a restricted or dangerous area. If the characters possess any objects that are two Civ Levels (or more) in sophistication above that of the world, a civil inspector may question them as to the source of the items. If the characters cannot account for their possession, the items may be confiscated.

The Law Level of a world affects the nature of federal encounters. If the Law Level is **0** or **1**, no federal presence exists and the encounter is considered "no encounter" If the Law Level is 2 or higher, the characters will be badgered with an increasing degree of determination. Illegal weapons that are discovered by a federal agent will always be confiscated if official cause cannot be given for their possession. Fines and/or incarceration will vary depending on the Law Level.

If a character is foolish enough to kill a federal agent (a capital crime), any future federal encounters should be geared toward bringing the character to justice. Federal encounters do not include planetary authorities, which are considered non-player characters.

[27.6] A creature encounter may occur in any environ without a high concentration of human population.

When a creature encounter occurs, the GM consults the *Creature Location* section of the Terrain Effects Chart (27.7). Cross-referencing the type of encounter (common, rare, or unique) with the environ the party is in will yield a group of numbers. Each number corresponds to one of the creature descriptions in 35.0. The GM chooses one of the listed creatures to use as the encounter. Additional restrictions may be placed on a creature (such as temperature or gravity ranges) by its description, and these should be considered when choosing a creature. The meaning of all the creature descriptions and explanations of any special powers they may possess are detailed in 35.0. Once a creature is chosen, the encounter is played out in accordance with 28.1.

The creature list in 35.0 is by no means intended as a comprehensive bestiary of known space. The manner in which the creatures are described, and the way that their powers may be mixed and matched, makes it easy for the GM to modify the listed creatures and to design his own creatures. When the GM has a good grasp of how the creatures work in play, he may create creatures in the same format. The general explanation of the creature descriptions should be used as a guideline; it details the meaning of each part of the creature description and how each is used in play.

[27.7] The Terrain Effects Chart summarizes the effect that each environ type has on movement, combat, and creature encounters.

[27.7] TERRAIN EFFECTS CHART

ENVIRON TYPE	TERRAIN VALUE	ACTION ROUND MOVEMENT MODIFIER	CREATURE VAULE			
				COMMON	RARE	UNIQUE
Volcanic / Hills	2	-4	6	9, 13, 15, 17, 18	21, 27, 29, 31	38, 39, 40
Volcanic / Mountains	3	-6	6	9, 13, 15, 17, 18	21, 27, 29, 31	38, 39, 40
Volcanic / Peaks	4	-8	6	9, 13, 15, 17, 18	24, 27, 29, 30	38, 39, 40
Crater / Flat	1.5	-2	6	9, 11, 13, 14, 17, 18	23, 27, 29, 30	38, 39, 40
Crater / Hills	2	-4	6	9, 11, 13, 14, 17, 18	21, 27, 29, 31	38, 39, 40
Crater / Mountains	3	-6	6	9, 11, 13, 14, 17, 18	21, 27, 29, 31	38, 39, 40
Crater / Peaks	4	-8	6	9, 11, 13, 14, 17, 18	27, 29, 30, 31	38, 39, 40
Barren / Flat	1	0	5	9, 11, 14, 15, 17, 18	21, 23, 25, 27	37, 39, 40
Barren / Hills	1.5	-2	5	9, 11, 14, 15, 17, 18	21, 23, 25, 27	37, 39, 40
Barren / Mountains	2	-4	5	9, 11, 14, 15, 17, 18	21, 25, 27, 29	37, 39, 40
Barren / Peaks	3	-6	5	9, 11, 14, 15, 17, 18	24, 27, 29, 30	37, 39, 40
Light Veg / Flat	1	0	4	1, 4, 5, 6, 7, 13	23, 24, 29, 30	32, 34, 37
Light Veg / Hills	1.5	-2	4	1, 4, 5, 6, 13, 16	23, 24, 29, 30	32, 34, 37
Light Veg / Mountains	2	-4	4	1, 4, 5, 6, 7, 13	24, 29, 30, 31	32, 34, 37
Light Veg / Peaks	3	-6	4	1, 4, 5, 6, 9, 11	24, 29, 30, 31	32, 34, 37
Woods / Flat	1.5	-2	3	1, 2, 4, 7, 8, 16	19, 20, 24, 26	32, 33, 36
Woods / Hills	2	-4	3	2, 4, 5, 7, 8, 16	19, 20, 24, 26	32, 33, 36
Woods / Mountains	3	-6	3	1, 2, 4, 5, 6, 7	19, 20, 24, 26	32, 33, 36
Woods / Peaks	4	-8	3	1, 2, 4, 5, 6, 8	19, 20, 24, 26	32, 33, 36
Forest / Flat	2	-4	2	1, 2, 4, 5, 7, 8	19, 20, 24, 29	34, 35, 37
Forest / Hills	3	-6	2	1, 2, 4, 5, 8, 17	19, 20, 24, 29	34, 35, 37
Forest / Mountains	4	-8	2	2, 4, 5, 7, 8, 18	19, 20, 24, 29	34, 35, 37
Forest / Peaks	5	-10	2	1, 2, 4, 5, 7, 8	19, 20, 24, 29	34, 35, 37
Jungle / Flat	3	-6	1	3, 4, 5, 7, 17, 18	28, 29, 30, 31	37, 38, 39
Jungle / Hills	4	-8	1	3, 4, 5, 7, 17, 18	28, 29, 30, 31	37, 38, 39
Jungle / Mountains	5	-10	1	3, 4, 5, 7, 17, 18	28, 29, 30, 31	37, 38, 39
Marsh / Flat	1.5	-4	2	2, 3, 4, 5, 7, 17	19, 24, 29, 30	38, 39, 40
Marsh / Hills	2	-6	2	2, 3, 4, 5, 7, 17	19, 24, 29, 30	38, 39, 40
Ice / Flat	1	-4	5	13, 15, 16, 17, 18	24, 29, 30, 31	37, 38, 40
Ice / Hills	3	-6	5	13, 15, 16, 17, 18	24, 29, 30, 31	37, 38, 40
Water	A	-10	2	10, 12, 18	22, 24, 31	32, 33

NOTES:

Terrain Value: Affects daily and hourly movement rates of characters and vehicles (see 26.4), Action Round movement rates of vehicles (see 21.0), and Hit Chance of weapon fire (29.5).

Action Round Movement

Modifier: Affects movement rate of characters in an Action Round (see 29.2).

Creature Value: Affects likelihood of a creature encounter (see 27.1).

Creature Location: Identifies creatures (by identity number) which may be encounter (see 27.6).

A: Terrain on water surface ranges from 1 to 3, depending on chopiness of surface.

Terrain Value when submerged ranges from 1.5 to 5, depending on depth and opacity of liquid. A Terrain Value of 1 is considered 0 when calculating Hit Chance of weapon fire.

[27.8] An accident may occur in any location listed on the Encounter Table.

When the GM rolls a *common*, *rare*, or *unique* accident encounter, he refers to the list of accidents in 38.0 and chooses one that fits the character's current situation. The list presents two types of accidents (either of which may be chosen). An *avoidable* accident is actually a dangerous situation that the characters may attempt to overcome by using their skills. An *unavoidable* accident is an occurrence that the characters are powerless to prevent.

An avoidable vehicle accident is resolved as described in 11.2. That procedure may also be used to resolve a spaceship accident (using pilot skill). However, any damage incurred by a spaceship would be applied using the *Delta Vee* hit system (see DV42.0).

An avoidable expedition suit, body armour, or jetpack accident is resolved as follows:

1. The base chance to avoid the accident is determined (see 38.0). If the character is skilled, his Agility Rating and the square of his Skill Level is added to the chance.
2. The endangered character rolls percentile dice. If the dice result is less than or equal to the modified chance, no accident occurs. If the result is greater than the modified chance, proceed to Step 3.
3. The GM subtracts the modified chance from the dice result and locates the difference on the Hit Table (30.9) to determine both the damage incurred by the involved equipment and the hits incurred by the character. If armour is involved, its Projectile Defence Rating may protect itself and the character, as described in 30.6.

When an *unavoidable* accident indicates that damage has occurred to equipment, the extent of damage is determined by rolling *two dice* and referring to the Hit Table, adding **3** to the dice result for a *common* accident, **11** to the result for a *rare* accident, or **20** to the result for a *unique* accident.

The GM need not limit accident checks to encounters. If a character declares that he wishes to attempt something especially risky, the GM may use these procedures, applying the appropriate skill, to see if the character comes through safely.

[27.9] The GM may replace a "no encounter" result from the Encounter Table with a event of his own devising.

Any event not covered by the Encounter Table results that the GM wishes to use in an adventure may be assigned a space on the Table occupied by a "no encounter" result. Such events might include the discovery of an alien artefact or structure, the discovery of abandoned equipment, news of an occurrence that may or may not affect the characters, or some event that may only occur in a specific location or at a specific time. See 42.4 of the Adventure Guide for an example. If the GM wishes that such an event definitely occur, he should forego use of the Encounter Table and automatically implement his event instead.

[28.0] Creature and NPC Interaction

Once the GM has determined that the party has encountered a creature or NPC, the encounter is played out, either verbally or on the Action Display. The appropriate encounter procedure (there are two; one for creatures and one for NPC's) is undertaken to determine how the two sides become aware of each other, how they react to each other and, if called for, how hostilities are initiated.

The GM is not required to use these procedures if he has provided the creature or NPC with a specific purpose and strategy. However, the step-by-step structure of the procedures will prove helpful in resolving all types of creature and NPC encounters.

[28.1] When the party encounters a creature, the GM undertakes the following procedure:

1. Secretly determine all the attributes of the creature (if not already done).
2. Make sure the characters are properly deployed on the Action Display.
3. Secretly roll percentile dice to determine the *awareness* of the creature and the party and place the creature on the Action Display in accordance with the awareness result. If the creature is *unaware* of the party, read its *sight* description to the characters and skip step 4. If both are aware of each other, read the *warning* description to the party. If the party is unaware of the creature, read nothing.
4. Use the Creature Reaction Table to secretly determine the creature's reaction to the party. If the party is unaware of the creature, and the creature chooses to attack or flee, conduct the Interaction indicated on the Creature Interaction Matrix.
5. If the sight description of the creature has already been read to the characters, allow them to attempt *perception* of the creature. Then ask the characters to declare their strategy (see 28.4). Cross-reference the character's strategy with the creature's reaction on the Creature Interaction Matrix and carry out the indicated Interaction.

Step five is repeated after each Interaction to determine the next Interaction. The character's are read the *sight* description of a creature at the beginning of the second conduct of step 5 in a given encounter (if they have not heard it before). The GM may change a creature's reaction to a party at the end of any Interaction or Action Round. If he chooses to do so, the Interaction Matrix is referred to again.

[28.2] The awareness of the party and the creature they encounter determines the initial deployment of the creature and the initial information received by the party.

The creature's *Initiative Percentage* is multiplied by the *Terrain Value* of the environ to determine the base *awareness chance*. The attributes of the party modify this chance as follows:

- Subtract *twice* the highest *Environ* Skill Level in the party.
- Subtract the highest *Battlefield* Skill Level in the party. If the encounter is with an NPC, subtract the *square* of the highest Battlefield Skill Level.
- Subtract *ten* if the party possesses an operating Neuroscanner and the creature is protein-based or more Terran-like.
- Subtract **20** if the party possesses a robot with a bio system and the creature is protein based or more Terran-like. This subtraction may not be combined with the Neuroscanner subtraction.
- Subtract the *square* of the highest *Life Sense* Skill Level in the party.
- Subtract the *square* of the highest *Mental Power* Rating in the party if the creature is *intelligent*.
- Add **20** if the party is resting without a watch.
- Add a variable amount if the party has exceeded the movement rate recommended in 26.4.

The GM rolls percentile dice. If the result is equal to or less than the modified chance, the party is *unaware* of the creature. If the creature's Aggression Rating is **7** or higher, place a creature in a hex of the Action Display from which it could attack one character (determined at random) without moving (often this will be in the same hex as a character). The creature is not committed to an attack at this point. If the Aggression Rating is 6 or less, place the creature in a hex at the edge of the party's sight (see 28.3).

If the result is greater than the modified chance by **30** or less, the party and the creature are aware of each other. Place the creature in a hex at the edge of the party's sight and read the creature's warning description to the party (see 35.0).

If the result is greater than the modified chance by more than **30**, the creature is unaware of the party. Place the creature in a hex at the edge of the party's sight and read the creature's *sight* description to the party.

With some alterations, the GM may use this procedure to check for character NPC awareness, if an encounter occurs in which one side might wish to ambush or elude the other. The NPC's Ambush and Environ Skill Levels should be taken into account (instead of the Initiative Percentage). If the party is unaware of an NPC, place him in the same hex as a character (if the NPC is unarmed) or four hexes away with a clear line of fire (if the NPC is armed).

[28.3] The maximum range at which a being may be seen (and thus fired at) is 200 meters or 40 hexes.

The maximum range in any given encounter is *divided by* the *Terrain Value* of the encounter area (see the Terrain Effects Chart). Thus, in a Forest Mountain area (Terrain Value of **4**) the maximum range is **50** meters or **10** hexes. When the GM is placing a creature or NPC on the Action Display for an encounter, it should be placed in a hex at the maximum range from one of the characters (unless the characters are unaware, see 28.2). When a creature or NPC has moved beyond the maximum range from all characters the GM should remove it from the Display and conduct its actions secretly, keeping track of its position until at least one character has re-established sight (by moving back within maximum range).

If the encounter is taking place in darkness, add three to the Terrain Value up to a maximum of six.

Exception: A creature with heightened vision or a character with night glasses is not affected by darkness when seeing in the infrared, heat residue may be contained in haze, dust fog and liquid thermals which may affect infrared sight. Light intensification is dependent on available light to work no matter how faint.

The GM may impose other additions to the Terrain Value when determining maximum range in the case of dust, fog or other non-terrain visual obstructions.

$$\text{Visible distance} = 200\text{m (40 Hexes)} / \text{Terrain Value.}$$

Modifiers:

Moonlit Night = Terrain Value +3.

Moonless Night = Terrain Value +4.

Light Dust, Haze or Fog: Terrain Value +1.

Medium Dust, Haze or Fog: Terrain Value +2.

Heavy Dust, Haze or Fog: Terrain Value +3.

[28.4] A creature's reaction to the party, and the party's strategy determines how an encounter will be resolved.

Unless the GM has chosen a reaction for the creature, he secretly rolls one die and *adds* the creature's *Aggression* Rating to the result. He locates the modified die result on the Creature Reaction Table to determine one of the following creature reactions:

Flee. Terrified of the party; will leave the area quickly as possible.

Leave Slowly. Bothered by the party; will amble off.

Watch Warily. Suspicious of the party but has not yet decided what to do about it.

Ignore. Totally unconcerned about the party and its actions.

Protect. Will attack to defend itself if provoked.

Attack. Angered or hungry; will attempt to kill or capture (depending on the creature type).

Communicate. Intelligent; will attempt to establish contact with the party.

If the party is aware of the creature, the GM asks them to choose one of the following strategies:

Attack. The party plans to fire weapons, strike the creature, or take any other hostile action against the creature.

Manoeuvre. The party plans to move towards and around the creature without taking hostile action.

Watch Warily. The party will hold its ground, watching and recording the creature's actions.

Ignore. The party will disregard the creature.

Flee. The party will move away from the creature as quickly as possible.

Communicate. The party will attempt to establish contact with the creature.

The GM secretly cross-references the creature's reaction with the character's strategy on the Creature Interaction Matrix and carries out the indicated *Interaction*. Each possible Interaction is explained with the table and may call for the conduct of an Action Round, may allow manoeuvre by one side or the other, or may indicate some other activity. The GM should return to Step 5 of the Creature Encounter Procedure after conducting an Interaction, unless otherwise stated in the Interaction description. When it becomes obvious that the party will not be changing its strategy and the creature will not be changing its reaction (especially when combat has been initiated by one or both sides), the GM should stop using Interactions. Instead, Action Rounds are conducted until the encounter is resolved.

Note: Any reaction result calling for movement by an immobile creature is considered a Watch Warily reaction. However, the creature will "close up" if possible.

[28.5] The GM uses the Creature Reaction Table to determine a creature's attitude toward the party.**[28.5] CREATURE REACTION TABLE**

ONE DIE PLUS CREATURE'S AGGRESSION		REACTION	NOTES: *. If the creature possesses an Intelligence Rating, its reaction is to communicate (instead of the listed result). J. If the party is unaware of the creature, immediately conduct Interaction J. D. If the party is unaware of the creature, immediately conduct Interaction D. This table is not used if the creature is unaware of the party. See 28.4 for explanation of use.
2-8		Flee (J)	
9-10		Leave Slowly	
11		Watch Warily*	
12		Ignore	
13		Watch Warily*	
14, 15		Protect*	
16 - 22		Attack (D)	

[28.6] The GM uses the Creature Interaction Matrix to determine the interaction between a creature and the party.

[28.6] CREATURE INTERACTION MATRIX

See 28.4 for explanation of use.

CHARACTER STRATEGY CREATURE REACTION	ATTACK	MANEUVER	WATCH WARILY	IGNORE / UNAWARE	FLEE	COMMUNICATE
Attack	A	B	C	D	E	F
Protect	A	G	H	I	J	K
Watch Warily	L	M	N	N	J	P
Ignore / Unaware	Q	M	N	N	J	R
Leave Slowly	S	T	U	J	J	V
Flee	W	X	Y	J	J	Y
Communicate	Z	AA	BB	N	J	CC

- A. Conduct Action Rounds until one side or the other is dead, captured, or escaped (thus concluding the encounter).
 B. Conduct an Action Round. The characters have the initiative but may not attack the creature in any manner.
 C. Conduct an Action Round, adding *five* to the creature's initiative die roll.
 D. Conduct an Action Round. The creature has the initiative. Skip Step 4 of the Action Round.
 E. Each character may move as far as would be allowed in one Action Round (see 29.2). Then, conduct an Action Round, adding *eight* to the creature's initiative die roll.
 F. Conduct an Action Round. The creature has the initiative.
 G. Each character may move as far as would be allowed in one Action Round (see 29.2). then conduct interaction H.
 H. If the creature is able to attack without moving, conduct an Action Round, adding *five* to the creature's initiative die roll. Otherwise, return to Encounter Step 5.
 I. If the creature is able to attack without moving, conduct interaction F. Otherwise, return to Encounter Step 5.

- J. The encounter is over (the creature, the characters, or both have left the area).
 K. The GM rolls one die and adds the creature's *Intelligence Rating* (if any) to the result. If the modified die result is *less than* the creature's *Aggression Rating*, conduct interaction F (the creature has mistaken the character's actions for an attack). Otherwise, after time passes without incident, return to Encounter Step 5.
 L. Conduct an Action Round, adding *five* to the party's initiative die roll.
 M. Each character may move as far as would be allowed in one Action Round (see 29.2).
 N. Time passes as neither side takes any action.
 P. The characters' communication efforts seem to have no effect. If the creature has no *Intelligence Rating*, or the following check is not successful, time passes without incident; return to Encounter Step 5. The GM rolls percentile dice. If the result is less than the creature's *Intelligence Rating* plus the highest *Empathy Rating* of those characters attempting communication, roll one die and refer to the Creature Reaction Table to see if the creature changes its reaction (the party retains the communicate strategy). If the creature possesses psionic powers, the *square* of one character's *Psionic Communication Skill Level* may be used instead of an *Empathy Rating*.
 Q. Conduct an Action Round. The party has the initiative. Skip Step 4 of the Action Round.
 R. The creature shows no interest as time passes; return to Encounter Step 5. *Exception:* If the characters are attempting to communicate with a creature that is unaware of them, and the GM feels that the creature has been made aware by the character's actions, he may roll one die and refer to the Creature Reaction Table to determine the creature's reaction (the party retains the communicate strategy).
 S. Move the creature two hexes away from the characters. Then conduct an Action Round, giving the characters the initiative.
 T. Each character may move as far as would be allowed in one Action Round (see 29.2). At some point during the character's movement, move the creature two hexes away from them.
 U. Move the creature two hexes away from the party.
 V. The party's communication efforts have no effect. If the creature has no *Intelligence Rating*, or if the following check is not successful, it wanders away and the encounter is over. The GM rolls percentile dice. If the result is *less than* the creature's *Intelligence Rating* plus the highest *Empathy Rating* of those characters attempting communication, roll one die and refer to the Creature Reaction Table again to see if the creature changes its reaction (the party retains the communicate strategy). If the creature possesses psionic powers, the *square* of one character's *Psionic Communication Skill Level* may be used instead of an *Empathy Rating*.

- W. Move the creature away from the characters a number of hexes equal to its *Agility Rating*. Then conduct an Action Round, giving the characters the initiative.
 X. Move the creature away from the characters a number of hexes equal to its *Agility Rating*. Then each character may move as far as would be allowed in one Action Round (see 29.2). Finally, move the creature again (as above).
 Y. Move the creature away from the characters a number of hexes equal to its *Agility Rating*.
 Z. Conduct Interaction Q. Before returning to Encounter Step 5, roll percentile dice. If the result is *equal to* or less than the highest *Intelligence* or *Empathy Rating* among the characters, inform them that the creature has been attempting to communicate. If the creature possesses psionic powers, the *square* of one character's *Mental Power Rating* may be used instead of an *Intelligence* or *Empathy Rating*.
 AA. Each character may move as far as would be allowed in one Action Round (see 29.2). Then check to see if the characters become aware of the creature's communication attempt in accordance with Interaction Z, before returning to Encounter Step 5.
 BB. Time passes as neither side moves. Before returning to Encounter Step 5, roll *two* dice. If the result is *less than* the highest *Intelligence* or *Empathy Rating* among the characters, inform them that the creature is attempting to communicate. If the creature possesses psionic powers, the *square* of one character's *Mental Power Rating* may be used instead of an *Intelligence* or *Empathy Rating*.
 CC. The party and the creature are attempting to communicate. Multiply the creature's *Intelligence Rating* by the highest *Linguistics Skill Level* among the characters (minimum of one) or, if the creature has psionic powers, multiply its *Intelligence Rating* by the highest *Psionic Communication Skill Level* plus the highest *Mental Power Rating* possessed by one character. Roll percentile dice. If the result is equal to or less than the product calculated above, a successful means of communication has been established; the GM should play the creature as an NPC. If the dice result is greater than the product, return to Encounter Step 5. Only one dice roll is allowed per attempt, but as long as both sides choose to continue communicating, one dice roll may be made each time. However, the chance of success is *reduced* by 10 percentage points for each additional attempt (this is cumulative). The passage of about three hours should be noted for each attempt.

[28.7] When the party encounters an NPC, the GM undertakes one of two procedures, depending on the type of encounter he envisions.

The GM secretly determines all the attributes of the NPC (if not already done) and assesses the party's situation. If he feels that combat would precede any vocal interaction (in say, an ambush or battlefield situation), the following steps are conducted.

1. Make sure the characters are properly deployed on the Action Display.
2. The GM secretly rolls percentile dice to determine the *awareness* of the NPC and the party (see 28.2). Place the NPC(s) on the Action Display in accordance with the awareness result.
3. Conduct an Action Round. If one side is unaware of the other, the aware side has the automatic initiative; and step 4 of the Action Round is skipped. Continue conducting Action Rounds until the combat is resolved or both sides choose to cease hostilities. After the first Action Round, both sides are considered aware of each other.

If the GM does not feel that combat would be immediately initiated and wants to allow interaction between the party and the NPC (conversation and reaction) the following steps are conducted (unless the GM has chosen a distinct attitude for the NPC).

1. The GM secretly rolls percentile dice and compares the dice result to the NPC's *Aggression Rating times ten*. This comparison will yield a positive or negative *reaction number*. **Example:** An NPC's Aggression Rating of 4 multiplied by 10 equals 40. Percentile dice are rolled and the result is 76. Comparing the multiplied Aggression of 40 with the roll of 76 yields a reaction number of +36.
2. The GM locates the reaction number on the **NPC Reaction Table** (28.8) and makes a mental note of the indicated NPC reaction. The party may now choose one character among them as their *spokesman*. If no spokesman is chosen, skip Steps 3 and 4 and proceed to Step 5.
3. The spokesman rolls one die. If the result is *less than* his *Empathy Rating*, the GM reads the *Key Word* of the NPC reaction to the party, as an indication of the NPC's apparent intentions. If the die result is *equal to* or *greater than* the spokesman's Empathy Rating, the Key Word is not revealed.
4. The spokesman may perform the *communication task*; see the streetwise and diplomacy skill descriptions (14.0). For every **10** (or fraction) *below* the modified chance for the task the dice result indicates, the party receives a *friendly shift* of *one line towards 0* on the Reaction Table. For every **10** *above* the modified chance, the party receives a *hostile shift* of *one line away* from 0.
5. The GM checks the list of Reaction Shifts (listed with the Reaction Table) to determine whether any shifts are applied (in addition to any applied as stated in Step 4). Any verbal interaction by the players may also be considered. Apply the shifts in the direction indicated.
6. After all shifts are applied, the GM locates the new line on the NPC Reaction Table. He reads or paraphrases the Key Word and the NPC reaction to the players (if he thinks it would be obvious) and the result is enacted as it applies to the situation.

[28.8] The GM uses the NPC Reaction Table to determine the attitude of an NPC towards the party in an encounter.

[28.8] NPC REACTION TABLE

ROLL DIFFERENCE	KEY WORD	NPC REACTION
-111 to -120	Attack	Viciously tries to kill the party.
-101 to -110	Attack	Tries to grievously hurt the party.
-91 to -100	Attack	Attacks party to stop them.
-81 to -90	Attack	Takes the offensive to warn the party.
-71 to -80	Attack	Tries to stop the party without bloodshed.
-61 to -70	Attack	Aims weapons at the party.
-51 to -60	Attack	Draws weapons on party.
-41 to -50	Hesitant	Prepares to take offensive action.
-31 to -40	Cautious	Distrustful and will wait and see.
-21 to -30	Wary	Doubts party's word, but remains patient.
-11 to -20	Suspicious	Needs more information to act.
-1 to -10	Suggestible	Will listen to party's story.
0	Friendly	Will aid party if possible.
+1 to +10	Suggestible	Will hear the party out.
+11 to +20	Suspicious	Thinks party is here to make trouble.
+21 to +30	Wary	Nervous because party could cause harm.
+31 to +40	Cautious	Party is intimidating and fear is growing.
+41 to +50	Hesitant	Party causing great fear.
+51 to +60	Flee	Backs away from the party.
+61 to +70	Flee	Tries to hide from the party.
+71 to +80	Flee	Moves quickly away from the party.
+81 to +90	Flee	Runs frantically away from the party.

If the actions of the party cause a shift into Flee or Attack reaction from a less extreme reaction, the NPC receives the Initiative in the first Action Round. Upon reaching 0 (Friendly), no further shifting can occur for the party's benefit. If the die roll matches the NPC's Aggression x10 exactly, interpret it to mean extreme interest, and sexual attraction if possible. A party can ruin this reaction by taking harmful actions. See 28.7 for explanation of use.

Friendly Shifts (TOWARDS 0)

Shift 2	The party has no weapons visible.
Shift 1	Character has military rank and NPC was/is in the military.
Shift 1	Party spokesman's social standing is +/- 1 of NPC's. ^A
Shift 2	Characters are disguised as allies or are allies.
Shift 1	Party has correct ID or papers, which pass inspection.
Note ^B	NPC Party outnumbers characters.
Shift 1	Characters adopt friendly attitude toward NPC's. ^C
Shift 2	Characters adopt helpful attitude toward NPC's. ^C

Hostile Shifts (AWAY FROM 0)

Shift 1	The party has weapons visible.
Shift 2	The party has weapons at the ready.
Shift 4	The party has no weapons aimed.
Shift 1	Party spokesman's social standing beyond +/- 1 of NPC's. ^A
Shift 2	Characters disguises are seen through.
Shift 3	Party's ID or papers, did not pass inspection.
Shift 4	Characters are disguised as the enemy or are the enemy.
Note ^B	Character party outnumbers the NPC's.
Shift 2	No one in the party can speak the NPC's language.
Shift 1	Characters adopt an angry or disdainful attitude. ^C
Shift 2	Character(s) revealed as psionic; no NPC psionic.
Shift 2	Characters actually threaten NPC's. ^C

A. If the characters have not designated a spokesman, these shifts are ignored.

B. The GM should shift 1 for every two characters or NPC's, rounding fractions up.

C. These actions are verbally enacted by the players in their interplay with the GM.

[29.0] Action Rounds

Action Rounds are used to resolve combat between characters, NPC's and creatures. When a possible combat situation arises, the GM and the players prepare the Action Display as described in 26.6, the Creature Encounter Procedure (28.1) and the NPC Encounter Procedure (28.7).

During a creature encounter, an Action Round is undertaken when called for by an Interaction (see 28.4). Some Interactions call for the conduct of one Action Round, and then another Interaction is determined. Others call for the repeated conduct of Action Rounds until combat is resolved (one side or the other is incapacitated or escapes).

During an **NPC** encounter, an Action Round is undertaken if either the characters or NPC's wish to initiate combat. Action Rounds are repeated until combat is resolved or both sides choose to cease hostilities.

ACTION ROUND PROCEDURE:

1. If not stated in the Encounter Procedure or Interaction, determine which side has the *initiative* (see 29.1).
2. Every individual which is not stunned, passed out or restrained on the side *with initiative* may move, fire and/or perform other actions. Each individual conducts his actions one at a time; that is, one performs actions, then the next, then the next, and so on. The order in which individuals perform their actions is up to the players (if characters) or the GM (if NPC's or creatures). If an enemy individual is attacked or fired upon, the effects are implemented immediately.
3. Every individual on the side *without initiative* that was fired at in Step 2 must conduct a *willpower check*. Those individuals that fail the check must now perform a *rash* or *protective* action.
4. Every individual on the side *without initiative* may perform actions as described in Step 2. **Exception:** An individual that was attacked in *close combat* during Step 2 or that *failed* a willpower check in Step 3 may not perform any actions *at all*. This step is skipped if the side without initiative is unaware or is ignoring the side with initiative.
5. The GM may check the NPC's or creatures to determine if their reaction to the characters changes. The characters may also change their strategy. If one or both sides wishes to continue combat, return to Step 1 of this procedure. However, if one or both sides changes their strategy during a creature encounter, check the appropriate interaction to see how the next Action Round will be conducted (if at all).

Throughout this section, any references to abilities and options of the characters also applies to NPC's.

[29.1] The players and the GM determine which side has the initiative at the beginning of each Action Round.

The players use the one character in their party that has the highest *Initiative Value*, determined as follows: Add together the character's *Leadership* Rating (if the enemy is a creature, *Intelligence* may be used instead), his *Environ* Skill Level, and his *Battlefield* Skill Level (if the characters are fighting NPC's, *double* the Battlefield Skill Level). The highest sum obtained by one character is the party's Initiative Value and that character is considered the party's leader.

The GM secretly determines the Initiative Value of the enemy force. If a creature, its initiative percentage is used as its Initiative Value. If NPC's, the Value is determined in the same way as for characters. One side's Initiative Value may be increased in accordance with a creature interaction (see 28.6).

The player controlling the character being used for initiative rolls one die and adds the result to his Initiative Value. The GM secretly does the same for the enemy force. The side that achieves the higher sum receives the initiative this round, and performs actions first.

If one side is unaware in the first Action Round of a combat, they are considered aware in all the following Rounds. However, until the initially unaware side actually gains the initiative in an Action Round, 3 is subtracted from all their initiative die rolls.

A character or NPC that is currently stunned, unconscious, or that failed a will power check in the previous Action Round may not be used to determine the Initiative Value.

Close Combat Initiative. If a character is engaged in close combat with an NPC or creature (see 29.9), the GM should have the character and his enemy check for initiative in relation to each other separate from the rest of the combatants. Their rolls will have no effect on the other individuals. Thus it is possible that a character will have the initiative in his close combat situation while the rest of the party will not, and vice versa.

[29.2] A character may move a number of hexes equal to his Agility Rating in a single Action Round, with the following modifiers:

- Add the Terrain Movement Modifier for the environ (see the Terrain Effects Chart).
- Add the Gravity Movement Modifier for the world (see the world log).
- Add the character's appropriate Gravity Skill Level.

Example: A character with an Agility Rating of 7 in a woods/hill environ (-4) on a size 4 world (+2) who has a Light Gravity Skill Level of +1, would be able to move up to 6 hexes in a single Action Round.

The number of hexes a character may move may be increased or decreased if he is wearing an expedition suit or body armour. *Subtract* the character's EVA or Body Armour Skill Level (whichever is higher) from the *Encumbrance Rating* of the suit or armour. If the result is greater than one, *divide* the character's movement rate by the result (rounding to the nearest whole number). If the result of the subtraction is one or less, the character's movement is not affected.

Exception: If a character using his Body Armour Skill is wearing *augmented* armour, and the subtraction result is - 2 or less, *multiply* the character's movement rate by the *absolute value* of the result.

Example: Assuming the character in the above example is wearing Civ Level 7 Impact Armour (encumbrance Rating of 3, augmented) and does not have the EVA or Body Armour Skill, he would be able to move only two hexes per Action Round (6 + 3). If he had a Skill Level from 2 to 4 he could move the full six hexes. If he had a Body Armour Skill Level of 5 (or 6) he could take advantage of the armour's augmentation and move 12 (or 18) hexes.

Unless a character's Agility Rating is **0** (which indicates that he may not move at all) or he is restrained, he may always move at least one hex, even if his calculated movement is **0** or less.

The movement rate of a robot is calculated in the same manner as that of a character (robots have no Gravity Skill Levels). However, if a robot's calculated movement rate is 0 or less it may not move *at all* (unless it has a creative thought system).

The movement rate of a creature is equal to its Agility Rating only. The effects of gravity and the environ are already included in its Agility Rating.

[29.2] MOVEMENT RATE CALCULATION SUMMARY

Character Action Round Movement Rate...

Character Agility Rating
plus Gravity Skill Level
plus Gravity Movement Modifier
plus Terrain Movement Modifier.

$$\text{Character AR Move Rate} = \text{Chr AY} + \text{GSk} + \text{GMv mod} + \text{TMv mod}$$

If the character is wearing protective attire with an Encumbrance Rating, *subtract* the EVA or Body Armour Skill Level from the Rating. If the result is **2** or greater, *divide* the sum of the preceding calculation by the subtraction result. If the result is **-2** or less and the character is wearing augmented (powered) body armour, *multiply* the sum of the preceding calculation by the absolute value of the subtraction result. If the result is **-1**, **0** or **+1**, the character's movement is not affected by the attire.

Ground Vehicle Movement Rate...

Vehicle Speed (in hexes per Action Round or kilometres per hour; see 21.1)
divided by (Terrain Value, 27.7 + Terrain Value Modifier, 21.1)

$$\text{Vehicle AR Move Rate} = \text{VSpd} / (\text{TV} + \text{TV mod})$$

A Ground Vehicle may not traverse terrain with a Terrain Value that is greater than the vehicle's Terrain Value Limit (21.1)

See 29.2 for additional information.

[29.3] When a character is eligible to move, he may perform other actions before, after or instead of moving.

An action a character performs during an Action Round other than movement may reduce the number of hexes he may move in that Round or may prevent him from moving altogether. Unless otherwise specified, actions may be performed before moving, after moving, or instead of moving. They may not be performed before and after moving and may not interrupt movement. Thus a character may perform actions and then move, or he may move and then perform actions, or he may perform actions only. If a single action would reduce a character's movement rate below 0, he may still perform that action but may not do anything else in the Action Round.

Fall prone. No reduction. May be performed after move only.

Get up. -1 hex. Performed before move if prone.

Open or close door. -1 hex.

Pick up object. -2 hexes.

Pass through narrow opening. -2 hexes.

Load weapon. One Action Round.

Fire weapon. No reduction (however, 29.6).

Draw Weapon. -1 hex.

Exit enemy-occupied hex. -2 hexes. May not be performed if engaged in close combat. May be performed before move only.

Attack in Close Combat. -3 hexes. May be performed after .move only. A character may conduct no more than one close attack in a single Action Round.

Break off from Close Combat. Movement rate reduced to one hex. Character must have the initiative and may not break off if restrained. May be performed before move only.

Pressurize or Depressurize in Airlock. Two Action Rounds.

Emplace Machine Gun. Two Action Rounds (a machine gun mounted on a structure or vehicle is considered emplaced).

Jump over object. -3 hexes. May be performed after move only, although the jump may include an additional forward momentum of one hex. A character may jump a number of feet equal to one half of his total movement rate for the Action Round.

Perceive Creature without Bioscanner. No reduction.

Perceive Creature with Bioscanner. One Action Round.

Jet Pack Movement. A skilled character wearing a jetpack may move (fly) a number of hexes equal to twice his Agility Rating, plus his Gravity Skill Level, plus the Gravity Movement Modifier, plus the *square* of his Jetpack Skill Level. No modifier for terrain is considered. An unskilled character may move a number of hexes equal to his Agility Rating plus his Gravity Skill Level plus the Gravity Movement Modifier (the GM may wish to check for an accident when an unskilled character is using a jetpack). Jetpack movement is halved (rounded up) if a character is taking off or landing before or after the move. A character using a jetpack cannot take off and land in 1 Action Round.

The movement rates of vehicles (in hexes per Action Round) are listed on the appropriate vehicle chart. As long as a vehicle is being driven, it may move at its listed movement rate (as modified by the Terrain Value of the environ (see 21.1)). A character that wishes to switch from driving a vehicle to moving on foot (or vice versa) must spend one Action Round shutting down (or starting) the vehicle.

A character that is controlling a robot's actions in an Action Round may not himself move, fire a weapon or perform any other actions in that Round (unless the robot has a self-activation system).

[29.4] The size of an individual or object determines how much space it occupies in a hex.

The size classifications are: *Minuscule* (smaller than a coin). *Very Small* (the size of a book). *Small* (the size of a small child), *Man-size*, *Large* (the size of a large horse), *One-hex*. *Two-hex*, and so on.

There is no limit to the number of minuscule or very small objects or individuals. That may occupy a hex. Twenty small, 10 Man-size, or three large objects or individuals may occupy a hex. The size of an object or individual affects weapon fire in the form of a modifier applied to the Hit Chance (see the Fire Modifier Chart).

[29.5] When eligible to move, a character may fire a loaded weapon he possesses at any target within his sight.

He may fire the weapon up to a number of times equal to the weapon's *Fire Rate* (listed on the Weapon Chart). However, if he fires a number of times *greater than half* the weapon's Fire Rate, the weapon becomes *unloaded* and may not be fired again until loaded (an action listed in 29.3). Thus, a weapon with a Fire Rate of 1 must be reloaded after each fire. As long as a weapon is fired a number of times equal to or less than half its Fire Rate, the character need not pause to reload. A character that is *not* skilled with a weapon may only fire it once in an Action Round.

For each fire he wishes to conduct, the character declares his intended target and conducts the following steps:

1. Referring to the Weapon Chart, cross-reference the type of weapon being fired with the column corresponding to the number of hexes away the target lies to find the Base Hit Chance. This range is counted by including the target hex but not the firing character's hex.
2. Multiply the *Terrain Value* in the environ by the *Terrain Multiplier* (listed with the range on the Weapon Chart) and *subtract* this product from the Base Hit Chance. If the target is *prone*, *double* the subtraction.
3. If the firing character is skilled with the weapon, add his Dexterity Rating and the square of his Skill Level to the Hit Chance.
4. Consult the Fire Modifier Chart to see if any other additions or subtractions are applied to the Hit Chance, depending on the situation. Certain Hit Chances for manual weapons indicate that the character's *Strength* Rating is also added to the Hit Chance (see the Weapon Chart).
5. The character rolls percentile dice. If the dice result is equal to or less than the modified Hit Chance, he hits the target; refer to the Hit Table to determine the damage incurred by target in accordance with 30.0 (**Exception:** If a target is fired at more than once, damage is determined after all fires are conducted). If the dice result is greater than the chance, he misses the target; the GM may check to see if the fire hits a *likely target* (see 29.7).

A character may fire at any number of different targets in a single Action Round (within the limit of his weapon's fire rate). However, a reduction (listed on the Fire Modifier Chart) is applied to *all* fires if he does so. A reduction is also applied to all fires when firing a weapon with recoil more than once in an Action Round (even if firing at the same target).

A character in a hex occupied by an enemy capable of movement may only fire at a target in that hex.

[29.6] The Fire Modifier Chart lists all the modifiers that may be applied to the Hit Chance when firing a weapon.
See below.

[29.6] FIRE MODIFIER SUMMARY

Chance to Hit the Target...

Base Hit Chance *minus*

(Terrain Value x Terrain Multiplier) *plus*

character's Dexterity Rating (if skilled) *plus*

square of character's skill level

Any of the following modifiers that apply are also considered and are cumulative.

(Modifier) if the Firing Character...

(-20) ...moves on foot in the same Action Round.

(-30) ...is driving a vehicle.

(-5) ...is in a moving vehicle.

(-10) ...is firing at more than one target in the same Action Round. Apply modifier to all fires for each target beyond one (e.g. if 3 different targets are fired at, all hit chances are reduced by 20).

(-5) ...is firing more than one shot with a recoil weapon in the same Action Round. Apply modifier to all fires for each fire beyond one (e.g. if 4 fires are made, reduce all hit chances by 15)

(Modifier) if the Target is...

(Hit Impossible) ...Miniscule

(-45) ...Very Small

(-30) ...Small

(+20) ...Large

(+40) ...One Hex

(+20) ...Immobile.

(Double Terrain Value) ...Prone

The GM may apply further subtraction if the target is partially obstructed by a distinct object (remember natural terrain objects are accounted for by the Terrain Value and Multiplier). The Base Hit Chance and the Terrain Multiplier are listed on the Weapon Chart. The Terrain Value is listed on the Terrain Effects Chart.

See 29.4 for additional weapon fire restrictions.

[29.7] If a fire misses its intended target, the GM may check to see if a likely target is hit instead.

The GM locates the difference between the dice result and the modified Hit Chance on one of the following likely target results. If one applies, that object or individual suffers the effects of the fire.

1-30. No other object hit. **Exception:** If the target is engaged in close combat, the fire hits the target's adversary.

31-50. Fire hits an object or individual other than the intended target in the target hex or in a hex that the fire passed through (including hexes beyond the target).

51 or more. Fire hits an item or individual in a hex adjacent to any hex in the above result.

The GM determines which likely target is hit if more than one is eligible. Any fire that does not hit its target or a likely target always hits a *wall* (if present) behind the intended target (this could be very dangerous if a vacuum or a hostile atmosphere exists beyond a pressurized chamber). **Exception:** A skilled character firing an *arc gun* will never hit an object, individual or wall behind his intended target.

If the dice result is greater than the modified chance when throwing a *grenade*, the grenade strikes one hex away from the target hex for every **10** percentage points (or fraction thereof) over the chance the dice result indicates. The GM randomly determines which direction from the target the grenade goes.

[29.8] A character without initiative must conduct a will power check if he is fired upon and does not incur damage.

The character rolls one die; if the result is *equal* to his *Aggression* Rating, he passes the check. The character may add or subtract a number *up to* his *Mental Power* Rating or his *Battlefield Skill Level* (his choice) to or from the die result. Thus, a character with an *Aggression* of **7** and a *Mental Power* of **2** must roll a **5,6,7,8** or **9** to pass a willpower check. If the character has a *Battlefield Skill Level* of **3**, he must roll a **4** through **10** to pass the check.

A character that passes a will power check may participate in Step 4 of the Action Round. A character that fails a will power check may not do anything in Step 4; instead, he must immediately perform one of the following:

- A character that fails a willpower check by rolling *too high* must immediately fall prone in the hex he occupies or any adjacent hex that is further away from the source of fire (his choice). A character that is already prone does nothing.
 - A character that fails a will power check by rolling *too low* must perform a rash action. He must immediately move into the hex occupied by the individual that attacked him (or as close to this hex as possible if his movement rate is insufficient). If the character is able to conduct a close attack or fire his weapon after moving he must do so (his choice if able to do both). If a rash character is firing his weapon, he must conduct as many fires as possible. He may not fall prone after his rash action.
- Creatures never conduct willpower checks. A character on the side with initiative does not conduct a willpower check when fired upon. A character does not conduct a willpower check when attacked in close combat.

[29.9] A character or creature may attack an enemy in the same hex by using close combat, instead of firing a weapon.

Once close combat is initiated, the two participants are considered *engaged* until one or the other is stunned, passes out, dies or breaks off. An individual *without* initiative that is engaged in close combat may not perform any actions *at all* in step 4 of the Action Round. An individual *with* initiative that is engaged may only conduct a close attack or attempt to break off (see 29.3) during Step 2 of the Action Round. A character is not required to initiate close combat when in an enemy-occupied hex; if he is not engaged, he may fire a weapon at a target in the hex instead.

The close combat strengths of the attacker and defender depend on how each individual declares he will fight; *unarmed*, with a *blade* or in *body armour*. An individual may declare any one of the three types for which he is eligible.

Attacking or defending unarmed. The character's Dexterity, Strength or Agility Rating (his choice) is added to the square of his Unarmed Combat Skill Level. If the character is not skilled, he uses one half (rounded up) of one of his Ratings only.

Attacking or defending with a melee weapon. The character's Dexterity or Agility Rating (his choice) is added to the *Hit Strength* of the melee weapon (see the Weapon Chart) and the square of the Blade or Melee Weapon Skill Level. If the character is not skilled, he uses the Hit Strength of his Melee Weapon only.

Attacking or defending in body armour. The character's Strength Rating is added to the *Hit Strength* of his armour and the square of his Body Armour Skill Level. If the character is not skilled, he uses the Hit Strength of his armour or his Strength Rating only.

Note: A character in body armour may declare that he is attacking or defending unarmed if he wishes.

Creature (attacking or defending): The creature's Combat Rating is multiplied by one half (rounded down) of his Agility Rating. Thus, a creature with a Combat Rating of 6 and an Agility Rating of 7 would have a close combat strength of 18.

After determining the close combat strength of the attacker and defender, resolve the combat by *subtracting* the defender's close combat strength from the attacker's close combat strength to determine the differential (a negative number is possible). The attacker rolls *one die* and *adds* the die result to the differential.

- If the sum of the differential and the die result is 4 or greater, *divide the sum by two* (rounding down) and locate the halved sum on the Hit Table to determine hits incurred by the *defender* (see 30.1).
- If the sum of the differential and the dice result ranges from - 3 to 3 the attack has no effect.
- If the sum of the differential and the die result is - 4 or less, divide the *absolute value* of the sum by two (rounding down) and locate the halved sum on the Hit Table to determine hits incurred by the *attacker* (see 30.1).

Before resolving a close combat, the attacker (only) may declare that he is attempting to *restrain* his enemy. If this is declared, reduce any hits received in the combat by his enemy by three. If the adjusted number is 0 or higher, his enemy is considered restrained (suffering the adjusted number of hits) and remains restrained until the attacker releases him, or is stunned, passes out, or dies. A restrained individual may not perform any actions at all. An individual that is restraining an individual may not perform any actions other than movement (however, see 26.5), unless it is a creature that possesses the *multiple attack* power or that has restrained its adversary in *webs*.

[30.0] Hits and Damage

A character, creature, or NPC may suffer hits; and a vehicle, machine, or other piece of equipment may suffer damage, as a result of weapon fire, close combat, or an accident. Hits against an individual reduce his Physical Characteristic Ratings. Points lost from Physical Characteristics are regained by healing (see 12.3 and the Diagnosis and Treatment skill descriptions). Damage to equipment may puncture the object and/or render it inoperable until repaired (see 13.1 and the tech skill descriptions). The Hit Table is used to determine all types of hits and damage, although its use changes depending on the situation.

[30.1] When an individual is hit by weapon fire, the character who fired the weapon uses the Hit Table to determine the number of hits his target receives.

He rolls *one die* and *adds the Hit Strength* of the weapon to the die result. The modified die result is located on the Table to find which physical characteristic is affected and how many points are subtracted from that characteristics.

If an individual is hit by more than one fire from the same weapon in a single Action Round, the Hit Strength of the weapon is *multiplied* by the number of times the target was hit. One die is rolled and the result is added to this product to determine the one result that will be applied to the Hit Table. Thus, the Hit Strength of a paint gun that hits one target three times in one Action Round is 24 (3x8).

The die is not rolled when referring to the Hit Table after a close combat. The numerical result derived from a close combat (see 29.9) is applied directly to the Table to determine hits received.

When a creature is hit, the GM should secretly conduct the Hit Table die roll and apply any results unannounced.

[30.2] Hits suffered by an individual are applied as reductions to his Physical Characteristics.

When a character incurs a hit result, the listed number of points are immediately subtracted from the listed Characteristic Rating. This is done by recording the reduced Characteristic Rating next to the original rating on the Character Record (do not erase the original rating). Until healed, the character uses the reduced rating for all game purposes. When a character's *Endurance* Rating is reduced to **0**, he immediately *passes out* and will not come to until healing increases his Endurance to **1**. When a character's *Agility* is reduced to **0**, he may not move at all (he may use his hands to operate a small device or weapon). If a character's *Dexterity* is reduced to **0**, he may hold nothing and fire no weapon (he may still move).

There is no immediate effect of a character's Strength being reduced to 0. However, if a character's Strength *and* Endurance are reduced to **0**, he dies. A Characteristic Rating may never be reduced below 0. If a hit result calls for a greater reduction to a characteristic than is possible to apply, the excess reduction is applied to the next characteristic listed down on the Hit Table (the number of hits received is not increased). **Example:** A character with an Endurance Rating of 6 receives a hit result of 8 Endurance (result 16); his Endurance Rating is reduced to 0 and his Strength Rating (the next characteristic listed on the table) is reduced by **2**. Exception: If the 38 or more result is incurred on the Hit Table, use the next characteristic *up* (Strength) after applying reductions to endurance.

When applying hits to a creature, treat its Combat Rating as its Strength and Endurance Rating (for purposes of using the Hit Table) and treat its Agility Rating as its Agility and Dexterity Ratings. When a creature's Combat Rating is reduced to **0**, it passes out. When its Combat *and* Agility Ratings are reduced to **0**, it dies.

[30.3] Each time a character or NPC suffers one or more hits, he must immediately conduct a shock check.

The hit character rolls one die. If the die result is equal to or less than his *Mental Power Rating*, he is unaffected. If the die result is greater than his Mental Power Rating, the character immediately drops whatever he may be holding and falls down; he may perform no actions at all for the remainder of the current Action Round and the entirety of the following Action Round. After the following Action Round, he is no longer affected. Note that a character with a Mental Power Rating of **0** will always fail a shock check. A character that passes out or dies when hit does not conduct a shock check. Creatures never perform shock checks.

[30.4] An individual that is hit with a stun pistol pulse does not suffer any hits but may black out briefly.

The Hit Table is not used. Instead, the GM rolls *one die* and *adds the Stun Strength* of the weapon (either 8 or 16) to the die result. This modified result is compared to the *sum of the target's Endurance and Mental Power Ratings*. For every point above the sum the modified result indicates, the individual is stunned for one Action Round. Thus, a character with a combined Endurance and Mental Power Rating of **12** that suffers a modified stun result of **17** is stunned for five Action Rounds. A stunned individual immediately drops whatever he is holding and falls down; he may perform no actions at all until the requisite number of Action Rounds has passed. The count of Action Rounds for stun duration does not include the Action Round in which the individual is hit. The GM may wish to conceal the duration of a stun result from the characters, informing them only when the affected individual comes to.

The strength of a stun weapon is *halved* (before adding a die roll) if the target is wearing any type of full body armour or an expedition suit. A robot is not affected by stun weapons.

When checking for the result of a stun pulse against a creature, use its Combat Rating (only). Certain creature powers may render a stun pulse ineffective or alter its effects (see 47.0). In addition, the GM may choose to make creatures that have no central nervous system (in the GM's opinion) immune to stun weapons.

[30.5] Damage to a robot, vehicle, or other piece of equipment hit by fire or involved in an accident ranges from superficial damage to complete destruction of the object.

The Damage column of the Hit Table is used to determine whether the object suffers superficial, light, or heavy damage, or becomes partially or totally destroyed. An object that suffers more than superficial damage is rendered inoperable until repaired (see 13.0; the exact nature of the problem is up to the GM). An object that is totally destroyed may not be repaired.

When an object is hit by weapon fire, the damage result is determined as described in 30.1, using the Damage column instead of the Physical Characteristic column. A vehicle or robot that is hit by fire may be protected by its armour Defence Rating (see 30.6).

Damage to a vehicle or other object in an accident is assessed in accordance with 11.2 and 27.8. If a vehicle has a Projectile Armour Rating, the armour may protect the vehicle from damage. Note that any character in a vehicle that incurs damage may suffer hits as a result.

Damage suffered by body armour and other protective attire is not determined using the Damage column of the Hit Table. Instead, the Armour columns are used, as explained in 30.6.

[30.6] A character wearing body armour or any other attire with a Projectile and/or Beam Defence Rating receives protection from hits.

The Protective Attire Chart (20.0) lists a *Projectile Defence Rating* (use for protection from projectile weapons, close combat, and accidents) and a *Beam Defence Rating* (used for protection from laser pistols, paint guns, arc guns, and other beam weapons). When a character incurs a result on the Hit Table due to any type of combat or mishap, he checks the *Armour Result* listed with the hit result.

- If the Armour Result is less than the appropriate Defence Rating of the character's armour, the character and the armour are not harmed at all.
- If the Armour Result is equal to the Defence Rating of the armour, the character is not harmed, but the armour suffers *superficial damage* and *both* of its Defence Ratings are reduced by 1.
- If the Armour Result is greater than the Defence Rating of the armour, the armour is *pierced* and the character receives hits. The Defence Rating of the armour (before the current hit) is subtracted from the number of hits the character receives, and the appropriate Physical Characteristic is reduced by this adjusted amount. If the Armour Result is greater than the Defence Rating by 1, the armour suffers *light damage* and *both* Defence Ratings are reduced by 1. If the Armour Result is greater than the Defence Rating by 2, *heavy damage* is suffered, and both Defence Ratings are reduced by 2. If greater by 3, the armour is *partially destroyed*, and both Ratings are reduced by 3. If greater by 4 or more, the armour is *totally destroyed*. An Armour Defence Rating may never be reduced below 0.

There are four columns of Armour Results on the Hit Table. When hit by weapon fire, use the column corresponding to the total number of fires that the target was hit by. When involved in a close combat or an accident, use the **2 Fires** column of the Table.

All vehicles possess Armour Ratings, which are used in the same way as personal armour to protect the machine from damage. Certain creature powers provide a creature with natural armour (with specific ratings given in the power descriptions), used in the same way as character armour.

[30.7] The Toxin Effects Matrix is used to determine how an individual hit by a treated projectile is affected.

When an individual is hit by a needle from a needle pistol or rifle, or is exposed, to toxic gas from a grenade, the GM cross-references the type of toxin used with the composition of the target to determine the effects of poison. All character and NPC targets use the **Human** row of the matrix. A creature target uses the row that corresponds to its composition (only known by the GM, unless the characters have examined the creature, see 35.0).

A number from the matrix is treated as a Hit Strength; roll one die, adding the number to the die result, and determine the hits suffered by the individual as explained in 30.1 and 30.2. A letter result obtained from the matrix affects the target as explained (see matrix). In addition to its toxic qualities, a needle has a Hit Strength of 1. This applied to the target before determining the effects of the toxin. If the needle does no harm to the target, the toxin has no effect either.

[30.8] The Toxin Effects Matrix explains the effects that various toxins have on beings of various compositions.

[30.8] TOXIN EFFECT MATRIX

COMPOSITION	NERVE	POISON	KNOCK-OUT	ACETIC	ALKALOID
Human / Humanoid	20t	P	15s	Ne	Ne
Mammalian	10t	15c	5s	Ne	R
Terran-Like	15s	P	10c	R	Ne
Protein	P	D	Ne	15s	10t
Carbon	D	Ne	15t	P	5c
Non-Carbon	Ne	10s	R	10c	P

Number results indicate Hit Strength (see 30.1 and 30.2).

Ne: No Effect.

R: Creature raging; will attack for remainder of current Action Round with its Combat Rating doubled.

D: Creature dazed; blacks out for a number of Action Rounds equal to the roll of one die. When the creature regains consciousness, it will be raging (result **R**).

P: The individual loses one point from the Endurance Rating (Combat Rating, if creature) each Action Round. When the rating reaches 0, the individual loses one point from the Strength Rating (Agility if creature) each Action Round. When that rating reaches 0, the individual is dead.

c: Apply any hits received to the creatures' Combat Rating only.

s: Treat as stun strength (see 30.4).

t: Apply hits in accordance with the Hit Table. However, after a number of minutes (four Action Rounds apiece) equal to the roll of one die, the effects of the hits disappear (unless the individual dies as a result of the hits).

See 30.7 for explanation of use.

[30.9] The Hit Table is used to determine hits suffered by individuals and damage suffered by objects.

[30.9] HIT TABLE

ONE DIE PLUS HIT STRENGTH	PHYSICAL CHARACTERISTIC RATING POINTS LOST	ARMOUR RESULT (NUMBER OF FIRES)				DAMAGE TO EQUIPMENT	
		1	2*	3, 4	5 or more		
1 or less	No Effect	-	-	-	-	NE	* Use this column when involved in any Close Combat or Accident .
2	1 Strength	-	-	-	-	NE	
3	1 Dexterity	-	-	-	-	NE	NE: No Effect.
4	2 Endurance	1	-	-	-	NE	S: Superficial Damage.
5	2 Agility	1	-	-	-	NE	
6	3 Endurance	1	1	-	-	NE	L: Light Damage.
7	3 Strength	2	1	-	-	S	H: Heavy Damage.
8	4 Endurance	2	1	1	-	S	
9	4 Agility	2	1	1	-	S	P: Partially Destroyed.
10	5 Endurance	2	1	1	-	S	T: Totally Destroyed.
11	5 Strength	2	1	1	1	S	
12	6 Endurance	3	2	1	1	S	
13	6 Dexterity	3	2	1	1	S	
14	7 Endurance	3	2	1	1	S	See 30.1 for explanation of use.
15	7 Agility	3	2	1	1	L	
16	8 Endurance	3	2	2	1	L	
17	8 Strength	4	3	2	1	L	
18	9 Endurance	4	3	2	2	L	
19	9 Agility	4	3	2	2	L	
20	10 Endurance	4	3	3	2	L	
21	10 Strength	4	3	3	2	L	
22	11 Endurance	5	4	3	2	L	
23	11 Dexterity	5	4	3	2	H	
24	12 Endurance	5	4	3	3	H	
25-26	13 Strength	5	4	3	3	H	
27-28	14 Endurance	5	4	4	3	H	
29-30	15 Agility	5	4	4	3	H	
31-33	16 Endurance	6	5	4	4	P	
34-37	17 Strength	6	5	5	4	P	
38 or more	18 Endurance	6	6	5	5	T	

VIII. Space Travel

There are two distinct methods of travelling between worlds. Hyperdrive uses the Mental Power of a psionic navigator to travel instantaneously from star system to star system. Unfortunately, hyperdrive will not work when a spaceship is within the gravity well of a star system. Thus, slower-than-light reaction drive (fission) is used to travel from planet to planet within a star system. A character conducting a hyperjump uses his navigator skill (this skill is not used to navigate a spaceship through interplanetary space). Pilot skill is used to control a spaceship through interplanetary space.

All the spaceships in *Universe* are composed of a *hull* and a variable number of *Pods*. The hull determines the ship's size and overall performance. The pods are attached to the hull and give the ship a specific character: military, scientific, merchant, passenger, etc. This concept is more fully explained in *Delta Vee* Sections 35.0 through 39.0.

The Gamesmaster creates spaceships from the various hulls and pods and introduces them into play so that the characters may travel in them, encounter them and, if wealthy enough, purchase them.

Two astronomical terms are used in this Chapter:

Astronomical Unit (AU). A standard measure of distance in interplanetary space. One AU equals 149 million km, the distance from Sol to Earth.

Ecliptic. The plane formed by a star and the orbital paths of all the planets around it. The mass of the worlds scattered around the ecliptic create a flattened sphere of gravity 'wells' that may not be entered when hyper-jumping.

[31.0] Hulls and Pods

Spaceship hulls and pods are manufactured on worlds with Class **3** and **4** spaceports, and in orbiting factories attached to such spaceports. Like all other manufactured goods, spaceship parts come in a variety of Civ Levels (6,7,8) and will only be readily available on a world of an equal or higher Civ Level. Spaceships are far beyond the financial means of most people and, thus, the characters will be little concerned with the economics of spaceship construction and purchase. However, the characters will be able to book passage in commercial spaceships and during an adventure will sometimes receive free transport by an employer or may even be loaned a ship for the completion of a specific mission.

The GM uses the list of hulls and pods in this Section and the additional information in the *Delta Vee* rules (especially concerning military spaceships) to create spaceships suited to his adventures. The hull/pod system allows the GM to design a wide variety of ships with a minimum of trouble. When constructing a ship, the GM should keep in mind the specifications of each hull and pod, especially their availability, Civ Level, and crew requirements, so that, when assembled, the ship may be logically (and legally) used by the characters.

[31.1] Every class of spaceship hull contains the following:

GENERAL RULE:

The spacecraft classes vary widely in size and quality, each spacecraft is actually a hull with one or more attached pods. (**Note:** The Battlecraft Class do not carry pods.)

In addition to the information listed for each spacecraft class on the Spaceship Attribute Chart, each ship possesses a sub-light engine (using radioactives as its energy source, see 32.2), a bridge with basic navigation and communications equipment, living quarters and first aid station for a crew necessary to keep the craft running, an airlock leading out of the ship, and a docking port for rendezvous with other craft. Craft designed to travel at relativistic speeds will carry a laser / subsonor for debris elimination and avoidance.

Six industrial concerns produce the spaceships:

Terwillicker Spaceworks, Inc. manufactures the *Terwillicker-5000*, a high-quality two-person craft; and the *Terwillicker-X* fighter, an innovative adaptation of the 5000 designed for military use.

Blades Research Institute produces military craft under long-term contract. The *Dagger*, *Sword*, and *Spear* Class ships are their most successful models.

Harmonics, Inc. specializes in finely crafted ships for government and high-level corporate use. The *Piccolo*, *Flute*, and *Clarinet* represent the top of their line.

The **Corco Group** manufactures a large line of commercial vessels, often sacrificing performance for economy. The *Gamma*, *Zeta*, and *Mu* Classes are well suited for transport in safe regions. The *Iota* is designed to appeal to merchants working in dangerous areas.

Additional information is listed with each spaceship hull description in 31.2. This information includes the following:

Availability (Open, Restricted, or Closed). An *open* spaceship is available for purchase by anyone who has the funds. A *restricted* spaceship is available only with permission from the federation or an independent world. Such ships, equipped with quality defensive gear and light weapons, are preferred by merchant concerns and government agencies operating in dangerous areas. A *military* spaceship is designed specifically for combat and is available only to the federal navy, the Astroguard services, and the transport branches of military ground forces.

Crew Required. The minimum number of crew members required to keep the spaceship running and trouble-free, excluding gunner for the ship's burster or any crew necessary to service any pods the ship possesses.

Passenger Capacity. The maximum number of people the spaceship may accommodate when no pods are attached. Accommodations are basic: shared sleeping quarters, galley, and first aid station (fulfills equipment requirement for diagnosis and treatment tasks, provides no Skill Level increase). Any crew required to run the ship takes up passenger space.

Cargo. The maximum metric tonnage of cargo that the spaceship can transport. Cargo space may be increased by **0.1** ton per passenger below passenger capacity carried. The cargo hold will not sustain life.

Cost. Price in Trans for the spaceship hull when new if purchased on a world of the same or higher Civ Level as the hull. Price may fluctuate as described in 18.0.

Performance Modifier (PM). A quantification of the ship's responsiveness and structural integrity. Applied to the chance to avoid an accident, in accordance with 11.2.

Base Repair Time. Spacecraft Engine, Bridge and Hulls have a Base Repair Time of **24** hours while Spacecraft Pods and Forcefields have a Base Repair Time of **12** hours.

SPACECRAFT HULLS

[31.2] The following spaceship hulls are the classes most common throughout the federation.

- **Corco Omega.**

Emergency craft launched from escape/EVA pod of a large spaceship.

The *Omega* contains a burnout hyperjump engine and must be replaced after one jump at a cost of **200** Trans.

NUMBER OF PODS: 0. **VELOCITY RATING:** 1. **MANOEUVRE RATING:** 3. **ENERGY CAPACITY:** 10.
ENERGY BURN RATE: 1. **STREAMLINED:** No. **BURSTER CLASS:** 0. **ARMOUR CLASS:** 0. **FORCEFIELD CLASS:** 0.
CIV LEVEL: 7. **TARGET PROGRAM:** 0. **AVAILABILITY:** Open. **CREW REQUIRED:** 1. **PASSENGER CAPACITY:** 4.
CARGO CAPACITY: 0.2. **PERFORMANCE MODIFIER:** -15. **COST:** 1100.

- **Terwillicker 5000.**

Favourite personal craft of wealthy individuals. Used as a light, short-range patroller by the Navy and the Astroguard, and as a courier by government and private concerns.

Note: This craft does not include a galley or first aid station.

NUMBER OF PODS: 0. **VELOCITY RATING:** 2. **MANOEUVRE RATING:** 7. **ENERGY CAPACITY:** 15.
ENERGY BURN RATE: 1. **STREAMLINED:** Yes. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 1.
FORCEFIELD CLASS: 0. **CIV LEVEL:** 7. **TARGET PROGRAM:** -2. **AVAILABILITY:** Open. **CREW REQUIRED:** 1.
PASSENGER CAPACITY: 2. **CARGO CAPACITY:** 2. **PERFORMANCE MODIFIER:** 0. **COST:** 3100.

- **Lander.**

A modified version of the 5000 is used as a surface-landing vessel launched from the Lander pod of a larger spaceship. It has a Velocity Rating of 1, a Manoeuvre Rating of 4, no armour, burster, or targeting program.

Note: This craft does not include a galley or first aid station.

NUMBER OF PODS: 0. **VELOCITY RATING:** 1. **MANOEUVRE RATING:** 4. **ENERGY CAPACITY:** 15.
ENERGY BURN RATE: 1. **STREAMLINED:** Yes. **BURSTER CLASS:** 0. **ARMOUR CLASS:** 0.
FORCEFIELD CLASS: 0. **CIV LEVEL:** 8. **TARGET PROGRAM:** 0. **AVAILABILITY:** Open. **CREW REQUIRED:** 1.
PASSENGER CAPACITY: 4. **CARGO CAPACITY:** 0.5. **PERFORMANCE MODIFIER:** -5. **COST:** 1500.

- **Terwillicker-X.**

Short-range fighter craft, usually launched from the Battlecraft pod of a large military spaceship. Orbiting space stations and commercial complexes often use the *X* for security and scouting.

Note: This craft does not include a galley or first aid station.

NUMBER OF PODS: 0. **VELOCITY RATING:** 3. **MANOEUVRE RATING:** 9. **ENERGY CAPACITY:** 15.
ENERGY BURN RATE: 1. **STREAMLINED:** Yes. **BURSTER CLASS:** 2. **ARMOUR CLASS:** 2.
FORCEFIELD CLASS: 0. **CIV LEVEL:** 8. **TARGET PROGRAM:** -4. **AVAILABILITY:** Restricted. **CREW REQUIRED:** 1.
PASSENGER CAPACITY: 2. **CARGO CAPACITY:** 0.1. **PERFORMANCE MODIFIER:** 25. **COST:** 6900.

Blades Research Institute

• Dagger.

Standard military patrol and pursuit craft.

NUMBER OF PODS: 2. **VELOCITY RATING:** 2. **MANOEUVRE RATING:** 6. **ENERGY CAPACITY:** 48.

ENERGY BURN RATE: 4. **STREAMLINED:** Yes. **BURSTER CLASS:** 2. **ARMOUR CLASS:** 2.

FORCEFIELD CLASS: 1. **CIV LEVEL:** 8. **TARGET PROGRAM:** -4. **AVAILABILITY:** Military. **CREW REQUIRED:** 2. **PASSENGER CAPACITY:** 4. **CARGO CAPACITY:** 0.5. **PERFORMANCE MODIFIER:** +15. **COST:** 12200.

• Sword.

Elite heavy cruiser, mainstay of the federal navy.

NUMBER OF PODS: 5. **VELOCITY RATING:** 3. **MANOEUVRE RATING:** 8. **ENERGY CAPACITY:** 78.

ENERGY BURN RATE: 6. **STREAMLINED:** No. **BURSTER CLASS:** 2. **ARMOUR CLASS:** 2.

FORCEFIELD CLASS: 2. **CIV LEVEL:** 8. **TARGET PROGRAM:** -4. **AVAILABILITY:** Military. **CREW REQUIRED:** 5. **PASSENGER CAPACITY:** 10. **CARGO CAPACITY:** 3. **PERFORMANCE MODIFIER:** +25. **COST:** 22100.

• Spear.

Military command post. Often used as the core spaceship of a federal navy task force or as an Astroguard headquarters.

NUMBER OF PODS: 8. **VELOCITY RATING:** 1. **MANOEUVRE RATING:** 4. **ENERGY CAPACITY:** 144.

ENERGY BURN RATE: 12. **STREAMLINED:** No. **BURSTER CLASS:** 2. **ARMOUR CLASS:** 2.

FORCEFIELD CLASS: 2. **CIV LEVEL:** 8. **TARGET PROGRAM:** -4. **AVAILABILITY:** Military. **CREW REQUIRED:** 10. **PASSENGER CAPACITY:** 20. **CARGO CAPACITY:** 7. **PERFORMANCE MODIFIER:** +10. **COST:** 27900.

Harmonics Inc.

• Piccolo.

Common high-performance craft. Popular with small businesses, independent explorers.

NUMBER OF PODS: 1. **VELOCITY RATING:** 3. **MANOEUVRE RATING:** 8. **ENERGY CAPACITY:** 30.

ENERGY BURN RATE: 3. **STREAMLINED:** Yes. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 1.

FORCEFIELD CLASS: 0. **CIV LEVEL:** 7. **TARGET PROGRAM:** -2. **AVAILABILITY:** Open. **CREW REQUIRED:** 1. **PASSENGER CAPACITY:** 6. **CARGO CAPACITY:** 5. **PERFORMANCE MODIFIER:** +5. **COST:** 5400.

• Flute.

A heavily-defended craft used by many branches of the military (especially when a low profile is desired) and by corporations operating in dangerous areas.

NUMBER OF PODS: 4. **VELOCITY RATING:** 3. **MANOEUVRE RATING:** 6. **ENERGY CAPACITY:** 66. **ENERGY BURN RATE:** 6.

STREAMLINED: Yes. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 2. **FORCEFIELD CLASS:** 1.

CIV LEVEL: 8. **TARGET PROGRAM:** -4. **AVAILABILITY:** Restricted. **CREW REQUIRED:** 3.

PASSENGER CAPACITY: 12. **CARGO CAPACITY:** 3. **PERFORMANCE MODIFIER:** +20. **COST:** 20700.

• Clarinet.

The premier deep-space trading vessel. Its size, economy, and combat adaptability make it popular with interstellar traders and pirates.

NUMBER OF PODS: 7. **VELOCITY RATING:** 2. **MANOEUVRE RATING:** 7. **ENERGY CAPACITY:** 104.

ENERGY BURN RATE: 8. **STREAMLINED:** No. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 1.

FORCEFIELD CLASS: 0. **CIV LEVEL:** 8. **TARGET PROGRAM:** -4. **AVAILABILITY:** Open. **CREW REQUIRED:** 4. **PASSENGER CAPACITY:** 20. **CARGO CAPACITY:** 6. **PERFORMANCE MODIFIER:** +10. **COST:** 14100.

Corco Group

• Corco Gamma.

Common small freight and passenger vessel.

NUMBER OF PODS: 3. **VELOCITY RATING:** 1. **MANOEUVRE RATING:** 4. **ENERGY CAPACITY:** 54.
ENERGY BURN RATE: 6. **STREAMLINED:** Yes. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 0.
FORCEFIELD CLASS: 0. **CIV LEVEL:** 7. **TARGET PROGRAM:** -2. **AVAILABILITY:** Open. **CREW REQUIRED:** 2.
PASSENGER CAPACITY: 8. **CARGO CAPACITY:** 2. **PERFORMANCE MODIFIER:** -10. **COST:** 6700.

• Corco Zeta.

One of the oldest commercial vessels, still widely used in safe areas.

NUMBER OF PODS: 6. **VELOCITY RATING:** 1. **MANOEUVRE RATING:** 3. **ENERGY CAPACITY:** 80.
ENERGY BURN RATE: 8. **STREAMLINED:** No. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 0.
FORCEFIELD CLASS: 0. **CIV LEVEL:** 6. **TARGET PROGRAM:** 0. **AVAILABILITY:** Open. **CREW REQUIRED:** 4.
PASSENGER CAPACITY: 20. **CARGO CAPACITY:** 5. **PERFORMANCE MODIFIER:** -20. **COST:** 6400.

• Corco Iota.

Economical, well-defended trading vessel designed for government-sponsored commerce.

NUMBER OF PODS: 9. **VELOCITY RATING:** 2. **MANOEUVRE RATING:** 5. **ENERGY CAPACITY:** 120.
ENERGY BURN RATE: 12. **STREAMLINED:** No. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 1.
FORCEFIELD CLASS: 1. **CIV LEVEL:** 7. **TARGET PROGRAM:** -4. **AVAILABILITY:** Restricted. **CREW REQUIRED:** 4.
PASSENGER CAPACITY: 25. **CARGO CAPACITY:** 10. **PERFORMANCE MODIFIER:** 0. **COST:** 17500.

• Corco Mu.

Common large freighter and passenger vessel.

NUMBER OF PODS: 12. **VELOCITY RATING:** 1. **MANOEUVRE RATING:** 4. **ENERGY CAPACITY:** 176.
ENERGY BURN RATE: 16. **STREAMLINED:** No. **BURSTER CLASS:** 1. **ARMOUR CLASS:** 0.
FORCEFIELD CLASS: 0. **CIV LEVEL:** 7. **TARGET PROGRAM:** -2. **AVAILABILITY:** Open. **CREW REQUIRED:** 5.
PASSENGER CAPACITY: 30. **CARGO CAPACITY:** 15. **PERFORMANCE MODIFIER:** -10. **COST:** 14500.

[31.3] The GM may design additional spaceship hulls to use during play.

Any hull designed should be given ratings and attributes comparable to those found on the Spaceship Attribute Chart (Delta Vee 38.9) and in 31.2. The spaceship may be made capable of carrying any number of pods. The Energy Burn Rate of a spaceship should be **20% to 50%** greater than the number of pods it may carry. The cost of a spaceship hull is calculated by adding together the costs of all the following attributes:

- 200 Trans x Velocity Rating x Number of pods.
- 100 Trans x Manoeuvre Rating x Number of pods.
- 100 Trans x Passenger capacity of hull.
- 10 Trans X Energy capacity of hull.
- 100 Trans for a Class 1 burster; 1,000 Trans for a Class 2 burster.
- Armour Class 1: 100 Trans x Number of pods.
- Armour Class 2: 1,000 Trans x Number of pods.
- Force Field Class 1: 200 Trans x Number of pods.
- Force Field Class 2: 1,000 Trans x Number of pods.
- Target Program: 500 Trans for every subtraction of 1.
- Cargo: 100 Trans per ton of capacity.

If the spaceship is streamlined, increase all the preceding by **50%**. These costs are based on the number of pods the ship is capable of carrying, not the number it is actually carrying at any particular time.

SPACECRAFT PODS

[31.4] Each spaceship hull may carry a variable number of pods, each containing a system that specialises or improves the ship's operation.

The concept of how pods work and details on combat abilities of certain pods can be found in Delta Vee 35.0 and 39.0, especially in 39.8 (the Pod Attribute Chart). The following pods are the types most commonly used on spaceships.

Each description includes the Pod's **Availability**, the **Crew Required** to operate the Pod, the Pod's **Passenger Capacity** and **Cargo Capacity** in Tonnes, the **Civ Level** at which the Pod initially becomes available and **Cost** in Trans.

These attributes are similar to those in 31.1.

Unless a pod is assigned a specific Armour Class by the Pod Attribute Chart, it is considered to be Armour Class **0**. At an additional cost of **50** Trans, a pod may be purchased at Armour Class **1**. At an additional cost of **400** Trans, a pod may be purchased at Armour Class **2**. Any crew required to run a pod without passenger capacity must be housed elsewhere on the spaceship.

• Arsenal.

Weapons Pod. Each Arsenal pod contributes one **Battle Command** to the ship's total. This pod may fire laser and particle bursts and barrages. This pod carries 8 Unguided, 7 Guided Missiles, 5 Intelligent and 2 MIMS missiles with only the MIMS and Intelligent missiles requiring a **Prepare Missile** command before launching.

LASER / PARTICLE WEAPONS: Yes. **UNGUIDED MISSILE:** 8. **GUIDED MISSILE:** 7. **INTELLIGENT MISSILE:** 5. **MIMS:** 2.

HYPERJUMP: No. **ARMOUR:** 2. **BATTLE COMMANDS:** 1. **NUMBER OF FIRES:** 2. **TARGET PROGRAM:** -4.

Availability: Military. **Crew Required:** 6. **Passenger Capacity:** 0. **Cargo Capacity:** 0. **Civ Level:** 8. **Cost:** 5000.

• Augmented Jump.

Allows spaceship to hyperjump. Navigator required. Jump engine never requires overhaul. Skill Level of navigator increased by 2 during hyperjump.

Availability: Restricted. **Crew Required:** 3 (including navigator). **Passenger Capacity:** 1 (private cabin for navigator, includes Interstellar Commlink). **Cargo:** 0. **Cost:** 2,500.

• Battlecraft.

Docking, refuelling, and maintenance facilities for a *Terwillicker 5000, X or other Battlecraft*. Does not come with the Battlecraft. See *Delta Vee*.

Availability: Open. **Crew Required:** 1. **Passenger Capacity:** 0. **Cargo:** 0. **Cost:** 500. **Civ Level:** 7.

• Battle Communications.

Allows one extra fire from any *one* pod or burster on the spaceship during the friendly Fire Phase. The player may conduct **Active Search** more effectively from the pod. The pod's Targeting Program allows a modifier of **-6** for any laser or particle fire conducted from anywhere on the ship.

LASER / PARTICLE WEAPONS: No. **UNGUIDED MISSILE:** 0. **GUIDED MISSILE:** 0. **INTELLIGENT MISSILE:** 0. **MIMS:** 0.

HYPERJUMP: No. **ARMOUR:** 2. **BATTLE COMMANDS:** 2. **NUMBER OF FIRES:** 1. **TARGET PROGRAM:** -6.

Availability: Military. **Crew Required:** 8. **Passenger Capacity:** 1 (cabin suitable for the needs of the ship's commander).

Cargo Capacity: 0. **Civ Level:** 8. **Cost:** 3000.

• Buffered Cargo.

Pressurized, temperature controlled cargo hold. Facilities for fragile and organic (but not living) items included.

Availability: Open. **Crew Required:** 1. **Passenger Capacity:** 0. **Cargo:** 20. **Cost:** 350. **Civ Level:** 7.

• Bio-Research.

Complete research laboratory for the study of alien life forms. Contains chambers for keeping living specimens in their natural environment conditions and computer library of all known life forms. Fulfils equipment requirements for biology, diagnosis, geology, physics, chemistry, and treatment tasks. Provides Skill Level increases of 1 when performing any of the above tasks (Skill Level increase of 3 for biology tasks).

Availability: Open. **Crew Required:** 1. **Passenger Capacity:** 1 (cabin/study for scientist). **Cargo:** 2 (contents of environment chambers). **Cost:** 1,800. **Civ Level:** 8.

• Crew.

Basic accommodations for 40 additional crew of a spaceship with recreation, shared sleeping quarters, first aid station and galley.

Availability: Open. **Crew Required:** 1. **Passenger Capacity:** 40. **Cargo:** 0.5. **Cost:** 900. **Civ Level:** 6.

• Energy.

Capable of holding and processing **144** Energy Units of radioactives, a ship with an energy pod expends all the Energy Units in the pod before expending Energy Units in its hull.

Availability: Open. **Crew Required:** 0. **Passenger Capacity:** 0. **Cargo:** 0. **Cost:** 140 (excluding energy). **Civ Level:** 7.

• Escape/EVA.

Contains assortment of expedition suits, propulsion devices, and tethers for zero-G manoeuvre outside the ship. Has three airlocks and four launch tubes, each capable of holding a Corco *Omega* lifeboat (not included).

Availability: Open. **Crew Required:** 0. **Passenger Capacity:** 0. **Cargo:** 0. **Cost:** 400. **Civ Level:** 7.

• Explorer.

Combines certain elements of a survey pod and a bio-research pod, designed for small exploration missions. Contains burn-out hyperjump engine. The engine in a hunter or explorer pod may not be used when attached to a ship capable of carrying more than 3 pods. An explorer pod engine must be replaced after two jumps at a cost of 375 Credits. Fulfills equipment requirements for biology, geology, physics, planetology, and chemistry tasks. Provides Skill Level increase of 1 when performing an astronomy or planetology task. Provides Skill Level increase of 2 when performing a biology task. Contains chambers for keeping living specimens in their natural environment conditions.

Availability: Open. **Crew Required:** 2 (including navigator). **Passenger Capacity:** 0. **Cargo:** 0.5 (contents of environment chambers). **Cost:** 1,800. **Civ Level:** 8.

• Heavy Weapon.

Weapons Pod. Each Heavy Weapon pod contributes one **Battle Command** to the ship's total. This pod may fire laser and particle bursts and barrages. This pod carries 5 Unguided and 3 Guided Missiles all except the Unguided missiles require a **Prepare Missile** command before launching.

LASER / PARTICLE WEAPONS: Yes. **UNGUIDED MISSILE:** 6. **GUIDED MISSILE:** 5. **INTELLIGENT MISSILE:** 3. **MIMS:** 1.

HYPERJUMP: No. **ARMOUR:** 2. **BATTLE COMMANDS:** 1. **NUMBER OF FIRES:** 1.

TARGET PROGRAM: -4.

Availability: Military. **Crew Required:** 4. **Passenger Capacity:** 0. **Cargo Capacity:** 0. **Civ Level:** 7. **Cost:** 3000.

• Hunter.

Weapons Pod. Contains burn-out hyperjump engine (see 32.1).

The jump engine in the Hunter pod may not be used when attached to a ship capable of carrying more than 3 pods.

A Hunter pod engine must be replaced after three jumps at a cost of 500 Credits. This pod may fire laser and particle bursts and barrages. This pod carries 2 Unguided and 1 intelligent Missile neither of which require a **Prepare Missile** command before launching.

LASER / PARTICLE WEAPONS: Yes. **UNGUIDED MISSILE:** 2. **GUIDED MISSILE:** 0. **INTELLIGENT MISSILE:** 1. **MIMS:** 0.

HYPERJUMP: Yes. **ARMOUR:** 2. **BATTLE COMMANDS:** 0. **NUMBER OF FIRES:** 1.

TARGET PROGRAM: -4.

Availability: Military. **Crew Required:** 2 (including navigator). **Passenger Capacity:** 0. **Cargo Capacity:** 0. **Civ Level:** 8. **Cost:** 2000.

• Lander.

Contains airlocks, docking, refuelling, and maintenance facilities for surface landing vessel (a modified *Terwillicker 5000* or *Piccolo*). Lander not included in cost of pod.

Availability: Open. **Crew Required:** 0. **Passenger Capacity:** 0. **Cargo:** 0. **Cost:** 300. **Civ Level:** 7.

• Light Weapon.

Weapons Pod. Each Light Weapon pod contributes one **Battle Command** to the ship's total. This pod may fire laser and particle bursts and barrages. This pod carries 5 Unguided and 3 Guided Missiles all of which require a **Prepare Missile** command before launching.

LASER / PARTICLE WEAPONS: Yes. **UNGUIDED MISSILE:** 5. **GUIDED MISSILE:** 3. **INTELLIGENT MISSILE:** 0. **MIMS:** 0.

HYPERJUMP: No. **ARMOUR:** 1. **BATTLE COMMANDS:** 1. **NUMBER OF FIRES:** 1.

TARGET PROGRAM: -2.

Availability: Military. **Crew Required:** 2. **Passenger Capacity:** 0. **Cargo Capacity:** 0. **Civ Level:** 6. **Cost:** 17000.

• Living Cargo.

Contains 50 independently pressurized and heated compartments for holding all types of living cargo from plants to pets to alien life forms. Requisite life support systems included. Compartments range in size from 0.5 cubic meter to 30 cubic meters.

Availability: Open. **Crew Required:** 1. **Passenger Capacity:** 0. **Cargo:** 10. **Cost:** 650. **Civ Level:** 7.

• Luxury Cabin.

Spacious single and double occupancy staterooms for first class passengers. Includes recreational, bar, and dining area; galley and first aid station.

Availability: Open. **Crew Required:** 5. **Passenger Capacity:** 15. **Cargo:** 0.5. **Cost:** 1,500. **Civ Level:** 7.

• Medical.

Fully equipped medical laboratory/computer. Fulfills equipment requirements for all biology, diagnosis, and treatment tasks. Provides Skill Level increase of 1 when performing a biology task. Provides Skill Level increase of 3 when performing a diagnosis or treatment task. Alternatively, the computer may diagnose and treat a patient by itself, with diagnosis and treatment Skill Levels of 6.

Availability: Restricted (medicines and drugs require an accredited doctor). **Crew Required:** 1. **Passenger Capacity:** 5 (four sickbeds and one cabin/study for doctor). **Cargo:** 0. **Cost:** 2,000. **Civ Level:** 8.

• Robot and Equipment.

Storage and maintenance facilities for robots and equipment used by the crew and passengers. Fulfills equipment requirements for all Compu/robot, Electro, Energy, Suit, Vehicle, and Weapon tech repair tasks. Provides Skill Level increase of 3 when attempting to repair any such item brought into the pod. Alternatively, the maintenance system may repair an item by itself, with a tech Skill Level of 6. (**Exception:** The system may not repair a robot by itself.) This pod does not aid the construction, Psion tech, and spaceship tech skills.

Availability: Open. **Crew Required:** 1. **Passenger Capacity:** 0. **Cargo:** 2 (items under repair). **Cost:** 1,200. **Civ Level:** 8.

• Standard Cabin.

Double, triple, and quad occupancy rooms for standard passengers. Includes dining area, galley, and first aid station.

Availability: Open. **Crew Required:** 3. **Passenger Capacity:** 30. **Cargo:** 0.5. **Cost:** 1,200. **Civ Level:** 7.

• **Standard Cargo.**

For all non-pressurised bulk materials haulage. Cargo in the pod must be all of the same type unless an Automatic Cargo Control (ACC) is fitted. Non-climate controlled cargo hold. Will not sustain life.

Availability: Open. **Crew Required:** 0. **Passenger Capacity:** 0. **Cargo:** 35. **Cost:** 35. **Civ Level:** 6.

• **Standard Jump.**

Allows spaceship to hyperjump. Psi-Navigator required. Jump engine requires monopole replacement every 200 light years (cost of replacement: 15 Trans). Skill Level of navigator increased by 1 during hyperjump.

Availability: Open. **Crew Required:** 2 (including navigator). **Passenger Capacity:** 0. **Cargo:** 0. **Cost:** 1,500.

• **Survey.**

Complete research centre for studying a world being orbited or approached. Contains computer library on all known planetary phenomena. Provides Skill Level increase of 2 when performing an astronomy task and a Skill Level increase of 3 when performing a planetology task.

Availability: Open. **Crew Required:** 1. **Passenger Capacity:** 1 (cabin/study for Astronomer or Planetologist). **Cargo:** 0. **Cost:** 1,600.

Civ Level: 8.

• **Tractor Beam.**

Allows the player to issue Manoeuvre Commands to another friendly or enemy spaceship or Battlecraft during his Command Phase, as if he controlled the unit. The player must issue a Battle Command to use the tractor beam. If he does so, a Civ Level 7 tractor beam may be used to issue *one* Manoeuvre Command to any one unit *within four hexes* of the ship with the tractor beam. A Civ Level 8 tractor beam may be used to issue *two* Manoeuvre Commands to any one ship *within six hexes* of the ship with the tractor beam. A tractor beam may not be used to issue Manoeuvre Commands to an enemy or friendly *missile*. Each Manoeuvre Command issued by using a tractor beam requires the expenditure of a number of Energy Units equal to *twice* the Energy Burn Rate of the target unit.

Availability: Restricted. **Crew Required:** 2. **Passenger Capacity:** 0. **Cargo:** 0. **Cost:** 2,500. **Civ Level:** 7.

[32.0] Interstellar Travel

A psionic navigator conducts and controls instantaneous interstellar travel, or hyperjumping, by manipulating magnetic monopoles with his mind. A hyperjump occurs when the thought patterns of a psionic mind concentrating on a remote destination are encoded into a plate of monopoles. The mental image and the power of the navigator's mind force the perpetually unidirectional particles to reverse their polarity, causing a shift or jump to the point matching the monopole pattern. This inexplicable phenomenon is the key to both humankind's galactic expansion and the psionic community's continued economic well being.

Failure of a navigator to wrest the monopoles to his mental command often results in a jump error and/or psychic damage to the psion. Gravitational fields increase this risk by disrupting the stability of the monopole screen that the navigator projects his mind onto. Because of this, spaceships must travel to the outskirts of a star system by conventional propulsion before a jump may be conducted. Conversely, the destination of a jump must be outside the gravity wells of the system so that the navigator's mind and the integrity of the ship will not be destroyed by monopoles reacting to forces other than his own thoughts. The point outside a star system that is closest to a given planet and yet far enough away from all gravitational fields in the system to conduct a safe hyperjump from is called that *system's jump point*. It is to this point that a navigator will bring a spaceship as the result of a perfect jump.

[32.1] A spaceship must have a hyperjump engine in order to travel between stars.

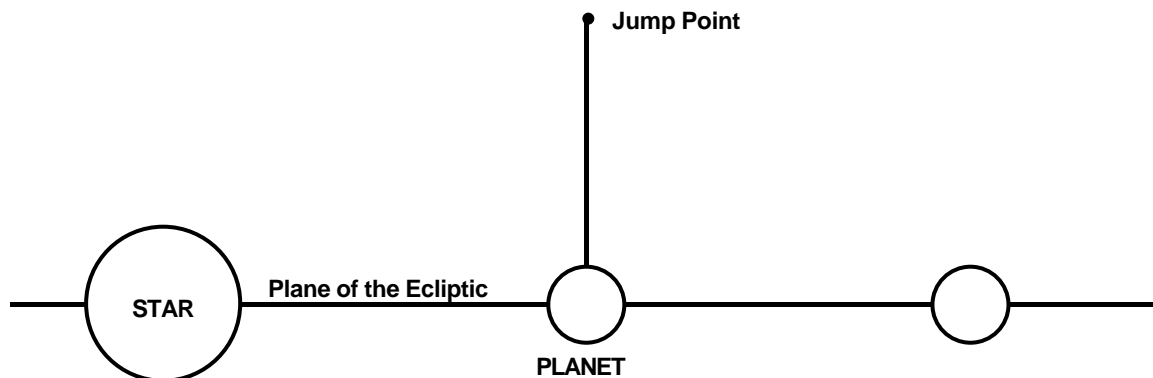
A standard jump pod, an augmented jump pod, a hunter pod, and an explorer pod each contains a jump engine. Any spaceship with one of these pods may hyperjump. **Exception:** The engine in a hunter or explorer pod may not be used when attached to a ship capable of carrying more than **3** pods. The Corco *Omega* lifeboat also contains a jump engine.

A jump engine does not consume energy; however, with the exception of the augmented jump pod, all hyperjump engines lose their stability after a time. A standard jump pod must be serviced as described in 31.4. The hunter pod, the explorer pod, and the *Omega* each contains a burn-out hyperjump engine. After a few jumps, such an engine must be entirely replaced. A hunter pod engine must be replaced after three jumps at a cost of **500** Trans. An explorer pod engine must be replaced after two jumps at a cost of **375** Trans. A Corco *Omega* engine must be replaced after one jump at a cost of 200 Trans.

[32.2] A spaceship that is at a safe jump point and that has a psionic navigator aboard may hyperjump.

A jump point for departing or arriving at a given planet lies above or below the plane of the ecliptic for the star system, such that a line drawn from the point to the planet would be perpendicular to the ecliptic.

See diagram below.



The length of this line depends on the Spectral Class of the planet's star and the distance between the planet and the star. Subtract the distance (in AU's) between the planet and the star from one of the following numbers:

Spectral Class A: 180 F: 130 G: 90 K: 60 M: 40

The result of this subtraction is the minimum distance (in AU's) from the planet a spaceship must be to go into or come out of a jump. For example, the minimum jump point for a planet that is **7AU's** from a Class **K** star is **53** AU's. This distance would have to be traversed using normal propulsion and could take as long as four weeks (for an **A** Class star); see 33.0.

Note: A spaceship must be stationary (at **0** velocity) at the moment of hyperjump, and will thus be stationary when it comes out of hyperjump. A hyperjump is conducted using the Hyperjump Table (32.3) in accordance with the navigation skill description (see 10.0).

[32.3] The Hyperjump Table is used to resolve the outcome of a hyperjump.

[32.2] HYPERJUMP TABLE

PERCENTILE DICE MINUS HYPERJUMP CHANCE	PSIONIC BACKLASH CHECK	JUMP OUTCOME AND SPACECRAFT LOCATION	NOTES:
-40 or less	No	Perfect Jump: Perpendicular to the plan of the system ecliptic, directly above the destination planet at the closest safe Jump Point	Random Destination: The GM secretly rolls the indicated die or dice three times to determine three co-ordinates. The first roll determines the X co-ordinate; the second roll determines the Y co-ordinate; and the third roll determines the Z co-ordinate. If the result of a roll is an even number, the co-ordinate is positive; if the result is an odd number the co-ordinate is negative.
-39 to -20	-50	Perfect Jump: Perpendicular to the plan of the system ecliptic, directly above the destination planet at the closest safe Jump Point	
-19 to 0	-40	Perfect Jump: Perpendicular to the plan of the system ecliptic, directly above the destination planet at the closest safe Jump Point	
+1 to +10	-30	Good Jump: Perpendicular to the plan of the system ecliptic, directly above the destination planet and 1 Die roll in AU's beyond closest jump point.	The GM secretly locates the three co-ordinates results on the Interstellar Display and informs the character that they are lost in space.
+11 to +20	-20	Good Jump: Perpendicular to the plan of the system ecliptic, directly above the destination planet and 2 Die rolls in AU's beyond closest jump point.	
+21 to +30	-10	Slight Jump Error: Perpendicular to the plan of the system ecliptic, directly above the destination planet and a Percentile Die roll in AU's beyond closest jump point.	A character may attempt an Astronomy skill task to determine their location (See 12.0). It is possible that a random destination will lie off the Interstellar Display.
+31 to +40	0	Minor Jump Error: Perpendicular to the plan of the system ecliptic, directly above the destination planet and 10x a Percentile Die roll in AU's beyond closest jump point.	
+41 to +50	+10	Major Jump Error: A Perfect Jump to the start nearest the destination star with the same Spectral Class letter.	See 10.0 and 32.2 for explanation of use.
+51 to +60	+20	Major Jump Error: The GM uses one die to determine the random destination. The destination star is used as the zero point.	
+61 to +70	+30	Jump Randomised: The GM uses two dice to determine the random destination. Sol is used as the zero point.	
+71 to +80	+40	Jump Failure: The Hyperjump does not occur and the spacecraft's jump engine suffers Heavy Damage	
+81 to +90	+50	Jump Randomised: The GM uses percentile dice to determine the random destination. Sol is used as the zero point.	
+91 or more	+60	Jump Disaster: Within the gravity wells of the destination star system. Use the Equipment Damage column of the Hit Table (30.9) to check for Spacecraft damage; roll two dice and add 15 to the dice result.	

[32.4] A character without a spaceship may travel between stars by booking passage on a commercial vessel.

Commercial hyperjump voyages occur with a varying degree of regularity between many stars. The frequency and reliability of a commercial voyage between two stars depends on the distance between them and the highest Spaceport Class of a world orbiting each star. Commercial interstellar travel always begins and ends at the world in a star system with the highest Spaceport Class (by federal law). If two or more worlds in a system share the highest class, the GM chooses one as the interstellar terminal.

The Interstellar Route Chart is used to determine the type of route (if any) that exists between any two stars. The highest Spaceport Class in the destination star system is cross-referenced with the highest Spaceport Class in the system of departure to yield three numbers, each defining the maximum distance (in light years) at which a given type of route exists.

A **Green** jump route is a well-travelled commercial lane with passenger and freight service occurring daily (or more often). If a character or party wishes to travel this route, roll *percentile* dice to determine how many *hours* he must wait for a ship with available space.

An **Amber** jump route is an infrequently travelled commercial lane traversed by freighters and an occasional passenger vessel. Roll *two dice* to determine how many *days* a character must wait for available space on this route.

A **Red** jump route is a rarely travelled course traversed by a few exploratory and crisply ships. Roll *percentile* dice to determine how many *days* a character must wait for available space on this route.

When using the Hyperjump Table for a spaceship that a character has booked passage on, assume the ship's navigator has a Skill Level of 7, a Mental Power Rating of 6, is in a standard jump pod, and either frequents or has previously visited both star systems at some time.

The price of *standard* passage on a commercial interstellar spaceship is calculated with the following formula:

(Distance in LY's x 100 Mils) + (Distance in AU's to and from each world's jump point x 20 Mils)

Standard passage includes a small room shared with two or three other passengers, a common toilet, a common dining area, and a baggage allowance of **100kg**. The price of a standard passage on a *red* jump is increased by **50%**.

A character travelling a green jump (only) may book *luxury* passage at **2.5** times the standard fare. A luxury passenger receives a private room (single or double occupancy, as requested) with private bath, a common recreation-bar-dining area featuring entertainment and gourmet dining, and a baggage allowance of **500kg**.

The total time of an interstellar voyage equals the time to travel from the world of departure to its jump point, and from the destination world to its jump point, in accordance with 33.0. The actual hyperjump takes no time.

[32.5] Interstellar Route Chart

[32.5] INTERSTELLAR ROUTE CHART						
ORIGIN STARPORT	DESTINATION STARPORT					
	½	1	2	3	4	5 EARTH
½	None	None	0/0/2	0/0/6	0/0/10	0/0/15
1	None	0/0/5	0/0/10	0/2/15	0/6/20	2/10/15
2	0/0/2	0/0/10	0/10/20	2/15/25	6/20/30	10/25/35
3	0/0/6	0/2/15	2/15/25	10/20/30	15/25/35	20/30/45
4	0/0/10	0/6/20	6/20/30	15/25/35	20/35/45	30/40/50
5 EARTH	0/0/15	2/10/25	10/25/35	20/30/45	30/40/50	-

NOTES:
If the distance (in light years) is equal to or less than the first number, a **green** jump route exists. If the distance is greater than the first number but less than or equal to the second number, an **amber** jump route exists. If the distance is greater than the first and second numbers, but less than or equal to the third number, a **red** jump route exists.

See 34.4 for details.

Calculating the distance between two stars in Light Years:

Where X, Y and Z are the co-ordinates of the Origin Star System and x, y and z are the coordinates of the Destination Star System.

Distance in Light Years = √ (X - x)² + (Y - y)² + (Z - z)²

[33.0] Interplanetary STL Travel

Travel between the worlds of a single star system, or between a world and its jump point is conducted at slower than light speeds (STL). The most common sub-light spaceship engine is a reaction drive, using radioactive elements as fuel.

Constant 1G Acceleration

In an interplanetary journey, a spaceship accelerates at a constant rate to the journey's mid-point and then decelerates at the same rate until it reaches its destination. Thus, the longer the journey, the higher the velocity the ship will attain at its "turn over" point. All interplanetary distances are measured in AU's. The time required for the journey depends on the spaceship's rate of acceleration. A constant acceleration/deceleration of **1G** is the usual travel speed for a 'spaceship. The travel time using this speed is calculated with the following equation:

Constant 1G Acceleration:

Time (in hours) = **68** $\sqrt{\text{distance in AU's}}$

Energy: 1 Block per 24 Hours

Coasting 1G Acceleration:

An energy efficient variation of the above is termed "Coasting" where the spacecraft will accelerate to build up velocity during the first part of the voyage, and only decelerate when the destination is near with the intervening time spent coasting. This method is vital for spacecraft that have energy limitations. Energy is consumed at a rate of **2** Energy Blocks every **5** days. The unpleasant consequences of this energy saving manoeuvre is that the middle three-fifths of the voyage are spent in weightlessness. There is a (50 - [10 x NW Gravity Skill Level])% chance that a character will experience bouts of extreme discomfort during these parts of the trip (roll once each week of weightlessness). The travel time using this method is calculated with the following equation:

Coasting 1G Acceleration:

Time (in hours) = **85** $\sqrt{\text{distance in AU's}}$

Energy: 1 Block per 60 Hours

(Additional – From Ares Magazine: *Mongoose & Cobra Universe Adventure*)

Constant 2.5G Acceleration:

A spaceship without special equipment manned by a healthy crew may travel at a constant acceleration/deceleration as high as **2.5G**. This speed equals an acceleration or deceleration of 1 per turn in *Delta Vee*. The travel time using this method is calculated with the following equation:

Constant 2.5G Acceleration:

Time (in hours) = **43** $\sqrt{\text{distance in AU's}}$

Energy: 1 Block per 6 Hours

Constant 5G Acceleration:

A high performance spaceship (Velocity Rating of 2 or 3) manned by a crew who all have *internal gravity webs* may travel at a constant acceleration/deceleration as high as **5G**. The speed is often used in long range military pursuit and equals an acceleration or deceleration of 2 per turn in *Delta Vee*. The travel time using this method is calculated with the following equation:

Constant 5G Acceleration:

Time (in hours) = **30** $\sqrt{\text{distance in AU's}}$

Energy: 1 Block per Hour

[33.1] The distance between two planets in a star system varies widely due to their orbital paths.

This distance may be as little as the *difference* between their distances from the star, or as great as the *sum* of their distances from the star (if the two planets are on exact opposite sides of the star). For example, the 11th and 12th planets on the Star System Log could be as close to each other as 15 AU's and as far apart as 65 AU's. Unless the GM wishes to determine the length of each planet's orbital year and set up an ever changing orbital model, he should use the following simplification to determine planetary distances: The distance between two worlds equals the distance from their star to the world of the two that is furthest from the star. Thus, the distance between the planets mentioned above would be 40 AU's.

For purposes of calculating interplanetary distances, a moon is considered to occupy the same position as its planet. The distance between a planet and any of its moons is left up to the GM. As a guideline, our moon is **.0026** AU's (360,000 km) from the Earth. At a constant **1G**-acceleration/deceleration, a journey from the Earth to the moon would take about **2.5** hours.

[33.2] As a spaceship travels through interplanetary space, it consumes fuel in the form of Energy Units and/or Energy Blocks.

An Energy Unit for a reaction drive engine consists of one kilogram of radioactives and costs **300** Mils. Thus, it would cost **43** Trans to "fill up" an energy pod capable of carrying **144** Energy Units. Energy is always available at a Class 3, 4, or 5 spaceport. Energy may be available at a Class **1** or **2** spaceport; see 25.5. Any spaceport orbiting a world that contains radioactives as a resource will always have spaceship energy.

As explained in *Delta Vee*, the number of Energy Units a spaceship expends to manoeuvre depends on its Energy Burn Rate, which corresponds to the number of Energy Units in one *Energy Block* for that ship. The same concept applies to long-range interplanetary travel. A spaceship that is travelling at a constant acceleration/deceleration of 1 G must expend 1 Energy *Block* every **24 hours** (or fraction thereof). A ship that is travelling at **2.5G** must expend 1 Energy Block every **6 hours**. A ship that is travelling at **5G** must expend 1 Energy Block every *hour*. A spaceship that is lifting off from the surface of a world must expend an additional number of Energy Blocks equal to the size of the world (**1** to **9**). Lift-off does not increase the voyage time.

The GM must make sure that any spaceship he enters into play possesses the requisite energy to complete any voyage planned for it. Sometimes two or three energy pods will be required for a large ship travelling to and from jump points.

[33.3] Any person in a spaceship undergoing high G forces must have an internal gravity web.

A gravity web contains and protects a person's organs and arteries during the strain of high G acceleration and deceleration. The web is inserted throughout the person's body in a complex series of operations. All star sailors are provided with a gravity web, as are many members of the Astroguard. A character may undergo an operation for gravity web implantation on any world with a Civ Level of 7 or higher. The operation costs **15** Trans and the character will be in the hospital for 7 days.

A character without a gravity web cannot survive an extended period of acceleration or deceleration greater than **2.5G**. When playing *Delta Vee*, a character without a gravity web cannot survive a velocity change of more than **2** (5G) in a single Command Phase.

[33.4] A character without a spaceship may travel between worlds in a star system by booking passage on a commercial vessel.

The frequency of commercial voyages between two worlds depends on the class of their spaceports. The Interplanetary Route Chart is used to determine the type of route (if any) that exists between any two worlds in the same system. The Spaceport Class of the destination world is cross-referenced with the Spaceport Class of the world of departure to yield the type of route: *course green*, *course amber*, or *course red*. The frequency and quality of service on these routes correspond to those of the jump routes of the same colour designations in 32.4.

The price of standard passage on a commercial interplanetary spaceship equals the distance of the voyage (in AU's) multiplied by **40Mils**. If the spaceship must lift off from the surface of a world (Spaceport Class *Vi*) or if the voyage is *course red*, the fare is increased by **50%**. In any case, the *minimum cost* for any interplanetary voyage is **250Mils** (including a voyage from a planet to one of its moons and vice versa).

A character travelling on a course green voyage of at least one AU may book luxury passage at **2.5** times the standard fare. He receives the comforts of luxury passage described in 32.4. A commercial vessel always travels at a constant acceleration/deceleration of 1G.

[33.5] Interplanetary Route Chart

[33.5] INTERPLANETARY ROUTE CHART							
ORIGIN STARPORT	DESTINATION STARPORT						NOTES:
	1/2	1	2	3	4	5 EARTH	
1/2	-	R	R	R	A		See 33.5 for details.
1	R	R	A	A	A		
2	R	A	A	G	G		
3	R	A	G	G	G		
4	A	A	G	G	G		
5 EARTH							

[34.0] Space Combat

When the characters are in a spaceship that encounters another spaceship, combat may occur. If possible, the characters should avoid spaceship combat; it is deadly. However, situations will certainly arise where combat is inevitable. When this happens, the GM and the players use the *Delta Vee* tactical space combat system to resolve the battle. *Delta Vee* is complete unto itself and may be used as is, if the characters are in a ship that they are not controlling. The following rules modify the system, allowing characters to participate directly in the conduct of combat. Combat burns up energy at a much faster rate than steady, uninterrupted travel. Conserving enough energy during battle so that the ship may get somewhere if it survives should be as much on the characters' minds as victory.

[34.1] The GM sets up the tactical maps and the spaceship counters.

Keeping in/mind that each hex on the map is **20,000Km** across, the GM may arrange the maps in any configuration and may place planets, asteroids, the characters' spaceship, and any spaceships encountered on the maps to match the situation he is describing. Unless the spaceships are near a world or jump point that they are travelling to or from, they will be travelling much faster than the velocities in *Delta Vee*. In this case, the Velocity markers assigned show their velocities relative to each other. The slowest ship should be assigned a **0** Velocity marker, and the others should have markers indicating their velocities in comparison with the slowest ship. If the GM wishes, he may use markers of his own devising to show velocities above **9**.

[34.2] Before beginning battle, each character declares which part of the ship he is in.

When in the bridge or certain pods of a spaceship, a character may use his space combat skills, as described in 43.2.

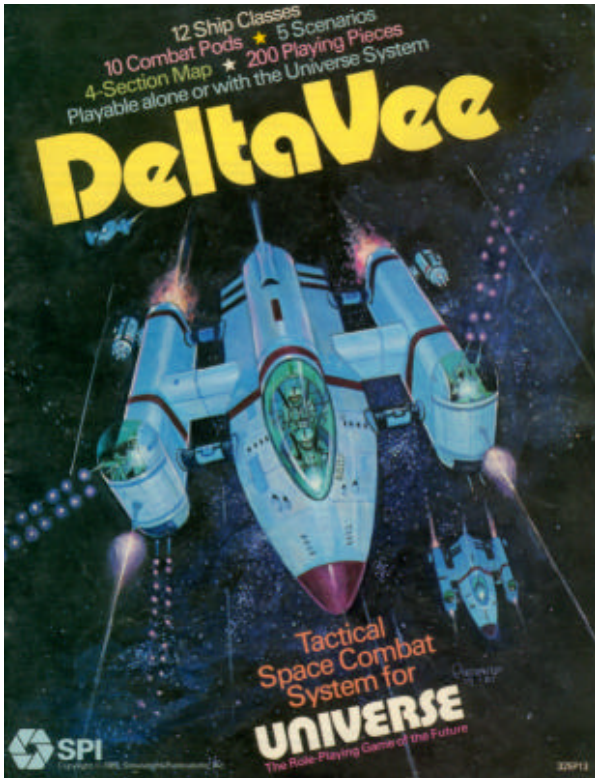
At the beginning of any friendly Command Phase during space combat, a character may declare that he is moving to another part of the ship. If he does so, his skills may not be used at all for that Command Phase and the next friendly Fire Phase. At the beginning of the following friendly Command Phase, the character may again use his skills (as allowed by his new location).

Unless the GM determines Skill Levels for the crew manning a spaceship that the characters encounter, he should use the *Delta Vee* system unmodified for their manoeuvres, commands, and fires.

[34.3] A character in a compartment of a spaceship that is hit by spaceship fire may suffer hits.

A character in a compartment that becomes vulnerable is not harmed. A character in a compartment that becomes damaged must use the Hit Table, as if struck with a Hit Strength of **6** (see 30.1). A character in a compartment that is destroyed must use the Hit Table, as if struck with a Hit Strength of **20**. If he survives this injury, and he does not pass out, he may immediately move to any other compartment. If he passes out as a result of the injury he dies.

Spaceship armour in *Delta Vee* uses a different classification system than personal and vehicle armour in *Universe*. If a situation should arise where a spaceship's armour is hit by forces other than spaceship weaponry, the Armour Classes of each pod and compartment can be translated into projectile and beam Defence Ratings as follows: Armour Class **0**: 2/2. Armour Class **1**: 4/4. Armour Class **2**: 6/6. A spaceship's force field may never be pierced by any projectile weapon.



DELTA VEE

SPACE COMBAT SYSTEM

SPI Universe First Edition 1981 Incorporating additional material from Ares Magazine & other sources.

IX. Delta Vee Tactical Space Combat

- [35.0] Introduction
- [36.0] Game Components
- [37.0] Sequence of Play
- [38.0] Spacecraft
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- [40.0] Movement and Direction
- [41.0] Commands
- [42.0] Laser and Particle Fire
- [43.0] Missile Launch and Interception
- [44.0] How to use the Spacecraft Logs
- [45.0] Scenarios
- [46.0] Delta Vee Charts and Tables

Read This First

The rules to *Delta Vee* are organized by major topics arranged in the order in which they occur in the play of the game. Each such major topic is given a number and a name below which is given (usually) a General rule or Description which summarizes the rule in that section. This is usually followed by numbered paragraphs called Cases, which give the specifics of the rules. Note that the numbering of the Cases is a decimal form of the major Section number. Players should examine the map and counters and then quickly read the rules (without trying to memorize them). Then the game should be set up to play and a "trial run" made.

IX. Delta Vee Tactical Space Combat

[35.0] Delta Vee Introduction

Delta Vee is a tactical simulation of combat among Spacecraft in the 24th Century. The game is intended for two players, although more may participate in scenarios devised by the players. Each hex on the *Delta Vee* game maps represents a volume 20,000 kilometres in diameter. The game uses a two-dimensional movement system; the "plane" of the playing area represents the ecliptic of the star system in which each battle occurs. Each Game-Turn represents 15 minutes.

During play, each player moves one or more Spacecraft about the game-map using a manoeuvre system that abstractly simulates the laws of Newtonian motion. Each Spacecraft is composed of a hull with a varying number of attached pods. Each pod represents a system that improves the ship's capabilities in combat, movement, and/or some other aspect of Spacecraft operations.

Each player controls his Spacecraft by issuing Manoeuvre Commands (so that the ship may alter its velocity or direction of movement) and Battle Commands (so that weapons and other systems aboard the ship may be prepared for use). A Spacecraft's combat abilities include laser fire, particle fire, four types of missiles, and Battlecraft (two-man fighter craft launched from larger ships). The attributes of each Spacecraft are recorded on a Spacecraft Log before beginning play. During the game, energy expended, missiles launched, and damage incurred by the ship are recorded on the ship's log.

Delta Vee is the tactical space combat system for SPI's science fiction role-playing game, *Universe*. Although there is little open warfare in the vast human interstellar empire of the 24th Century (contact with another space-faring race has yet to be established), there are many types of illegal ship traffic and disputes among self-governing worlds. These types of small conflicts form the background for the scenarios in *Delta Vee*. Interstellar travel in *Universe* is accomplished by Hyperjumping with the aid of a Psionic navigator. In *Delta Vee*, Hyperjumping is very rare, since all its battles occur within the confines of a star system, where Hyperjumping is impossible.

Note: One 20-sided die is necessary for playing *Delta Vee*. When using the die, always treat a result of **0** as **10**.

[36.0] Game Components

GENERAL RULE:

The game components consist of these rules, including charts, tables, and logs; four identical game maps; and 200 playing pieces. One 20-sided die and pencils with erasers are also required in order to play the game.

CASES:

[36.1] The perforated game map sheet is separated into four game maps, which are placed end-to-end or side-to-side to form the playing area.

All maps are identical, and each consists of a hexagonal grid to regularize the positions and movement of the playing pieces. Each hexagon ("hex") on each map has its own four-digit identity number. The set-up instructions for each scenario describe how many maps are initially used and how they are placed in relation to each other. Each map used at the start of a scenario is assigned a letter (A through D), to aid in deploying the playing pieces. Once play begins, additional maps may be added to the playing area or maps may be moved to accommodate the movement of the playing pieces (see 40.2).

[36.2] The charts and tables are used to summarize and resolve certain game functions.

These charts and tables include the Spacecraft Attribute Chart, Pod Attribute Chart, Command Summary, Relative Velocity Chart, Fire Results Table, Hit Table, Missile Attribute Chart, and Missile Interception Table.

[36.3] Players use the Spacecraft Logs to record the status of their Spacecraft, Battlecraft, and missiles during the course of play.

Each player uses one Spacecraft Log for each of his Spacecraft in play. There are two types of Spacecraft Logs. Type 1 is used for small ships, and Type 2 is used for large ships. The log used for a particular Spacecraft is stated in the scenario instructions. Photocopies of the Spacecraft Logs must be made for repeated play.

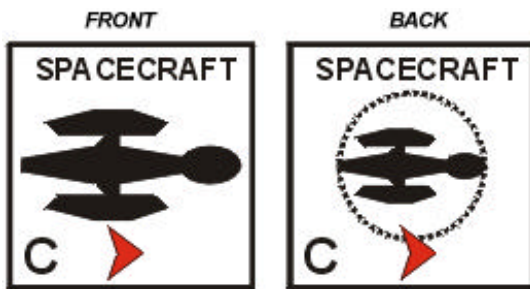
[36.4] The playing pieces represent the Spacecraft, Battlecraft, and missiles that may be used by the players.

The game also includes Velocity markers, Planet markers, Asteroid Field markers, and other game markers.

[36.5] The Spacecraft, Battlecraft, and missiles are assigned to the players by the scenario instructions.

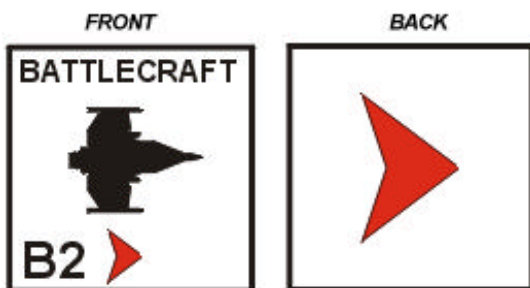
These three types of counters are collectively called **units**.

SAMPLE SPACECRAFT COUNTER



All Spacecraft counters are identical, except for an identifying letter. The specific attributes of each Spacecraft are detailed in the scenario instructions, the Spacecraft Attribute Chart, and the Pod Attribute Chart. The status of each Spacecraft during play is recorded on its Spacecraft Log. The arrowhead on each Spacecraft counter indicates the direction in which the Spacecraft is moving. Each Spacecraft counter must have a Velocity marker under it at all times. The back of each Spacecraft counter is used when the Spacecraft's force field is active (see 41.4).

SAMPLE BATTLECRAFT COUNTER

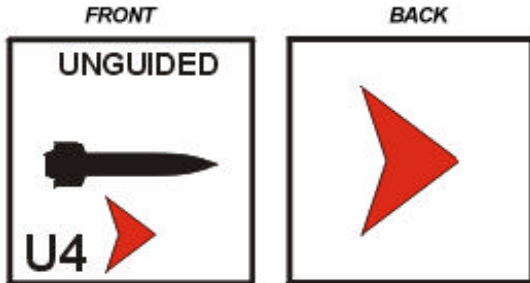


A Battlecraft is a small, manned fighter spacecraft that can be launched from a Spacecraft. All Battlecraft counters are identical, except for a letter-number that identifies each Battlecraft with the Spacecraft to which it belongs. For example, Battlecraft **A1** is the first Battlecraft of Spacecraft A. The attributes of each Battlecraft are detailed on the Spacecraft Attribute Chart. The status of each Battlecraft during play is recorded on the appropriate Spacecraft Log. Once a Battlecraft has been launched, a Velocity marker must be under it at all times. Until detected, a Battlecraft is kept face-down. The owning player may always inspect his unrevealed Battlecraft; the enemy player may not.

Missiles

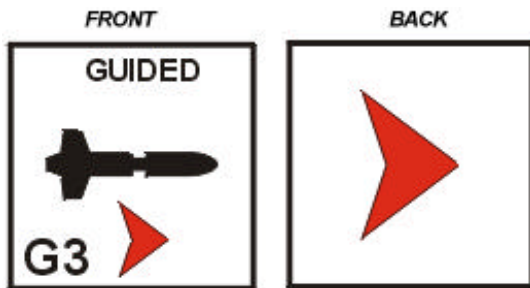
A missile is a self-propelled warhead that may be launched from a Spacecraft with the requisite capabilities. There are four types of missiles: *unguided*, *guided*, *intelligent*, and MIMS (Multi-Intelligent Missile System). All missile counters of a single type are identical except for an identity number (each guided missile has a letter-number that identifies it with the Spacecraft from which it is launched). The attributes of each missile are detailed on the Missile Attribute Chart and explanations follow. The status of a launched missile is recorded on the appropriate Spacecraft Log. Once a missile has been launched, a Velocity marker must be kept under it until the missile explodes or is moved off the playing area. The back of each missile counter is kept face-up until the missile is detected by the enemy player.

SAMPLE UNGUIDED MISSILE COUNTER



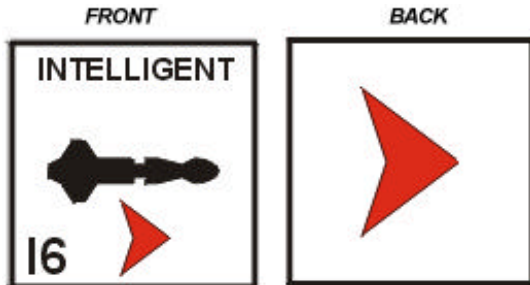
Unguided Missile. Once launched, an unguided missile may receive no Manoeuvre Commands. Its velocity is automatically increased by one each friendly Command Phase.

SAMPLE GUIDED MISSILE COUNTER



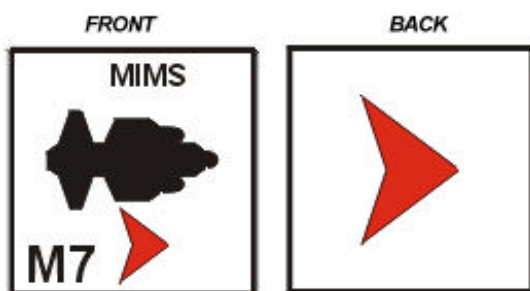
Guided Missile. A launched guided missile may be issued Manoeuvre Commands during each Command Phase in which the ship it was launched from is issued a Command to control that particular guided missile.

SAMPLE INTELLIGENT MISSILE COUNTER



Intelligent Missile. An intelligent missile may be issued Manoeuvre Commands during each friendly Command Phase.

SAMPLE MIMS MISSILE COUNTER



MIMS. A MIMS is identical to an intelligent missile except that it may launch four unguided missiles itself during any one friendly Fire Phase (see 43.9). After doing so, it is considered an intelligent missile.

[36.6] A Velocity marker is placed under each unit in play to show its current velocity.

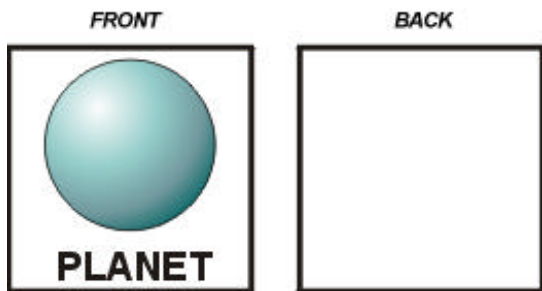
SAMPLE VELOCITY MARKER



The values of the Velocity markers range from **0 to 9** and are presented in five denominations. The players place and adjust the Velocity markers under their units to show each unit's current velocity. No more than one Velocity marker is placed under a single unit at a time. A missile or Battlecraft that has been *prepared* is not assigned a Velocity marker until launched. Both players may always inspect the Velocity markers under all enemy and friendly units.

[36.7] The game markers are used on the game maps and the **Spacecraft Logs** to show the status of various units.

SAMPLE PLANET COUNTER



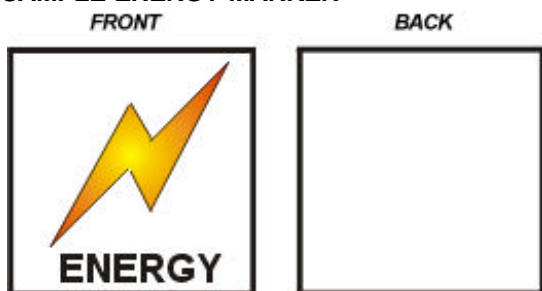
Planet. Placed on the game map in accordance with certain scenarios. Spacecraft may sometimes land on a planet or use its gravity well to alter the ship's velocity (see 40.5).

SAMPLE PLANET COUNTER



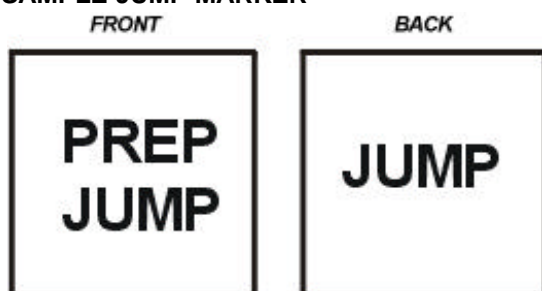
Asteroid Field. Placed on the game map in accordance with certain scenarios. An asteroid field presents a hazard to any units entering the hex (see 40.6).

SAMPLE ENERGY MARKER

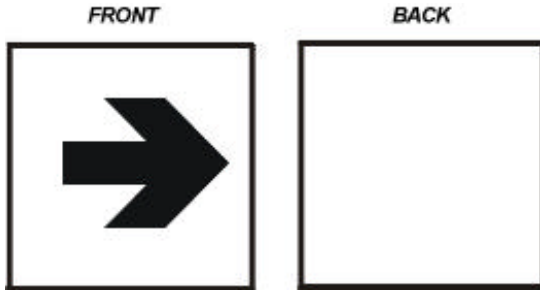


Energy Units. Used on the Energy Unit Track of each Spacecraft Log to record the expenditure of the ship's Energy Units during play (see 44.3).

SAMPLE JUMP MARKER



Prepare Jump/Jump. Placed atop a Spacecraft that has been issued a Prepare Jump or Jump Command (see 41.2).

SAMPLE DIRECTION REMINDER MARKER

Direction Reminder. Placed adjacent to a unit that has completed a zigzag move in the hex that the unit would enter next while maintaining its intended direction (see 40.1).

SAMPLE RANDOMISER CHIT COUNTER

Randomiser Chits. A 20-sided die is required to play *Delta Vee*. If one is not available, these 10 chits can be placed in an opaque, wide-mouthed container (such as a coffee mug). Whenever a roll of the die is called for, blindly draw a chit to obtain a die result. Always return a drawn chit to the container after noting its result, so that all 10 chits are always available to be drawn from.

[37.0] Sequence of Play

Delta Vee is played in *Game-Turns*. Each Game-Turn is divided into six distinct *Phases*, three for each player. The player whose Phase is in progress is called the *Phasing player*. All actions undertaken by the players in a Game-Turn must proceed strictly according to the following sequence outline:

1. FIRST PLAYER MOVEMENT PHASE

The first player (as assigned by the scenario instructions) must move all his Spacecraft, Battlecraft, and missiles currently in play.

Each unit is moved a number of hexes equal to its current velocity in the direction the unit is pointing, in accordance with the restrictions of 40.0. If a unit is moved into a hex occupied by a planet, the Phasing player may alter the unit's velocity and/or direction (see 40.5). If a unit is moved into a hex occupied by asteroids, the Phasing player must check for possible collision (see 40.6). If a missile is moved into a hex occupied by an enemy unit, or if a friendly unit is moved into a hex occupied by an enemy missile, the Interception Routine must be conducted (see 43.6).

2. SECOND PLAYER COMMAND PHASE**a. Detection Segment**

The second player flips over every unrevealed enemy unit within three hexes of each of his Spacecraft. Once an enemy unit is revealed, it remains revealed for the rest of the game.

b. Command Segment

The second player issues Commands to each of his units.

All of his eligible Spacecraft, Battlecraft, intelligent missiles, and MIMS may be issued Manoeuvre Commands. Each of his *guided* missiles may be issued Manoeuvre Commands if the appropriate Battle Command is issued to the Spacecraft controlling the missile. An unguided missile may be issued no Commands; however, the current velocity of each of his unguided missiles must now be increased by one.

3. FIRST PLAYER FIRE PHASE

The first player may conduct laser and particle fire and/or launch missiles from each of his eligible Spacecraft and Battlecraft. The result of each laser and particle fire is determined immediately, as each is declared. Each launched missile is placed in a hex adjacent to the Spacecraft from which it is launched. Each friendly Battlecraft may be used to conduct one laser fire (only). Each friendly Spacecraft may be used to conduct a variable number of laser and particle fires and to launch missiles, depending on the capabilities of its pods.

4. SECOND PLAYER MOVEMENT PHASE

The second player conducts the activities listed in Phase 1.

5. FIRST PLAYER COMMAND PHASE

The first player conducts the activities listed in Phase 2.

6. SECOND PLAYER FIRE PHASE

The second player conducts the activities listed in Phase 3.

One Game-Turn is now completed and another is begun. The players continue this sequence until one player has fulfilled his victory conditions.

[38.0] Spacecraft

GENERAL RULE:

The 12 Spacecraft Classes from which the players are assigned ships in *Delta Vee* vary widely in size and quality. Each Spacecraft is actually a hull with one to 12 attached pods. (**Note:** The two *Terwillicker* ship Classes are considered Battlecraft and do not carry pods.) In addition to the information listed for each Spacecraft Class on the Spacecraft Attribute Chart, each ship possesses a sub-light engine, a bridge with navigation equipment, and living quarters for a crew necessary to keep the craft running. Four industrial concerns produce the Spacecraft:

Terwillicker Spaceworks, Inc. manufactures the *Terwillicker-5000*, a high-quality two-person craft; and the *Terwillicker-X* fighter, an innovative adaptation of the 5000 designed for military use.

Blades Research Institute produces military craft under long-term contract. The *Dagger*, *Sword*, and *Spear* Class ships are their most successful models.

Harmonics, Inc. specialises in finely crafted ships for government and high-level corporate use. The *Piccolo*, *Flute*, and *Clarinet* represent the top of their line.

The **Corco Group** manufactures a large line of commercial vessels, often sacrificing performance for economy. The *Gamma*, *Zeta*, and *Mu* Classes are well suited for transport in safe regions. The *Iota* is designed to appeal to merchants working in dangerous areas.

CASES:

[38.1] The Velocity Rating represents the maximum change in velocity a Spacecraft may make at once.

Thus, a *Sword* Class ship may increase or decrease its current velocity up to three levels in a single Command Phase, while a *Spear* Class ship may increase or decrease its current velocity by only one level in a single Command Phase.

[38.2] The Manoeuvre Rating is the maximum number of Manoeuvre Commands that may be issued to a Spacecraft in a single Command Phase.

The actual number of Manoeuvre Commands that may be issued to a ship equals its Manoeuvre Rating minus its current velocity.

[38.3] The Energy Capacity and the Energy Burn Rate are used to measure a Spacecraft's expenditure of energy.

The total number of *Energy Units* a ship begins the game with is represented by its Energy Capacity. Each time a ship is required to expend an *Energy Block* (see 41.5), a number of Energy Units equal to its Energy Burn Rate are expended. A ship that possesses an *energy pod* has, 144 extra Energy Units at the start of play (see 39.6).

[38.4] Each Spacecraft possesses a laser weapon, called a burster.

A Class 1 burster may be used to conduct laser burst *only*. A Class 2 burster may be used to conduct laser bursts or laser barrages.

[38.5] Nine of the Spacecraft Classes are armoured, as a defence against enemy laser and particle fire.

Class 2 armour provides more protection than Class 1 armour (see 42.8). Three ship Classes possess no armour at all.

[38.6] Five of the Spacecraft Classes possess a force field generator, as a defence against enemy missile explosions.

A Class 2 force field provides more protection than a Class 1 force field (see 43.8). Seven ship Classes possess no force field generator at all.

[38.7] The Civ Level of a Spacecraft Class ranges from 6 to 8.

A ship's Civ (Civilization) Level may affect the performance of certain pods attached to it. Civ Levels represent the sophistication of the materials and equipment that make up the ship. As a comparison, current technology (1980's) is just under Civ Level 5.

[38.8] The Targeting Program represents the ability of the Spacecraft's tracking systems to target enemy ships for laser and particle fire.

The effectiveness of the Targeting Program is expressed as a modifier applied to the *relative velocity* of the target ship and the firing ship (see 42.5).

[38.9] The Spacecraft Attribute Chart describes the specific characteristics of each Spacecraft Class.

See charts and tables.

[39.0] Pods

GENERAL RULE:

A pod is a compartment serving a specific function that is attached to or enclosed in a Spacecraft. Each Spacecraft is assigned a variety of pods, in accordance with the scenario being played. The number of pods a ship possesses and the nature of those pods make each ship in *Delta Vee* distinct. All the major attributes of each pod are listed on the Pod Attribute Chart. Additional properties of certain pods are listed in 39.6.

CASES:

[39.1] Hunter, light weapon, heavy weapon, and arsenal pods may fire laser and particle weapons and launch missiles.

All four of these pods may fire laser and particle bursts and barrages (see 42.0). The number of missiles of the four types (unguided, guided, intelligent, and MIMS) each pod carries is listed on the Pod Attribute Chart. Certain missiles require a Battle Command in order to be launched (see 43.1). No other pods may be used to either fire weapons or launch missiles.

[39.2] The number of Battle Commands a player may issue to a ship in a single Command Phase is equal to the sum of the Battle Commands provided by each eligible pod.

The light weapon, heavy weapon, and arsenal pods each contribute one Battle Command to the ship's total. The battle communications pod contributes two Battle Commands to the ship's total. No other pods contribute Battle Commands.

[39.3] The Civ Level of a pod may affect the functions it performs.

The Civ Level of a pod is reduced by one if it is greater than the Civ Level of the Spacecraft to which it is attached. Also refer to 38.7.

[39.4] The Targeting Program affects laser and particle fire conducted from the pod.

See 38.8 and 42.5. The Targeting Program modifier for the battle communications pod is applied to fire from anywhere on the ship. Targeting Program modifiers in other pods apply to fire from that pod only.

[39.5] The hunter, light weapon, and heavy weapon pods may be used to fire or launch one of its weapons or missiles during the friendly Fire Phase.

The arsenal pod may be used to fire or launch two of its weapons or missiles during the friendly Fire Phase. The battle communications pod allows one additional fire or launch (see 39.6).

[39.6] The following pods possess special attributes not listed on the Pod Attribute Chart:

Battle Communications. Allows one extra fire from any *one* pod or burster on the Spacecraft during the friendly Fire Phase. The player may conduct Active Search more effectively from the pod (see 41.4). The pod's Targeting Program allows a modifier of -6 for any laser or particle fire conducted from anywhere on the ship.

Tractor Beam. Allows the player to issue Manoeuvre Commands to another friendly or enemy Spacecraft or Battlecraft during his Command Phase, as if he controlled the unit. The player must issue a Battle Command to use the tractor beam. If he does so, a Civ Level 7 tractor beam may be used to issue *one* Manoeuvre Command to any one unit *within four hexes* of the ship with the tractor beam. A Civ Level 8 tractor beam may be used to issue *two* Manoeuvre Commands to any one ship *within six hexes* of the ship with the tractor beam. A tractor beam may not be used to issue Manoeuvre Commands to an enemy or friendly *missile*. Each Manoeuvre Command issued by using a tractor beam requires the expenditure of a number of Energy Units equal to *twice* the Energy Burn Rate of the target unit.

Battlecraft. Contains one *Terwillicker-5000* or one *Terwillicker-X* (as specified by the scenario) that may be launched from the Spacecraft. To launch a Battlecraft, Battle Commands must be issued in two friendly Command Phases (see 41.4). Once a Battlecraft has been launched from its pod, it is treated as any other Spacecraft. However, a separate Battle Log is not used; the requisite information for each Battlecraft is listed on the "mother" ship's Battle Log. A Battlecraft may be returned to the ship from which it was launched (only) during any Command Phase in which the two units occupy the *same* hex, have *identical velocities*, and are pointing in the *same direction*. If these requirements are met, the Battlecraft may be docked in its pod by issuing a Rendezvous Command. Each Battlecraft begins play with 15 Energy Units. When in its pod, a Battlecraft may replace expended Energy Units by drawing from the supply of Energy Units aboard the ship; no Command is required to do so (see 44.4).

Standard Jump, Augmented Jump, and Hunter. In certain scenarios, one or both players may remove a ship with a jump pod entirely from play (which is better than being destroyed). Otherwise, a jump pod has no effect on play. See 41.2 for details. A Hunter pod contains a standard jump engine.

Energy. Contains 144 additional Energy Units. A ship with an energy pod expends all the Energy Units in the pod before expending Energy Units in its hull.

[39.7] The following pods have no effect on play except that damaging or destroying any of them on an enemy Spacecraft may aid a player in fulfilling his Victory Conditions.

Luxury Cabin, Standard Cabin, Crew, Advanced Medical, Bio-Research, Standard Cargo, Buffered Cargo, Living cargo, Lander, Survey, Robot and Equipment, Explorer, Escape/EVA. Each of these pods may have an Armour Rating ranging from 0 to 2, as specified by the scenario.

[39.8] The Pod Attribute Chart summarises the properties of all the pods that may be used during the game.

See charts and tables.

[40.0] Movement and Direction

GENERAL RULE:

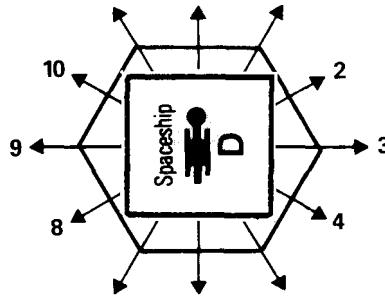
During a player's Movement Phase, he must move each and every one of his ships, Battlecraft, and missiles currently in play. The number of hexes each unit must be moved is determined by its Velocity marker. The direction each unit must be moved is determined by the direction in which the unit is pointing. The player has no choice in the movement of his units during the Movement Phase (**Exception:** See 40.5).

PROCEDURE:

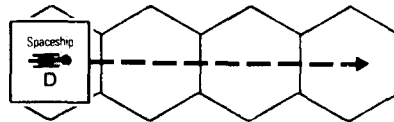
The player moves his units one at a time, in any order he desires. He moves each unit a number of hexes equal to its *current velocity*. Each unit is moved in a straight line, in the direction in which it is pointing. When the move is completed, the unit should point in the same direction in its destination hex.

CASES:

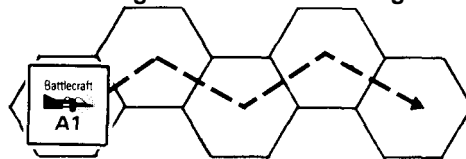
[40.1] A unit may point in one of 12 directions.



This is shown by orienting the unit marker's arrow toward a hex side or a hex corner. These directions may be equated to the numbers on a clock face.



A unit that is pointing toward a hex side is moved along the hex row extending from that hex side.



A unit that is pointing toward a hex corner is moved along a line extending from that corner. However, the unit is moved in a zigzag pattern; first to the left, then to the right, then to the left, etc.

If a unit that is pointing towards a hex corner is moved an odd number of hexes, a Direction Reminder marker should be placed in the hex immediately ahead of the unit's final position in the move. (i.e. in the hex the unit would occupy if the length of its move were one hex more). This reminds the players which zigzag hex row the unit should be moved through in its next move, so that "slippage" of the unit's direction to either side will not occur. A Direction Reminder marker has no effect on play (except to remind the player of the unit's proper direction) and is removed when the player changes direction.

The players must make sure that the orientation of each unit is always clearly evident. When more than one unit occupies a single hex, special care must be taken to show the orientation of each unit. The direction a unit points may be changed only during the Command Phase (**Exception;** See 40.5).

[40.2] When a ship or Battlecraft is directed to move off the maps currently in use, an unused map should be placed to abut the map edge from which the unit will exit.

This may be done whenever necessary, as long as the relative positions of all units and markers in the game remains the same. When placing a new map, make sure that the hex grid pattern is properly aligned with the other maps. A missile that is directed to move off the map is removed from play; a map is not specially positioned for it.

[40.3] A unit with a zero Velocity marker is not moved.

A unit without a Velocity marker that is stacked with a ship (such as an unlaunched missile or Battlecraft) is moved with the ship and has no effect on the ship's movement.

[40.4] A unit may be moved into and through hexes occupied by enemy or friendly units.

The Interception Routine (see 43.6) is conducted when a missile is moved into a hex occupied by an enemy unit at any point during its move, or if any unit is moved into a hex occupied by an enemy missile at any point during its move. There is no limit to the number of units that may occupy a single hex at any given time.

[40.5] The instant a Spacecraft or Battlecraft is moved into a planet hex, the Phasing player may issue the unit Manoeuvre Commands.

The number of Manoeuvre Commands the unit may receive is determined as in 41.1. Such a unit may immediately receive the following Manoeuvre Commands only: Accelerate, Decelerate, and Direction Change, within the restrictions of 41.2. However, the unit's current velocity may not be reduced below **1** in this manner (but may be during the Command Phase). A unit expends no energy for Manoeuvre Commands received as a result of entering a planet hex.

If a unit's current velocity is altered upon entering a planet hex, the number of hexes the unit has already traversed in its move is subtracted from the unit's new velocity to determine the number of hexes the unit must now be moved (in its new direction, if also altered). If this number is **0** or less, the unit is moved no further (it remains in the planet hex).

A unit with a current velocity of **1** that occupies a planet hex is considered to be orbiting that planet, and need not be moved during the Movement Phase.

If the current velocity of a streamlined Spacecraft or Battlecraft in a planet hex is reduced to **0** during the Command Phase, the unit is considered to land on the planet during the immediately following friendly Movement Phase. When this occurs, the unit's Velocity marker is removed and the unit remains in the planet hex for the remainder of the game. The unit may not be used for any game functions but is not considered destroyed. A unit that is not streamlined may not land on a planet. A missile is automatically destroyed upon entering a planet hex.

[40.6] When a unit is moved into a hex occupied by asteroids, the owning player must check for collision.

When an asteroid hex is entered, the unit's movement is interrupted while the player rolls a die. If the die result is less than or equal to the current velocity of the unit, it is hit by an asteroid. The player must then use the Hit Table as if the unit had just been hit by enemy fire (see 8.7). However, if a *critical hit* result is obtained from the table, it is considered a *no effect* result.

[40.7] No Energy Units or Energy Blocks are expended during the Movement Phase.

Energy is expended during the Command Phase and the Fire Phase.

[40.8] Under certain conditions, a ship may conduct a hyperjump during the Movement Phase.

When a ship does so, it is immediately removed from play. See 41.2 for details.

[41.0] Commands**GENERAL RULE:**

Each player issues Commands to his units during his Command Phase. A player may issue *Manoeuvre Commands* to all his Spacecraft, Battlecraft, and missiles (except unguided missiles) in play. A player may issue *Battle Commands* to all his Spacecraft (only) that possess the requisite pods. The number of Manoeuvre Commands that may be issued to a unit in a single Command Phase equals the unit's Manoeuvre Rating minus its current velocity. The number of Battle Commands that may be issued to a Spacecraft in a single Command Phase equals the sum of the Battle Commands provided by the ship's eligible pods.

PROCEDURE:

The Phasing player issues Commands to each of his units individually, in any order he desires. For each unit, he calculates the number of Manoeuvre Commands it may receive and then issues those Commands to the unit by performing the appropriate function listed in 41.2. If the unit is a Spacecraft, he calculates the number of Battle Commands it may receive and issues those commands to the ship by performing the appropriate functions listed in 41.4. He then records the requisite expenditure of Energy Blocks (if the unit is a Spacecraft) or Energy Units (if a Battlecraft or a missile).

CASES:**[41.1] The number of Manoeuvre Commands issued to a unit in a single Command Phase may never exceed the unit's Manoeuvre Rating.**

The number of Manoeuvre Commands a unit may receive is further reduced by its current velocity. Thus, if a unit with a Manoeuvre Rating of 7 had a current velocity of **4**, it could only receive three Manoeuvre Commands. **Exception:** If a unit's current velocity equals or exceeds its Manoeuvre Rating, the unit may be issued *one* Decelerate or Accelerate Command *only*.

No Manoeuvre Command may be issued to a Spacecraft that possesses a Prepare Jump or Jump marker, or that has an operating force field. No Manoeuvre Commands may be issued to a *guided* missile unless the appropriate Battle Command is issued to the Spacecraft controlling the missile (see 41.4). An *unguided* missile has no Manoeuvre Rating and may not be issued Manoeuvre Commands. However, during each Command Phase, the current velocity of each of the Phasing player's unguided missiles must be increased by one.

A player is not required to issue a ship its maximum number of Manoeuvre Commands. However, Manoeuvre Commands may not be transferred from one unit to another or accumulated from Game-Turn to Game-Turn. These restrictions apply to Battle Commands as well.

[41.2] An eligible unit may be issued following Manoeuvre Commands:

Accelerate / Decelerate. The Velocity marker of the unit is changed for a marker one greater or less in value. Thus, if a unit with a current velocity of 3 is issued an Accelerate Command, its Velocity marker is exchanged for a 4 Velocity marker. If the unit were issued a Decelerate Command instead, it would receive a 2 Velocity marker. Assuming a unit has the requisite Manoeuvre Commands, it may be issued any number of Accelerate or Decelerate Commands in a single Command Phase, up to a number *equal to* its Velocity Rating.

Direction Change. The direction that the unit is pointing is altered by one position (from a hex side to an adjacent hex corner, or from a hex corner to an adjacent hex side). Assuming a unit has the requisite Manoeuvre Commands, it may be issued any number of Direction Change Commands in a single Command Phase.

Weave. This Command may be issued to Spacecraft and Battlecraft only (not to missiles). The unit is immediately moved to any adjacent hex. The unit's velocity and direction are not changed (unless additional Manoeuvre Commands are issued). Only one Weave Command may be issued to a given unit in a single Command Phase. A unit may not weave into an asteroid hex or planet hex.

Prepare Jump / Abort Jump / Jump. In certain scenarios, a Spacecraft with a standard jump pod may prepare for a hyperjump away from the playing area. A Prepare Jump marker is placed atop the ship. In the following friendly Command Phase, the player must issue a Jump Command to the ship (the Prepare Jump marker is flipped over) or issue an Abort Jump Command to the ship (the Prepare Jump marker is removed). If a Jump Command is issued to the ship, it must be removed from play in the following friendly Movement Phase. A ship with an augmented jump pod need not be issued a Prepare Jump Command; it requires only a Jump Command (place a Jump marker atop the ship). A Jump Command may not be issued to a ship that has an active force field (a Prepare Jump Command may be issued to such a ship).

[41.3] The number of Battle Commands issued to a Spacecraft may not exceed the allotment provided by its eligible pods.

A light weapon, heavy weapon, or arsenal pod each allow a ship to receive one Battle Command. A battle communications pod allows a ship to receive two Battle Commands. Thus, a Spacecraft with two heavy weapon pods and a battle communications pod could receive four Battle Commands in a single Command Phase. The number of Battle Commands a Spacecraft may receive has no effect on the number of Manoeuvre Commands it may receive, and vice versa.

[41.4] An eligible Spacecraft may be issued the following Battle Commands:

Prepare Missile. If a Spacecraft has a light weapon, heavy weapon, or arsenal pod, the Phasing player may prepare a missile for launch by placing the appropriate missile counter (without a Velocity marker) *face-down* atop the ship. Consult the Pod Attribute Chart to find which pods may launch missiles and which of those missiles require a Prepare Missile Command. A prepared missile may be launched in any subsequent friendly Fire Phase (see 43.4). Assuming a Spacecraft has the requisite Battle Commands, it may be issued any number of Prepare Missile Commands in a single Command Phase. However, the maximum number of prepared missiles that a ship may carry at one time is limited to the number of missile-carrying pods the ship possesses. Thus, a ship with two heavy weapon pods may carry no more than two prepared missiles at a time. Until a prepared missile is launched, it is moved with its ship and has no effect on play.

Control Guided Missile. The player may issue Manoeuvre Commands to a guided missile previously launched from the Spacecraft. By issuing the Spacecraft one such Battle Command, the player may immediately issue any number of Manoeuvre Commands (within the restrictions of 41.1) to one of the ship's guided missiles currently in play.

Active Search. The player may flip over every enemy unit that is currently unrevealed within six hexes of the Spacecraft to which he is issuing this Command. This range is counted by including the enemy unit's hex but not the searching Spacecraft's hex. Once a unit is flipped over, it remains revealed for the rest of the game. If the Spacecraft to which an Active Search Command is issued possesses a battle communications pod, every inverted enemy unit within 10 hexes is flipped over. **Note:** Active Search should not be confused with *defection*, which occurs automatically at the beginning of the Command Phase and does not require a command.

Prepare Battlecraft. If a Spacecraft has a Battlecraft pod containing a Battlecraft, the player may prepare the Battlecraft for launch by placing the appropriate Battlecraft counter (without a Velocity marker) *face-down* atop the Spacecraft. The Battlecraft remains stacked with the Spacecraft (and is moved with the ship) until the player issues a Launch Battlecraft Command to the ship in any subsequent friendly Command Phase.

Launch Battlecraft. The player may launch a prepared Battlecraft (that is, a Battlecraft placed atop a Spacecraft in a previous friendly Command Phase) by placing the Battlecraft in any hex adjacent to the Spacecraft. The Battlecraft must be assigned a Velocity marker equal to, one less than, or one greater than the current velocity of the Spacecraft. **Exception:** A Battlecraft must be launched with a minimum velocity of 1. The Battlecraft must be pointing in the same direction that the ship is pointing when launched, or one of the two adjacent directions on either side (thus, a Battlecraft may be pointing in one of five directions when launched). Launching a Battlecraft does not require the expenditure of energy from the involved Spacecraft or Battlecraft.

Rendezvous. If a friendly Spacecraft or Battlecraft occupies the same hex as an enemy or friendly Spacecraft or Battlecraft, the two may be docked together. However, the two units must have identical velocities and must point in the same direction. This Command is used when a player wishes to dock a Battlecraft in the ship from which it was launched (see 39.6) or when a player wishes to dock with an enemy ship to fulfil a requirement listed in a scenario. Two Spacecraft that are docked together use *one* Velocity marker only. During the Command Phase, the Phasing player may issue Manoeuvre Commands to both ships as if they were one. If the expenditure of an Energy Block is required, a number of *Energy Units* equal to the Energy Burn Rate of both Spacecraft combined is expended. In this way one ship may "tow" another.

Tractor Beam. If a Spacecraft has a tractor beam pod, the player may activate its tractor beam. The player then issues Manoeuvre Commands to one other Spacecraft or Battlecraft, as explained in 39.6. A single tractor beam pod may only be issued one Command per Command Phase and does not remain active from Game-Turn to Game-Turn.

Activate / Deactivate Force Field. If a Spacecraft possess a force field (Class 1 or 2), it may be activated by flipping the Spacecraft over to its force field side. When activated, the force field provides protection against enemy missiles, but not against enemy laser or particle fire. Furthermore, the only commands that may be issued to a ship with an active force field are Prepare Jump, Abort Jump, Prepare Missile, Active Search, and Prepare Battlecraft. A missile may not be launched (but laser and particle fire may be conducted) from a Spacecraft with an active force field. An active force field may be deactivated by flipping the ship counter back to its normal side. A player may *attempt* to activate the force field of a ship that has been intercepted by a missile at the moment of interception (see 43.8).

[41.5] A unit must expend Energy Units or Blocks when issued certain Commands, depending on the type of unit.

The expenditure of Energy Units and Blocks is recorded on the appropriate Spacecraft Log (see 44.3).

- A **Spacecraft** must expend one Energy *Block* and a **Battlecraft** must expend one Energy *Unit* when it is issued *more than one Accelerate, Decelerate* and/or **Direction Change** Command in a single Command Phase. Regardless of how many of these Commands (beyond one) a ship or Battlecraft receives in a Command Phase, only one Energy Block or Unit is expended. A Spacecraft or Battlecraft that receives only one of the above Commands in a single Command Phase expends no energy (although it may expend energy as a result of other Commands it receives).

- A **Spacecraft** must expend one Energy *Block* and a **Battlecraft** must expend one Energy *Unit* when issued a **Weave** Command. This expenditure is in addition to any that may be required for other Manoeuvre Commands.

- A **missile** must expend one Energy *Unit* each time it is issued a Manoeuvre Command. Thus, if a missile is issued two Accelerate and one Direction Change Commands, three Energy Units are expended.

- A **Spacecraft** must expend one Energy Block when issued an **Activate Force Field** Command.

- A **Spacecraft** that uses its **tractor beam** must expend a number of Energy Units equal to *twice* the Energy Burn Rate of the ship or Battlecraft to which it is issuing a Manoeuvre Command. This expenditure must be made for *each* Manoeuvre Command issued to the target unit. A unit that is issued a Manoeuvre Command through a tractor beam does not expend energy for that Command.

- During the Fire Phase, a **Spacecraft** or **Battlecraft** must expend Energy Units when conducting a laser barrage, a particle burst, or a particle barrage (see 42.2).

[41.6] A unit that has expended all its available energy may be issued no Command that requires the expenditure of energy.**[41.7] The Energy Expenditure Summary lists the names of every Command that a player may possibly issue to a unit.**

See charts and tables.

[42.0] Laser and Particle Fire**GENERAL RULE:**

During a player's Fire Phase, he may conduct laser and/or particle fire against revealed and unrevealed enemy units with all his eligible spacecraft and Battlecraft. There are four types of fire: a laser burst, a laser barrage, a particle burst, and a particle barrage. Successful fire may result in a pod or other part of an enemy unit being damaged or destroyed. Fire may be conducted in any direction.

PROCEDURE:

The Phasing player declares and resolves each fire one at a time. All fires conducted from one Spacecraft or Battlecraft must be resolved before conducting fires from another Spacecraft or Battlecraft. For each fire conducted, the Phasing player undertakes the following steps, in order.

1. Declare what type of fire is being conducted, from where the fire is coming, and which enemy Spacecraft, Battlecraft or missile is the target of the fire. If necessary, note the expenditure of Energy Units on the appropriate Spacecraft Log.

2. Determine the *range* in hexes from the firing unit to the target unit. Range is counted by including the target unit's hex and all hexes lying between the firing unit and the target unit, but not the firing unit's hex.

3. Determine the *relative velocity* of the two units, using the Relative Velocity Chart if necessary. Subtract the *Targeting Program modifier* of the firing unit from the relative velocity and then add the modified relative velocity to the range to determine the *Target Value*.

4. Refer to the Fire Results Table, cross-referencing the proper Target Value column with the row matching the type of fire declared to find the *Hit Chance*. Roll the die; if the die result is less than or equal to the Hit Chance, the target may have been hit. Proceed to Step 5. If the die result is greater than the Hit Chance, the fire has missed the target and this procedure is concluded.

5. Roll the die again and refer to the Hit Table to determine which part (if any) of the enemy unit has been hit. The non-Phasing player must immediately apply the effects of the hit to the target unit.

5. Roll the die again and refer to the Hit Table to determine which part (if any) of the enemy unit has been hit. The non-Phasing player must immediately apply the effects of the hit to the target unit.

CASES:**[42.1] The number and types of fires a Spacecraft or Battlecraft may conduct in a single Fire Phase depends on the Class of its burster and the attributes of its pods.**

- A **Class 1 burster** on a Spacecraft or Battlecraft allows one laser **burst** each Fire Phase.
- A **Class 2 burster** on a Spacecraft or Battlecraft allows one laser **burst** or one laser **barrage** each Fire Phase.
- A **Hunter, Light Weapon** and **Heavy Weapon Pod** each allow *one fire of any type* (or one missile launch, see 43.2) each Fire Phase.
- An **Arsenal Pod** allows *two fires of any type* (or one fire and one missile launch, or two missile launches) each Fire Phase.
- A **Battle Communications Pod** allows *one additional fire of any type* (or one additional missile launch) from any of the above eligible items each Fire Phase.

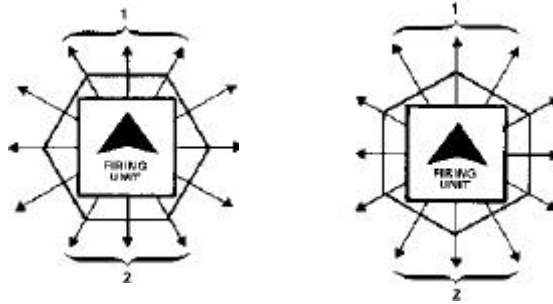
All these items are cumulative. Thus, a Spacecraft with two light weapon pods may be used to conduct three fires each Fire Phase (one from its burster and one from each weapon pod). If the ship also possesses a battle communications pod, it could conduct one additional fire from its burster or either weapon pod (for a total of four fires per Fire Phase).

The number of fires a Spacecraft may conduct in a Fire Phase should not be confused with the number of Battle Commands the ship may receive in a Command Phase. Fires may not be conducted in the Command Phase, and Commands may not be issued in the Fire Phase.

[42.2] A unit that conducts any type of fire except a laser burst must expend one or more Energy Units.

A **particle burst** costs 1 Energy Unit, a **laser barrage** costs 2 Energy Units, and a **particle barrage** costs 3 Energy Units. The expenditure of Energy Units is recorded on the appropriate Spacecraft Log (see 44.3).

[42.3] The relative velocity of the firing unit and the target unit is determined by comparing the direction and current velocity of each unit.



Imagine the two units are in the same hex and compare their directions on one of the following diagrams. Use the first if the firing unit points toward a hex side and the second if the firing unit points toward a hex corner. The direction of the target unit is matched to one of the 12 arrows radiating from the hexes.

Depending on the unit's relative directions, one of the following statements will apply:

1. If the target unit is pointing in the *same* direction as the firing unit, or an *adjacent* direction, their relative velocity equals the *difference* between their current velocities.
2. If the target unit is pointing in the *opposite* direction as the firing unit, or a direction *adjacent to the opposite direction*, their relative velocity equals the *sum* of their current velocities.
3. If the target unit is pointing in any of the six directions not covered in the above two statements, refer to the Relative Velocity Chart and cross-reference the current velocity of each unit on the chart to find their relative velocity.

Example: The firing unit has a velocity of 4 and the target unit has a velocity of 3. If their directions apply to statement 1, their relative velocity is 1. If their directions apply to statement 2, their relative velocity is 7. If their directions apply to statement 3, the Relative Velocity Chart is used to determine that their relative velocity is 5.

[42.4] The relative velocity and the range between the firing unit and the target unit may be reduced if the positions of the two units fulfil either of the following conditions.

1. A straight line may be drawn between the two units and their indicated directions. **[See Diagram A]**

If this applies, the relative velocity is determined as described in 42.3 and is then *halved*, rounding fractions up. The range between the two units is *not* affected.

2. The two units are pointing in the *same* direction and their current velocities are *identical*. **[See Diagram B]**

If this applies, the relative velocity is *automatically zero* and the *range* between the two units is *halved*, rounding fractions up. If conditions 1 and 2 apply in a single situation, condition 2 takes precedence.

DIAGRAM A

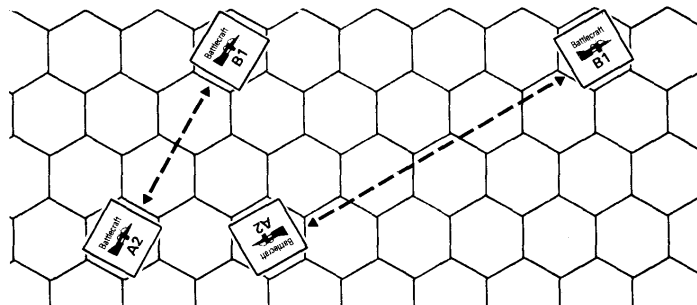
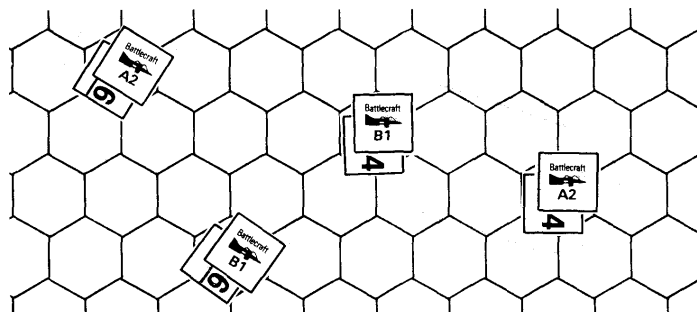


DIAGRAM B



[42.5] Each Spacecraft and Battlecraft possesses a Targeting Program, which modifies the determined relative velocity.

The modifier is listed on the Spacecraft Attribute Chart. If a fire is being conducted from a hunter, light weapon, heavy weapon, or arsenal pod, the Phasing player may use the Target Program modifier of either the pod or the Spacecraft. If a Spacecraft possesses a battle communications pod, a Targeting Program modifier of - 6 is applied to *all* fire conducted from the ship.

If, after applying the Targeting Program modifier, the relative velocity is less than zero, it is treated as zero. The Targeting Program modifier is *never* used to reduce the *range* between the firing unit and the target unit. After calculating the modified relative velocity, it is added to the range to determine the Target Value used with the Fire Results Table.

[42.6] The Fire Results Table is used to determine if a fire has hit its target.

The Target Value [Range + (Relative Velocity-Targeting Program)] is cross-referenced with the declared type of fire to determine the Hit Chance. The Phasing player then rolls the die; if the die result is equal to or less than the Hit Chance, he proceeds to the Hit Table.

[42.7] The Hit Table is used to determine which pod or other part of the target unit has been hit.

The Phasing player rolls the die and locates the die result on the table. With the exception of die result **1**, each result lists two parts of the target unit. If the target unit possesses *neither* of the listed parts, the hit is a glancing blow that has no effect. If the target unit possesses *only one* of the listed parts, that part has been hit. If the target unit possesses *both* of the listed parts, the *Phasing* player chooses which of the two parts has been hit. He can inspect the opposing player's applicable Spacecraft Log before choosing.

If a **1** is rolled when using the Hit Table, a *critical hit* has occurred; the *Phasing* player chooses one part of the target unit listed on the Hit Table to receive the hit. He can inspect the opposing player's applicable Spacecraft Log before choosing.

Exception: If the target unit is *unrevealed*, a critical hit is treated as *no hit*.

If the target unit is a *revealed missile*, it is destroyed on the result of **1** or **2**. If the missile is *unrevealed*, it is destroyed on a result of **2** only. No other result on the Hit Table affects a missile.

[42.8] When a unit receives a hit, the owning player must record it on the appropriate Spacecraft Log. The effects of a hit depend on the Armour Rating of the part hit.

- A part with a **0** Armour Rating is *destroyed* when first hit. An **X** is placed in the Status Box for that part on the Spacecraft Log. Any further hits on that part have no additional effect.
- A part with a **1** Armour Rating is damaged when first hit. A **D** is placed in the Status Box for that part on the Spacecraft Log. The part is destroyed when it receives a second hit.
- A part with a **2** Armour Rating is made vulnerable when first hit. A **V** is placed in the Status Box for that part on the Spacecraft Log. The part is damaged when it receives a second hit and destroyed when it receives a third hit.
- A missile is always destroyed when first hit. Draw a line through all the boxes for that missile on the Spacecraft Log and remove the missile from play.

The bridge, engine and force field (if any) of a Spacecraft are located in the main hull and are considered to have the Armour Rating of the Spacecraft.

[42.9] When a pod or other part of a Spacecraft or Battlecraft is damaged or destroyed, the capabilities of that part are immediately impaired.

The following list summarises all the effects of damage and destruction.

Bridge. Damaged: The Manoeuvre Rating of the unit is reduced by two and the unit may no longer receive Weave Commands.
Destroyed: The Manoeuvre Rating of the unit is reduced to **1** and the unit may no longer receive Weave Commands.

Engine. Damaged: Each and every Manoeuvre Command issued to the unit requires the expenditure of one Energy Block.
Destroyed: The unit may receive no Manoeuvre Commands at all.

Class 1 Force Field. Damaged or Destroyed: The force field may not be used at all.

Class 2 Force Field. Damaged: The force field is considered to have the protective ability of a Class 1 force field and may not be activated at the moment of missile interception (see 43.8). **Destroyed:** The force field may not be used at all.

Hunter Pod. Damaged: All missiles in the pod are lost, including any currently prepared for launch (cross them off the appropriate Spacecraft Log); laser and particle barrages may not be conducted from the pod (laser and particle bursts may be conducted); the pod may not be used to hyperjump. **Destroyed:** The pod is totally eliminated.

Light Weapon or Heavy Weapon Pod. Damaged: All missiles in the pod are lost, including any currently prepared for launch; any guided missiles previously launched from the pod may not be issued Manoeuvre Commands; laser and particle barrages may not be conducted from the pod (laser and particle bursts may be conducted). **Destroyed:** The pod is totally eliminated.

Arsenal Pod. Damaged: Same as damage to a light weapon or heavy weapon pod; in addition, the pod only allows one fire per Fire Phase (instead of two). **Destroyed:** The pod is totally eliminated.

Battle Communications Pod. Damaged: The pod allows only one additional Battle Command per Command Phase (instead of two); the pod's Targeting Program modifier is eliminated (the modifier of the Spacecraft or firing pod being used instead); the pod does not allow an additional fire; the pod does not increase the range of an Active Search. **Destroyed:** The pod is totally eliminated.

Tractor Pod. Damaged or Destroyed: The tractor beam may not be used at all.

Battlecraft Pod. Damaged or Destroyed: A Battlecraft may not be launched from or dock with the pod. A Battlecraft inside the pod when damaged or destroyed may not be used at all.

Standard or Augmented Pod Jump. Damaged or Destroyed: The pod may not be used to hyperjump.

Energy Pod. Damaged: Ten Energy Units must be expended each friendly Command Phase (in addition to any other expenditures of energy) until a total of 144 Energy Units have been expended (including previously expended energy). **Destroyed:** The total expenditure of energy for the Spacecraft must be immediately brought up to 144 Energy Units; the pod is considered empty.

Damage and destruction of any other pod has no effect on play (but may affect a victory in a scenario). The capabilities of a pod or other part are not affected when made *vulnerable*.

[43.0] Missile Launch and Interception

GENERAL RULE:

During a player's Fire Phase, he may launch missiles from any of his Spacecraft that possess missile-carrying pods. Certain missiles must be prepared before launch, depending on the type of missile and the pod from which it is being launched. Once launched, each missile is moved in accordance with 40.0, and is issued Commands in accordance with 41.0 and the restrictions of the following cases. The Interception Routine is undertaken each time any missile is in a hex occupied by an enemy unit. If interception occurs, the missile explodes, destroying itself and the enemy unit (unless the enemy unit is a Spacecraft with an active force field).

CASES:

[43.1] The number of missiles of each type a pod possesses at the beginning of play is listed on the Pod Attribute Chart.

The chart also states whether or not the missile must be prepared before it may be launched, by issuing a Prepare Missile Command to the Spacecraft in a previous Command Phase (see 41.4). In order to launch a missile, it must be atop the launching Spacecraft at the beginning of the friendly Fire Phase, or must be a type of missile that need not be prepared.

[43.2] The launch of a missile counts as one fire towards the total number of fires that may be conducted from a Spacecraft in a single Fire Phase.

Thus, if a Spacecraft with two light weapon pods launches two missiles in a Fire Phase, it may conduct only one additional fire (from its burster). Also see 42.1. The launch of a missile does not require the expenditure of energy by the missile or by the launching Spacecraft.

[43.3] When the Phasing player wishes to launch a missile, he chooses a missile counter and marks his Spacecraft Log.

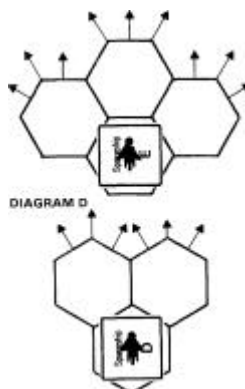
He chooses the counter that matches the chosen missile type and, if a guided missile, whose identity letter matches that of the Spacecraft from which it is being launched. He then writes the number of the pod from which it is being launched and the identity number of the missile in the first unused **Pod/#** box for that missile type on the appropriate Spacecraft Log. For example, if guided missile A-03 were launched from a heavy weapon pod (assigned pod #2), the Phasing player would write **2/3** in the first unused Pod/# box of the guided missile section of Spacecraft A's Log.

[43.4] A missile is launched by assigning it a Velocity marker and placing it face-down in a hex adjacent to the launching Spacecraft.

A missile must be assigned a Velocity marker *equal to, one greater than, or one less than* the current velocity of the Spacecraft from which it is launched. **Exception:** The initial velocity of a missile must be at least 1.

The hex in which a missile may be placed and the direction in which the missile may point are restricted. The following diagrams show all possible missile placements. Diagram C is used if the launching ship points toward a hex side. Diagram D is used if it points toward a hex corner. A missile may be placed in any hex shown and, within a hex, may point in any direction indicated by an arrow radiating from the hex.

DIAGRAM C



A launched missile may not be initially placed in the hex occupied by the launching Spacecraft. More than one missile may be launched into the same hex. Such missiles may be assigned identical or different directions and velocities.

[43.5] The Velocity Rating, Manoeuvre Rating, and Energy Unit Allowance of each type of missile are listed on the Missile Chart.

The Civ Level of each missile is equal to the Civ Level of the pod from which it is launched. Unguided missiles may not receive Manoeuvre Commands and are thus not listed on the chart. Other types of missiles may be issued Manoeuvre Commands in accordance with 26.5 and 41.1. Note that a missile must expend one Energy Unit for each and every Manoeuvre Command that it receives (see 41.5). A missile must be removed from play at the conclusion of the friendly Movement Phase following the Command Phase in which it expended its last Energy Unit.

[43.6] The Interception Routine is performed whenever a friendly missile enters a hex occupied by an enemy unit, or when any enemy unit enters a hex occupied by a friendly missile, regardless of the Phase in progress.

The player owning the missile undertakes the following steps:

1. Determine the relative velocity of the two units as described in 42.3. The conditions of 42.4 may also apply, but the conditions of 42.5 do not. Since the range during interception will always be zero, it has no effect.

2. Cross-reference the determined relative velocity with the Civ Level of the intercepting missile on the Missile Interception Table to determine the Interception Chance.

3. Roll the die. If the die result is equal to or less than the Interception Chance, interception has occurred; the missile explodes, destroying itself and the enemy unit (**Exception:** See 43.8). If the die result is greater than the Interception Chance, interception does not occur; the missile and the enemy unit are not affected, and interception is not attempted between the two units again as long as they occupy the same hex.

The Interception Routine must be conducted whenever possible. **Exception:** A player may decline to conduct the Interception Routine if his involved missile has a Civ Level of 8 (but may not decline if being intercepted by an enemy missile). The Interception Routine is not conducted between friendly units; interception between friendly units is impossible.

If an enemy and a friendly missile occupy the same hex, the Phasing player, and then the non-Phasing player, conduct the Interception Routine.

If a friendly missile is in a hex occupied by more than one enemy unit, the Interception Routine is conducted with the enemy unit with the lowest relative velocity only. If more than one such unit presents the same relative velocity, the player owning the missile may choose the unit to intercept.

[43.7] The Missile Interception Table is used during the Interception Routine to determine if a missile intercepts an enemy unit.

See charts and tables.

[43.8] A Spacecraft with an active force field is not destroyed when intercepted by an enemy missile.

Instead, the player owning the missile rolls the die and refers to the Hit Table, in accordance with 42.7. If the Spacecraft has a Class 1 active force field, the Hit Table is used *three* times when interception occurs. If the Spacecraft has a Class 2 active force field, the Hit Table is used *once* when interception takes place.

A player owning a Spacecraft that possesses an inactive force field may attempt to activate the force field at the moment of interception. When the enemy player has determined that interception occurs, the player owning the Spacecraft rolls the die.

If the die result is *more than one less* than the Civ Level of the Spacecraft, the force field is activated; flip the Spacecraft counter over. On any other die result, the Spacecraft is destroyed. No Command is required to activate a force field in this manner. However, an Energy Block must be expended (see 41.5) and a Battle Command is required to deactivate the force field (see 41.4).

[43.9] Four unguided missiles may be launched from a MIMS that is currently in play during any one friendly Fire Phase.

The player owning the MIMS declares this action and places four unguided missile counters in hexes adjacent to the MIMS, in accordance with 43.4 (as if the MIMS were a Spacecraft). He may use any of his unused missile counters of the appropriate type for this purpose. The launch of these missiles is not recorded on the Spacecraft Log, but a single MIMS may only conduct this special launch once. No Command is required for a MIMS to launch its missiles, and the MIMS remains in play after doing so, as an intelligent missile.

[44.0] How to Use the Spacecraft Logs

GENERAL RULE:

Before beginning play, each player fills out a Spacecraft Log for each Spacecraft assigned to him by the scenario instructions. During the game, energy expenditure by each ship and the current status of the ship's equipment is updated on the Log. The status of the ship's missiles and Battlecraft is also kept track of on the Log.

CASES:

[44.1] The Compartment section of the Spacecraft Log is used to assign pods specific locations on the Spacecraft and to record hits incurred by the pods, the bridge, the engine, and the force field.

To prepare the Compartment section for play, complete the following steps:

1. If the Spacecraft does *not* have a force field, put an **X** in the Force Field Status box.
2. Consult the Spacecraft Attribute Chart to find how many pods the Spacecraft possesses. Then cross out all boxes for pods beyond the number available to the ship.
3. Consult the scenario instructions to find which types of pods the ship possesses. Write the names of these pods in the available numbered Pod Type boxes. The pods may be assigned to the boxes in any order the player desires, as long as the boxes crossed out in accordance with Step 2 are not used.
4. Note the Armour Rating for the bridge, engine, and force field (that of the Spacecraft) and for each pod in the appropriate boxes.

During play, the Status box for the bridge, engine, force field, and each pod is used to record hits incurred, by marking a **V**, **D**, or **X** in each box (see 42.8).

[44.2] Each Missile section of the Spacecraft Log is used to note how many missiles are available on the Spacecraft and to record the expenditure of energy by each missile after launch.

To prepare each Missile section for play, count the total number of missiles of that type available (the total of the amounts listed on the Pod Attribute Chart for the ship's missile-carrying pods). If this total is less than the total number of missiles shown in the section, cross out lines in the section (from the bottom up) until the totals match. Unless the Unguided Missile section is being filled out, consult the Missile Chart to find how many Energy Units each missile possesses (see 43.5). If this number is less than the number of Energy Unit boxes for each missile, cross out boxes for each missile (starting from the right) until the numbers match.

When a missile is prepared for launch or is launched (if preparation is not necessary), the owning player notes the number of the pod and the identity number of the missile counter in the first available Pod/# box in the appropriate Missile section. A pod that has launched a number of missiles equal to the amount of missiles shown for the pod on the Pod Attribute Chart may launch no more missiles of that type.

Each time a missile receives a Manoeuvre Command, the owning player must put an X through one of the missile's Energy Unit boxes. When all the boxes for a missile are marked, the missile is removed from play (see 43.5). Unguided missiles do not expend Energy Units, and thus have no Energy Unit boxes.

[44.3] The Energy Unit Track and Energy Block section of the Spacecraft Log is used to note how much energy the Spacecraft possesses at the start of play and to record the expenditure of energy during play.

An *Energy Unit* is a measure of energy common to all units in the game. An *Energy Block* is a variable measure of energy used by Spacecraft only. The size of an Energy Block for a particular Spacecraft equals the Energy Burn Rate of the Spacecraft (see the Spacecraft Attribute Chart) and is expressed in terms of Energy Units. Thus, an Energy Block for a *Flute* Spacecraft equals six Energy Units.

To calculate the number of Energy Blocks possessed by a Spacecraft at the start of play, divide the Energy Capacity of the ship by its Energy Burn Rate. If the ship possesses an energy pod, add 144 to the Energy Capacity before dividing. This number is noted on the Energy Block section of the log by crossing out boxes in excess of the number (from the bottom up).

Before beginning play, cross out all the boxes on the Energy Unit Track in excess of the Spacecraft's Energy Burn Rate, and place an Energy Unit marker in the 0 space of the track.

Each time a Spacecraft expends an Energy Block during play (see 41.5) an Energy Block is marked. When all the available boxes are marked, the Spacecraft has no more energy (see 41.6).

Each time a Spacecraft expends one or more Energy Units (for conducting fire or operating a tractor beam) the Energy Unit marker is moved the appropriate number of spaces along the Energy Unit Track. Each time the marker is moved into the space matching the Energy Burn Rate of the Spacecraft, the marker is returned to the 0 space, and the expenditure of one Energy *Block* is marked. Movement of the marker is then continued (if necessary).

[44.4] The Battlecraft section of the Spacecraft Log is used to record the status of a launched Battlecraft.

The status of the Battlecraft's bridge and engine (in terms of hits received) is recorded in the Bridge and Engine boxes. The expenditure of Energy Units by the Battlecraft is recorded by marking the Energy Unit Boxes (see 41.5). When all the Energy Unit Boxes for a Battlecraft are marked, it has no more energy. A *docked* Battlecraft may receive Energy Units from its Spacecraft; erase marks from any number of the Battlecraft's Energy Units Boxes and record the expenditure of an equal number of Energy Units by the ship. A Battlecraft may never possess more than **15** Energy Units.

[illegible]

[45.0] Scenarios

GENERAL RULE:

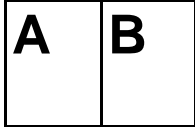
Before beginning the game, the players choose which of the following five scenarios they will play. Each scenario provides a brief description of the situation, how the maps are arranged, the forces that each player receives, how those forces are set up, the deployment of planets and asteroid fields (if any), and how each player may achieve victory. Scenario 1 is recommended for those playing *Delta Vee* for the first time.

In all scenarios, a Spacecraft or Battlecraft may be destroyed for purposes of victory. A Spacecraft or Battlecraft is considered destroyed if it does not possess an active force field when intercepted by an enemy missile; or if its bridge, engine and more than half of its pods are destroyed (remove the unit from play). Unless specifically stated otherwise in a scenario, hyperjumping may not be conducted.

SCENARIO1: The Showdown

A gang of cut-throats flying a long range pursuit craft stolen from a federal installation on a nearby planet are intercepted by a similar ship manned by the local guard. Enraged by the theft, the military authorities order the complete destruction of the criminals.

Map Deployment:



Player 1 Deployment:

One *Piccolo* (Spacecraft counter E) with one hunter pod, in hex A0207 pointing towards 3 o'clock with a velocity of 1. Use Spacecraft Log Nr1.

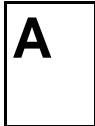
Player 2 Deployment: One *Piccolo* (Spacecraft counter D) with one hunter pod, in hex B1511 pointing towards 9 o'clock with a velocity of 1. Use Spacecraft Log Nr1.

Victory Conditions: The instant one player's Spacecraft is destroyed, the opposing player is declared the winner. Neither player may conduct a jump.

SCENARIO 2: The First Shot

Tensions were high between the opposed governments of Venable and Laidley, two planets in the Eridani system. When a Venable light cruiser ventured into Laidley space to "test the waters," it encountered two Laidley patrol craft. The smaller ships opened fire and the brief Eridani War began.

Map Deployment:



Player 1 Deployment:

One *Sword* (Spacecraft counter A) with two heavy weapon pods, one battle communications pod, one Battlecraft pod (with a *Terwillicker-X*) and one energy pod; in hex A1112, pointing towards 9 o'clock with a velocity of 3. All pods are armour Class 2. Use Spacecraft Log Nr.2.

Player 2 Deployment:

Two *Daggers* (counters A and B) each with a heavy weapon pod and an energy pod (armour Class 2); in hexes A0706 and A0705, pointing towards 3 o'clock with a velocity of 3. Use two copies of Spacecraft Log Nr. 1.

Victory Conditions: Player 1 wins if both *Daggers* are destroyed. Player 2 wins if the *Sword* is destroyed. If neither player has fulfilled his victory conditions and all opposing Spacecraft and Battlecraft are more than 25 hexes apart at any time, the game is declared a draw.

SCENARIO 3: Escape from Tau Ceti

As four smuggler ships head out of the Tau Ceti system with a cargo of deadly drugs and escaped convicts, a federal heavy cruiser gives chase. The naval vessel's orders are to prevent the criminal ships from hyperjumping at any cost.

Map Deployment

A	B	C	D	E
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Player 1 Deployment:

One Corco *Iota* (Spacecraft counter A) with two heavy weapon pods (neither pod has any intelligent missiles or MIMS), one energy pod, one standard jump pod, one crew pod, and four buffered cargo pods. All pods are armour Class 2. Use Spacecraft Log Nr. 2.

Two Corco *Gammas* (counters B and C), each with one light weapon pod, one standard jump pod, and one standard cargo pod. All pods are armour Class 1. Use two copies of Spacecraft Log Nr. 1.

One Corco *Gamma* (counter D) with one standard jump pod, one crew pod, and one standard cargo pod. All pods are armour Class 0. Use Spacecraft Log Nr. 1.

All four ships must be placed within one hex of A0909. All must be placed in different hexes and must point toward 3 o'clock with a velocity of 2. Each Spacecraft has already expended 3 Energy Blocks.

Player 2 Deployment: One *Sword* (counter A) with two arsenal pods, one battle communications pod and two Battlecraft pods (each with a *Terwillicker-X*); in any hex in the 0100 hex row of map A, pointing in any direction with a velocity of 3. All pods are armour Class 2. Use Spacecraft Log Nr. 2.

Victory Conditions: Player 1 wins if the Corco *Iota* or two Corco *Gammas* are able to jump (see 7.2). A ship may not jump until it enters map E (to be placed during play as shown in the diagram) or enters a map placed above or below map E (in the direction of the arrows). Player 1 also wins if the *Sword* is destroyed. Player 2 wins if *three* enemy ships are destroyed (including the Corco *Iota*).

SCENARIO 4: Pirates!

A Corco *Mu* loaded with passengers and valuable cargo is approaching the planet Esata after Hyperjumping into the system. As it nears the dense Bicker's Asteroid Belt, it is set upon by a pair of ruthless pirate ships looking for booty. A distress call is sent to Esata in the hopes that aid will come to the Corco *Mu*.

Map Deployment:

A	B	C
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Player 1 Deployment:

One Corco *Mu* (Spacecraft counter B) with one light weapon pod, one Battlecraft pod (with a *Terwillicker-5000*), one standard jump pod, one energy pod, one standard support pod, three standard cabin pods, one crew pod, and three buffered cargo pods; in hex C1406, pointing at 9 o'clock with a velocity of 2. All pods are armour Class 1. Use Spacecraft Log Nr. 2.

One *Dagger* (Spacecraft counter A) with one heavy weapon pod and one energy pod (both armour Class 2); in hex A0409 pointing at 3 o'clock with a velocity of 1. Use Spacecraft Log Nr. 1. The *Dagger* may not move, fire or be fired at until *alerted*. During each friendly Command Phase, Player 1 rolls the die; if the result is a 1 or 2, the *Dagger* has been alerted and may be used normally (beginning with that Command Phase).

Player 2 Deployment:

One *Flute* (counter A) with one arsenal pod, one energy pod, one tractor pod, and one buffered cargo pod; in hex B1612, pointing in any direction with a velocity of 0. All pods are armour Class 2. Use Spacecraft Log Nr. 1.

One *Flute* (counter B) with one heavy weapon pod, one Battlecraft pod (with a *Terwillicker-X*), one energy pod and one buffered cargo pod; in hex B1611, pointing in any direction with a velocity of 0. All pods are armour Class 2. Use Spacecraft Log Nr. 1.

Planet: In hex A0409

Asteroid Fields: In hexes C0902, C0904, C0907, C0909, C0912 and C0915. An asteroid field is considered to exist in all six hexes adjacent to each Asteroid Field marker, as well as in the hex occupied by each marker.

Victory Conditions: Player 1 wins the moment the Corco *Mu* is put into orbit around Esata, or if both *Flutes* are destroyed. If the Corco *Mu* is destroyed, the game is immediately declared a draw. Player 2 wins if either *Flute* is able to dock with the Corco *My* (see 7.4).

SCENARIO 5: Attack on Convoy Red

A vital convoy of arms and ammunition hurriedly organised by the Imperial fleet and establishment merchant heads for the planet Zaraznov, after hyperjumping from a nearby system. A successful revolutionary uprising on the planet has gained control of small well-equipped fleet. A task force from the insurgents is patrolling Zaraznov space, awaiting the expected convoy.

Map Deployment:

A	B	C
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Player 1 Deployment:

One *Spear* (Spacecraft counter A) with two arsenal pods, one battle communications pod, one Battlecraft pod (with a *Terwillicker-X* Battlecraft), one tractor pod (Civ Level 8), one standard jump pod, one energy pod, and one crew pod. All pods are armour Class 2. Use Spacecraft Log Nr. 2.

Three *Corco Zetas* (counters B, C and D) each with one light weapon pod, one energy pod, one standard jump pod, and three standard cargo pods. All pods are armour Class 1. Use three copies of Spacecraft Log Nr. 1.

One *Dagger* (counter E) with a hunter pod and an energy pod. Both pods are armour Class 2. Use Spacecraft Log Nr. 2.

All five ships must be placed within one hex of A0407. All must be placed in different hexes. Player 1 may choose any one direction and any one velocity (from 0 to 4) for the ships, but all must point in the same relative direction and have the same velocity. Each Spacecraft has already expended 10 Energy Blocks. Spacecraft D has no guided missiles remaining.

Player 2 Deployment:

One *Clarinet* (counter A) with two heavy pods, one battle communications pod, two Battlecraft pods (each with a *Terwillicker-X* Battlecraft), one energy pod and one crew pod; in hex B0717. All pods are armour Class 2. Use Spacecraft Log Nr. 2.

One *Flute* (counter B) with one heavy weapon pod, one Battlecraft pod (with a *Terwillicker-X*), one energy pod and one equipment pod; in hex B0617. All pods are Armour Class 2. Use Spacecraft Log Nr. 1.

One *Flute* (counter C) with one light weapon pod, one tractor pod (Civ Level 8), one energy pod and one crew pod; in hex BOS 16. All pods are armour Class 2. Use Spacecraft Log Nr.1.

Player 2 may choose any one direction and any one velocity (from 0 to 6) for the ships, but all must point in the same relative direction and have the same velocity.

Planet: In hex C1110.

Victory Conditions:

Player 1 receives one Victory Point for each of his Spacecraft placed in orbit around the planet. He receives an additional VP for each undestroyed cargo pod aboard such a ship. Once a Spacecraft is placed in orbit, it is removed from play. When player 1 has accumulated eight VP's, he wins the game.

Player 2 receives one VP for each enemy ship destroyed and each cargo pod destroyed (thus, the destruction of a *Corco Zeta* is worth four VP's). Player 2 loses two VP's for each of his *Flutes* that is destroyed. When player 2 has accumulated eight VP's, he wins the game if his *Clarinet* is destroyed. Player 2 loses the game (regardless of how many VP's he has earned).

Abbreviated Sequence of Play

1. First Player Movement Phase
2. Second Player Command Phase
 - c. Detection Segment
 - d. Command Segment
3. First Player Fire Phase
4. Second Player Movement Phase
5. First Player Command Phase
 - c. Detection Segment
 - d. Command Segment
6. Second Player Fire Phase

Delta Vee**Design Credits**

Game Design and Development:

John H. Butterfield Physical Systems and Graphics:

Redmond A. Simonsen Play testing:

Justin Leites, Darryl Esakof, David McCorkhill, Scott Laiken, Edward J. Woods, James Mulligan.

Blindtesting:

David Spangler, Richard A. Edwards, Wes Devin, Mark Barrows and the Olympia Gaming Association

Production:

Carolyn Felder, Ted Koller, Manfred F. Milkuhn, Michael E. Moore, Bob Ryer, Ken Stec

[46.0] Delta Vee Charts and Tables**[38.9] SPACECRAFT ATTRIBUTE CHART**

CLASS	NUMBER OF PODS	VELOCITY RATING	MANOEUVRE RATING	ENERGY CAPACITY	ENERGY BURN RATE	STREAMLINED	BURSTER CLASS	ARMOUR CLASS	FORCEFIELD CLASS	CIV LEVEL	TARGET PROGRAM	AVAILABILITY	CREW REQUIRED	PASSENGER CAPACITY	CARGO CAPACITY	PERFORMANCE MODIFIER	BASE REPAIR TIME (HOURS)	TRANS COST
BATTLECRAFT																		
Terwillicker 5000	0	2	7	15	1	Y	1	1	0	7	-2	O	1	2	2	0	24	3100
Terwillicker-X	0	3	9	15	1	Y	2	2	0	8	-4	R	1	2	0.1	+25	24	6900
Lander	0	1	4	15	1	Y	0	0	0	8	0	O	1	4	0.5	-5	24	1500
Corco Omega	0	1	3	10	1	N	0	0	0	7	0	O	1	4	0.2	-15	24	1100
SPACESHIPS																		
BLADES RI																		
Dagger	2	2	6	48	4	Y	2	2	1	8	-4	M	2	4	0.5	+15	24	12200
Sword	5	3	8	78	6	N	2	2	2	8	-4	M	5	10	3	+25	24	22100
Spear	8	1	4	144	12	N	2	2	2	8	-4	M	10	20	7	+10	24	27900
HARMONICS INC																		
Piccolo	1	3	8	30	3	Y	1	1	0	7	-2	O	1	6	1	+5	24	5400
Flute	4	3	6	66	6	Y	1	2	1	8	-4	R	3	12	3	+20	24	20700
Clarinet	7	2	7	104	8	N	1	1	0	8	-4	O	4	20	6	+10	24	14100
CORCO GROUP																		
Corco Gamma	3	1	4	54	6	Y	1	0	0	7	-2	O	2	8	2	-10	24	6700
Corco Zeta	6	1	3	80	8	N	1	0	0	6	0	O	4	20	5	-20	24	6400
Corco Iota	9	2	5	120	12	N	1	1	1	7	-4	R	4	25	10	0	24	17500
Corco Mu	12	1	4	176	16	N	1	0	0	7	-2	O	5	30	15	-10	24	14500

See 38.0 for explanation of use.

[41.7] ENERGY EXPENDITURE SUMMARY**Action or Situation:** *Energy Expenditure***Issuing more than 1 Acceleration, Deceleration, or Direction****Change Manoeuvre Command per Phase:**

1 Energy Block if spaceship 1 Energy Unit if Battlecraft.

Missile Manoeuvre:

1 Energy Unit per Manoeuvre Command.

Weave Command:

1 Energy Block if spaceship 1 Energy Unit if Battlecraft.

Activate Spaceship Force Field:

1 Energy Block.

Use Tractor Beam:*Energy Units equal to twice the Energy Burn Rate of the target unit per each Manoeuvre Command.***Replenish Battlecraft energy Levels:***Number of Energy Units needed or desired, up to a maximum of 15.***Manoeuvre Docked Spaceships:***Energy Units equal to sum of both ships Energy Burn Rate.***Particle Burst:**

1 Energy Unit.

Laser Barrage:

2 Energy Units.

Particle Barrage:

3 Energy Units.

If Engine is damaged:

1 Energy Block per each and every Manoeuvre Command.

If Energy Pod is Damaged:

-10 Energy Units each Command Phase.

If Energy Pod is Destroyed:*Total Energy Units expended immediately increased to 144.***[42.6] FIRE RESULTS TABLE****A:** Hit is automatic; no dice roll is conducted. Proceed to the Hit Table.**(-):** Hit is impossible; no die roll is conducted. If the Target Value is greater than 14, a hit with any type of fire is impossible. See 42.6 for detailed explanation of use.

ENERGY UNIT COST	TYPE OF FIRE	TARGET VALUE							
		0	1	2, 3	4, 5	6, 7	8, 9	10, 11	12-14
0	Laser Burst	7	6	5	4	3	2	1	-
2	Laser Barrage	9	8	7	6	5	4	3	1
1	Particle Burst	A	9	7	4	1	-	-	-
3	Particle Barrage	A	A	9	7	4	1	-	-

[39.8] POD ATTRIBUTE CHART

POD TYPE	LASER/PARTICLE WEAPONS	UNGUIDED MISSILE	GUIDED MISSILE	INTELLIGENT MISSILE	MIMS	BATTLE COMMANDS	CIV LEVEL	TARGET PROGRAM	FTL / JUMP	SEE 39.6	NUMBER OF FIRES	ARMOUR
Hunter	Y	2	0	1	0	0	8	-4	Y	X	1	2
Light Weapon	Y	5*	3*	0	0	1	6	-2	N	-	1	1
Heavy Weapon	Y	6	5*	3*	1*	1	7	-4	N	-	1	2
Arsenal	Y	8	7	5*	2*	1	8	-4	N	-	2	2
Battle Comm	N	0	0	0	0	2	8	-6	N	X	1	2
Tractor Beam	N	0	0	0	0	0	7	-	N	X	0	0-2
Tractor Beam	N	0	0	0	0	0	8	-	N	X	0	0-2
Battlecraft	N	0	0	0	0	0	7	-	N	X	0	0-2
Standard Jump	N	0	0	0	0	0	7	-	Y	X	0	0-2
Augmented Jump	N	0	0	0	0	0	8	-	Y	X	0	0-2
Energy	N	0	0	0	0	0	7	-	N	X	0	0-2
All others	N	0	0	0	0	0	V	-	N	-	0	0-2

* Launch of missiles requires Prepare Missile Command in previous Command Phase. See 39.0 for detailed explanation of use.

[42.7] HIT TABLE**DIE Part of Target Hit**

1	Critical Hit. If the unit is a revealed missile, it is destroyed. If the unit is unrevealed (of any type), treat as "no hit".
2	Bridge, Engine. If the unit is a missile (revealed or unrevealed), it is destroyed.
3	Force Field, Pod 8
4	Pod 1, Pod 9
5	Pod 2, Pod 10
6	Pod 3, Pod 11
7	Pod 4, Pod 12
8	Pod 5, Pod 13
9	Pod 6, Pod 14
10	Pod 7, Pod 15

See 42.7 for detailed explanation of use.

[43.5] MISSILE CHART

MISSILE TYPE	CIV LEVEL	VELOCITY RATING	MANEUVER RATING	ENERGY UNITS
GUIDED	6	1	5	7
	7	2	5	9
	8	2	6	10
UNGUIDED	6	2	5	6
	7	2	6	7
	8	2	7	9
MIMS	7	2	6	6
	8	2	7	7

See 43.5 for detailed explanation.

[42.3] RELATIVE VELOCITY CHART

		CURRENT VELOCITY OF FIRING UNIT								
CURRENT VELOCITY OF TARGET UNIT		0, 1	2	3	4	5	6	7	8	9
	0, 1	1*	2	3	4	5	6	7	8	9
2		2	3	4	4	5	6	7	8	9
3		3	4	4	5	6	7	8	9	9
4		4	4	5	6	6	7	8	9	10
5		5	5	6	6	7	8	9	9	10
6		6	6	7	7	8	8	9	10	11
7		7	7	8	8	9	9	10	11	11
8		8	8	9	9	9	10	11	11	12
9		9	9	9	10	10	11	11	12	13

* If the velocity of both units is 0, the relative velocity is 0.

If the compared directions of the target unit and the firing unit do not fulfil the conditions of statements 1 or 2 in 42.3, use this chart to determine the relative velocity of the units. The current velocity of each unit is cross-referenced to yield their relative velocity.

[43.7] MISSILE INTERCEPTION TABLE

A: Interception is automatic; no dice roll is conducted.

See 43.6 for detailed explanation of use.

MISSILE CIV LEVEL	RELATIVE VELOCITY					
	0	1, 2	3, 4	5-7	8-10	11 OR MORE
6	8	6	4	2	1	1
7	9	7	5	3	2	1
8	A	8	6	4	3	2

DELTA VEE SPACESHIP LOG Nr. 2

Spaceship Name

ID

Velocity Rating

Maneuver Rating

Burstor Class

Force Field Class

Target Program

Nr. of Battle Commands

Nr. of Fires

COMPARTMENTS

ARMOR

STATUS

Bridge

Engine

Force Field

Pod 1

Pod 2

Pod 3

Pod 4

Pod 5

Pod 6

Pod 7

Pod 8

Pod 9

Pod 10

Pod 11

Pod 12

UNGUIDED MISSILES

Pod/#

GUIDED MISSILES

Pod/#

ENERGY UNITS

INTELLIGENT MISSILES

Pod/#

ENERGY UNITS

MIMS

ENERGY BLOCKS

ENERGY UNIT TRACK

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

BATTLECRAFT #1

ARMOR

STATUS

Bridge

Engine

ENERGY UNITS

BATTLECRAFT #2

ARMOR

STATUS

Bridge

Engine

ENERGY UNITS

BATTLECRAFT



UNIVERSE

ADVENTURE GUIDE

SPI Universe First Edition 1981 Incorporating additional material from Ares Magazine & other sources.

X. Encounters

[47.0] Creatures

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[51.0] The Orionis System

[52.0] The Players and the Characters

[53.0] Gamemaster's Background

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[55.0] Adventure Afterward

The Universe Adventure Guide is divided into two distinct parts.

Encounters is used by the GM as a continuing source of creatures, non-player characters, spaceship encounters, and accidents that may be used from adventure to adventure. The players should not be allowed to see **Chapter IX**, Encounters, at all. Although they will eventually run out, the encounters presented will continue to be a source of inspiration and ideas for the imaginative GM.

Lost on Laidley is a single self-contained adventure, intended to be played once by the GM and the players during their first session of *Universe*. The Chapter presents a completely generated star system that serves three purposes. It is the setting for *Lost on Laidley*; it is a comprehensive example of world generation; and it may be the backdrop for adventures created by the GM. The players should be allowed to see only Sections 39 and 40 of the adventure. The contents of the remaining Sections will be revealed to them during play. After the adventure has been played, the format of *Lost on Laidley* and the ideas presented within it will continue to guide the GM in the conduct of his own adventures.

X. Encounters

The following creatures, non-player characters, spaceships, and accidents are used by the GM when the appropriate encounter occurs (see 27.0). These lists should not serve as the sole source of encounters; after the GM has run a number of adventures, the supply will dwindle and the GM should start to develop his own encounters (although he may continue to get many ideas from these encounters). Federal encounters are not described in this chapter; they occur in accordance with 27.4.

[47.0] Creatures

The GM should choose one of the following 40 creatures when a creature encounter occurs. He consults the appropriate column (common, rare, or unique) of the Creature Location Chart (27.6) to quickly find which creatures (by identity number) are eligible to appear in the party's environ, and makes the selection from that group. An item-by-item explanation of the creature descriptions follows and detailed **Explanations of Creature Powers** are included after these.

If a creature description indicates that more than one creature is present, the GM should roll one die, two dice or percentile dice (as seems appropriate to the situation) to determine how many creatures there are.

Each creature description provides the GM with a complete and variable explanation of the creature's attributes and is organized as follows:

Identity Nr. Identifies the creature when referring to the Creature Location Chart.

Restrictions. Aside from a creature's environ location, additional restrictions may be placed on the ranges of temperature, gravity, and water availability in which the creature may exist. Specific sites for the creature may also be suggested (see the list of sites in 24.8).

Combat Rating. A quantification, ranging from **1** to **15**, of the creature's brute strength and endurance. Certain creatures are incapable of combat (represented by **na**). The creature's strength when attacking (or defending in close combat) is equal to its Combat Rating times *one half* of its Agility Rating (rounded down). When a creature's Combat Rating is reduced to **0**, it is dead.

Agility Rating. A quantification, ranging from **1** to **15**, of the creature's speed and nimbleness. Certain creatures are immobile (represented by **na**). A creature may move a number of hexes equal to its current Agility Rating each Action Round.

Aggression Rating. A quantification, ranging from **1** to **12**, of the creature's self-preserving and aggressive instincts. A creature's Aggression Rating is used to determine the creature's reaction to the party (see 28.4).

NOTE: The preceding four ratings are listed as a range of three or four possible ratings for each creature, to allow variety when using the same creature type more than once. The GM should choose specific ratings from these ranges for each creature he uses.

Initiative Percentage. A number, ranging from **1** to **20**, representing the creature's awareness and ability to get the jump on its adversaries. The percentage is multiplied by the *Terrain Value* to determine the base awareness chance at the beginning of an encounter.

Composition. The basic stuff of life that the creature is composed of. Types include humanoid, mammalian, Terran-like, protein, carbon, and non-carbon. Each creature has a primary composition and a secondary composition (followed by a percentage chance). The GM may roll percentile dice to see if the creature consists of the secondary composition; otherwise, the primary composition is used. Composition determines how a creature will be affected by drugs and toxins (see 30.7).

Size. A category matching the target size categories in 29.7. These include very small, small, man-sized, large, one-hex, two-hex, and so on. An additional category, *minuscule*, is used for bugs, micro organisms, and other creatures too small to fire a weapon at or see.

Powers. A list of one to five powers the creature may possibly possess, with a percentage chance for each. Upon choosing a creature, the GM rolls percentile dice for each listed power to see if the creature has it. The powers and their variable availability give each creature a unique and ever-changing *modus operandi* (see **Explanations of Creature Powers**). The GM may "mix and match" powers as much as he desires.

Warning. A visual or sensual description to be read to the characters if they and the creature are aware of each other at the moment of encounter. A warning allows the characters to choose a strategy while knowing very little about the appearance and nature of the creature.

Sight. A visual description to be read to the characters if they are aware of a creature that is itself not aware at the moment of encounter, or when they get their first good look at the creature later in the encounter. Sight describes a creature in objective visual terms, but reveals nothing that would not be immediately obvious. A character may not fire at a creature until he has heard this description.

Perception. An analytical description read to the party if a character successfully perceives. Once sight has been established, the party may attempt the perception tasks listed in the life sense skill (10.0) and/or the perception tasks listed in the biology skill (12.0). If the creature has a non-organic composition, the GM may allow a perception task using a scientific skill other than biology. Perception may reveal vulnerable areas of the creature, its intentions towards the party, its method of propulsion, attack, defence, and ingestion, and other information that will aid the party in dealing with the creature.

Examination. A physiological description read to the party if a character successfully conducts examination (see the biology skill, 12.0). Examination may only be attempted if the creature is dead, unconscious or safely restrained. Examination may reveal strange fluids in the creature's interior systems, entirely unique interior systems, valuable chemicals, drugs or poisons in the creature, and whether or not it is edible.

NOTE: Warning, sight, perception, and examination may also reveal any *powers* possessed by the creature. Each power in Explanation of Creature Powers lists one of these four categories and should be revealed to the party when they are read that category description (if they have not been made aware of the power by the creature's actions). The GM may always alter or elaborate upon the wording of a description to better fit the situation. Many creatures do not possess all four description categories; such a creature possesses no attributes of interest that would be revealed in the category.

Certain creatures with bizarre attributes have special procedures for their use listed at the end of their description.

None of the creatures is given an actual name. If the characters are encountering a creature that they already know exists in the area, the GM should provide a name. If they are encountering a previously undiscovered creature, the GM should allow the party to agree upon a name.

CREATURE Nr.1: Man size

Restrictions: Light vegetation; woods; forest. Non-corrosive atmosphere. Gravity of **0.6** to **1.6**. Temperature between **30°** and **100°**.

Combat: 2-3 **AY:** 3-6 **AG:** 1-3 **IN:** na **Initiative:** 2%

Composition: Mammalian; Terran 10%

Powers: Edible 5%; camouflage 5%; heightened smell 30%

• **Warning:** You see a group of large four-legged entities which seem to be busy grazing on the local flora.

• **Sight:** Each entity is two meters long and stands almost two meters high at the shoulder. They look like Terran swine, but have elongated pointed snouts (about 10 to 16 centimetres long). They appear stupid and harmless.

CREATURE Nr. 2: Small

Restrictions: Light vegetation; woods; forest; marsh. Must have non-corrosive atmosphere. Gravity between **0.4** and **1.4**. Temperature between **20°** and **100°**. Near water.

Combat: 1-3 **AY:** 1-2 **AG:** 2-3 **IN:** na **Initiative:** 2%

Composition: Mammalian; Terran 40%

Powers: Dart shooting 100%; edible 10%; heightened hearing 30%; poison attack 35%; camouflage 5%

• **Warning:** You hear a crashing and rooting in the nearby undergrowth.

• **Sight:** A meter-long hedgehog-like entity covered in 15-20cm long quills. Locomotion is by slithering on belly since creature is legless.

• **Perception:** Entity has anteater-type mouth and single eye. Shoots quills at threatening objects or entities if frightened.

• **Examination:** Belly is not coated with quills. Entity is helpless if turned on back since powerful locomotive muscles are on its underside only.

CREATURE Nr. 3: Minuscule

Restrictions: Marsh; jungle. Must have non-corrosive atmosphere. Gravity between **0.4** and **2.0**. Temperature above **50°**. **Combat:** na **AY:** 8-10 **AG:** 10-12 **IN:** na **Initiative:** 15%

Composition: Terran; protein 20% **Powers:** Camouflage 100%; flight 100%; poison attack 100%; radar sense 60%; swarm mind 30%

• **Warning:** You notice that members of your party not wearing body armour are acting strangely, as if they are suffering from some illness, though the exact nature of the problem is not clear.

• **Perception:** The illness will be diagnosed as a type of poison (virulent, viral, paralytic, or psychotic, but not a spore) and will be connected with a one-inch long insect present in great numbers.

• **Examination:** Insect has powerful quarter-inch sting in tail containing poison.

CREATURE Nr. 4: 2-hex

Restrictions: Light vegetation; woods; marsh; forest; jungle. Normal atmosphere only. Gravity of 0.6 to **2.5**. Temperature between 50° and 150°.

Combat: 8-10 **AY:** 6-8 **AG:** 9-12 **IN:** na **Initiative:** 15%

Composition: Terran; protein 10%

Powers: Chitinous carapace 90%; tunnelling 65%; entrapment 35%; poison attack 80%; regeneration 20%

• **Warning:** You spot segmented centipede-like entity 8 meters or more in length and 2 meters thick.

• **Sight:** The entity has 8 to 10 body segments, a score of triple-jointed legs (with broad softly padded feet) and a set of mandibles.

• **Examination:** The padded feet can be used as scoops to assist in rapid tunnelling. Mandibles are the prime weapons.

CREATURE Nr. 5: Small

Restrictions: Light vegetation; woods; marsh; forest; jungle. Non-poisonous, non-corrosive atmosphere. Gravity of **0.6** to **1.6**. Temperature between **100°** and **175°**.

Combat: 4-6 **AY:** na **AG:** 3-5 **IN:** na **Initiative:** 3%

Composition: Protein; Terran 5%

Powers: Adhesive secretion 100%; poison 100%; radar sense 20%; regeneration 5%; edible 60%

• **Warning:** You observe an odd, cactus-like form of vegetation.

• **Sight:** Vegetation is less than a meter tall and 20 centimetres in diameter and appears to be entirely smooth-skinned.

• **Examination:** Plant has sweet centre favoured by local fauna who are induced to steer clear of it only by its defences, a sticky substance that makes mouths adhere to it and a poison which it then secretes.

CREATURE Nr. 6: Man-sized

Restrictions: Light vegetation; woods. Any atmospheres other than thin. Gravity of **0.4** to **1.2**. Temperature between **75°** and **150°**. Water must be readily available.

Combat: 4-7 **AY:** 8-10 **AG:** 3-5 **IN:** na **Initiative:** 2%

Composition: Mammalian; Terran 20%

Powers: Swarm mind 100%; edible 10%; poison attack 80%

• **Warning:** You observe a small herd (6-18) of what appear to be four-legged lizards. They are grazing on local flora.

• **Sight:** Two additional legs (total of 6) partially retractable and tipped with sharp claws as main defence. Stands one meter tall and about 2 meters in length. Forked tail.

• **Perception:** Entity is very fast for herbivore.

• **Examination:** Entity is omnivore (*not* herbivore) with retracting fangs for tearing meat. Herd group moves and acts as one. Usually eat only flora and carrion, but will attack for meat if starving.

CREATURE Nr. 7: Very small

Restrictions: Light vegetation; woods; forest; marsh; jungle. Normal or poisonous atmosphere. Gravity of **0.6** to **1.2**. Temperature between **50°** and **200°**.

Combat: 1-2 **AY:** 10-12 **AG:** 4-6 **IN:** na **Initiative:** 5%

Composition: Terran; protein 30%

Powers: Edible 5%; swarm mind 60%; poison attack 5%; flying 100%

• **Warning:** You hear a low droning buzz.

• **Sight:** A score of 20-centimeter long insectile creatures much like dragonflies.

• **Perception:** Entities are slightly territorial, but herbivorous.

CREATURE Nr. 8: Large

Restrictions: Woods; forest. Non-poisonous atmosphere. Gravity of **0.6** to **1.6**. Temperature of **50°** to **100°**. Must be near water source.

Combat: 7-12 **AY:** 8-10 **AG:** 10-12 **IN:** na **Initiative:** 15%

Composition: Mammalian; Terran 30%

Powers: Heightened vision 90%; heightened smell 100%; camouflage 80%

• **Warning:** You have a feeling that you are being watched.

• **Sight:** Hairless, otherwise wolf-like 3-meter long entity with prehensile tail. Has long "whiskers" or feelers around eyes.

• **Perception:** Mouth contains large sharp fangs. Entity is carnivore. Will not flee or otherwise leave.

• **Examination:** "Whiskers" are sense organs used to smell prey. Entity has no "nose" in Terran sense...just bare organs.

CREATURE Nr. 9: Man sized

Restrictions: Volcanic; crater; barren; light vegetation. Thin atmosphere only. Gravity of 0.2 to **0.8**. Temperature less than **200°**.

Combat: 6-8 **AY:** 6-8 **AG:** 7-10 **IN:** na **Initiative:** 20%

Composition: Mammalian; Terran 15%

Powers: Radar sense 100%; poison attack 100%; poison 10%

• **Warning:** You hear a horrible sucking sound originating nearby.

• **Sight:** A short six-legged, hairless dog-like entity. Black skin. Headless, with neck ending in muscular mouth-like opening. Entity stands 1 Vi meters at the shoulder and is 2 meters long.

• **Examination:** Entity is toothless. Instead, strong muscles crush foreign matter in throat while poisonous secretion breaks down fibres. Carnivorous. Retractable claws for pinning prey on front and rear legs.

CREATURE Nr. 10: Small

Restrictions: Water. Lake or pond only. Must have atmosphere. Gravity between **0.4** and **1.6**. Temperature between **75°** and **150°**.

Combat: 5-8 **AY:** 8-10 **AG:** 3-5 **IN:** na **Initiative:** 1%

Composition: Terran; protein 20%

Powers: Heightened hearing 100%; poison 90%; reflective carapace 10%

• **Warning:** You observe a small blur of red out of the corner of your eye.

• **Sight:** Small amphibious saurian about a meter long with 8 legs, tail, and feathery ridges along back.

Covered in iridescent red scales.

• **Perception:** Entity is omnivorous, timid, and reclusive.

• **Examination:** Feathery ridges are sense organs. Feet are webbed with clear membranes.

CREATURE Nr. 11: Large

Restrictions: Crater; barren; light vegetation. Non-corrosive, non-poisonous atmosphere. Gravity of **0.4** to **1.6**. Temperature between **75°** and **200°**. Usually found near water.

Combat: 2-4 **AY:** 1-3 **AG:** 8-10 **IN:** na **Initiative:** 5%

Composition: Terran; protein 20%

Powers: Camouflage 50%; edible 30%; heightened vision 40%; poison discharge 80%

• **Warning:** You observe a large, bird-like entity approximately 4 meters high.

• **Sight:** Entity appears to be watching party. Has short wings, feather-like skin, four legs, and large comb.

• **Perception:** Size of wings indicates that entity is flightless. Teeth in beak-like mouth indicate carnivore or omnivore.

• **Examination:** Reveals poison discharge as gaseous cloud from anal orifice (where appropriate).

CREATURE Nr. 12: 19 hex

Restrictions: Water. Temperature between **50°** and **150°**. Large body of water only. May be submerged or on surface.

Combat: 12-15 **AY:** 12-15 **AG:** 10-12 **IN:** na **Initiative:** 20%

Composition: Protein; Terran 20%

Powers: Adhesive secretion 30%; radar sense 50%; regeneration 40% (not centre hex); inky discharge 30%

• **Warning:** A large undulating mass under your party is rising rapidly toward you.

• **Sight:** A collection of squid-like tentacles joined at the centre and about 25 meters in diameter.

• **Perception:** Has 30 12-meter long suckered tentacles. No body at centre point, but lidless eyes and sharp beaks are at the tip of each tentacle. Presents man-sized target in each hex occupied (due to open structure). Obviously very dangerous.

• **Examination:** Small, powerful heart-like organ at centre. Nerve collections at end of each tentacle form brain of sorts.

CREATURE Nr. 13: Small

Restrictions: Air. Requires non-corrosive atmosphere and moisture. Gravity of **0.2** to **1.0**. Temperature between **50°** and **200°**.

Combat: 1-2 **AY:** 1-2 **AG:** 1-2 **IN:** na **Initiative:** 10%

Composition: Protein; carbon 40%

Powers: Poison discharge 100%; multiple attack 100%; kinetic absorption 10%; unknown propulsion 5%; poison 15%

• **Warning:** What appear to be windblown puff-balls are headed in your direction.

• **Sight:** Each ball is 50 centimetres in diameter. Balls have fuzzy appearance.

• **Perception:** Balls are loose aggregations of seedpods which are discharged when in presence of energy source (including body heat). Entity itself is a floating plant.

CREATURE Nr. 14: Large

Restrictions: Barren; crater; light vegetation. Must have atmosphere. Gravity of **0.4** to **2.0**. Any temperature. Sunlight.

Combat: na **AY:** na **AG:** na **IN:** na **Initiative:** na

Composition: Protein; carbon 20%

Powers: Edible 10%

• **Sight:** An artichoke-like plant 3 meters tall and 4 meters in diameter. Leaves will be open and flat on ground during daylight, but close up to form perfectly sealed chamber at night.

CREATURE Nr. 15: Large

Restrictions: Air. Normal atmosphere only. Gravity of **0.2** to **1.0**. Temperature above **100°**.

Combat: 4-7 **AY:** 10-11 **AG:** 5-7 **IN:** na **Initiative:** 15%

Composition: Protein; Terran 45%

Powers: Unknown propulsion 100%; multiple attack 100%; radar sense 60%; balance disruption 10%

• **Warning:** You hear a rushing noise and a flapping of wings.

• **Sight:** A 15-meter long "flying" reptile-like entity. Wings are used mostly to guide entity, seldom flapped. Span of 5 meters.

• **Perception:** Two orifices on leading edge of wings near juncture with torso. Two retracting talons on underside.

• **Examination:** Orifices are actually a biological "supercharger" used to maintain speed and altitude. Entity is a carnivore with large needs since energy for the "supercharger" is provided by it's body.

CREATURE Nr. 16: Large

Restrictions: Woods flat; woods hills; light vegetation flat; light vegetation hills; ice flat; ice hills. Any non-poisonous atmosphere.

Gravity of **0.6** to **1.6**. Temperature between **0°** and **90°**.

Combat: 3-6 **AY:** 3-5 **AG:** 3-5 **IN:** na **Initiative:** 5%

Composition: Protein; Terran 40%

Powers: Edible 80%; heightened smell 90%; invisibility 100%

• **Warning:** You observe a group of herd animals (between 10 and 200) grazing on the local vegetation. Each entity weighs about one ton apparently and measures close to 3 meters in length. They appear to be antelope-like, but are six-legged and not horned.

• **Sight:** Entities will always become invisible when frightened.

CREATURE Nr. 17: Man-sized

Restrictions: Any environ. Gravity between **0.2** and **1.2**. Must have non-poisonous, non-corrosive atmosphere.

Temperature between **0°** and **75°**.

Combat: 7-9 **AY:** 6-9 **AG:** 9-12 **IN:** na **Initiative:** 20%

Composition: Protein; Terran 40%

Powers: Entrapment 100%; heightened vision 60%; poison attack 70%; reflective carapace 10%; adhesive secretion 80%

• **Warning:** You notice a camouflaged pit 5 meters deep and covered with a sticky web-like film. If unaware, one random member of the party falls into the pit.

• **Sight:** The inside of the pit is covered with a sticky substance. Bottom contains three tunnels (each one meter in diameter). Sound of skittering in darkness.

• **Perception:** Occupant is a 2-meter long insectile-appearing entity much like a wingless wasp or hornet.

• **Examination:** Creature inhabits tunnels created by some departed life-form. Uses as both home and trapping device. Will leave tunnels if it thinks it can make a kill.

CREATURE Nr. 18: Man sized

Restrictions: Any environ. Found only in poisonous or corrosive atmosphere. Gravity of **0.2** to **0.8**. Temperature between **50°** and **150°**.

Combat: 6-8 **AY:** 2-4 **AG:** 5-7 **IN:** na **Initiative:** 2%

Composition: Carbon; non-carbon 40%

Powers: Radar sense 20%; acid 100%; adhesive secretion 40%; unknown propulsion 20%.

• **Warning:** You see a jellyfish-type creature 2 meters in diameter. It is transparent and the internal organs are clearly visible.

• **Sight:** Entity's spherical shape is broken by two pseudopods, each about 2 meters long. Each pseudopod has a ring of black dots on it. Entity glistens as if wet.

• **Perception:** Black dots appear to be sense organs of some sort. They are coated with some sort of secretion.

CREATURE Nr. 19: Very small

Restrictions: Woods; forest; marsh. Non-poisonous, non-corrosive atmosphere. Gravity of **0.4** to **1.2**. Temperature between **50°** and **100°**. Only found near water (large pond or small lake).

Combat: 1-2 **AY:** 7-9 **AG:** 4-5 **IN:** 5-7 **Initiative:** 15%

Composition: Protein; Terran 50%

Powers: Camouflage 100%; radar sense 10%; edible 20%; mind control 90%; psionic communication 5%

• **Warning:** A character with a Mental Power of 4 or greater feels that he is being observed.

• **Sight:** The source of the emanations appears to be a small (1-foot long) toad-like entity which is barely discernible. Entity has three legs, skin which changes colour to blend with surroundings. Appears to have tufted antennae along backbone.

CREATURE Nr. 20: Small

Restrictions: Woods; forest; marsh. Non-corrosive atmosphere. Gravity of **0.4** to **1.0**. Temperature between **75°** and **125°**. **Combat:** 7-11 **AY:** 9-12 **AG:** 10-12 **IN:** 1-3 **Initiative:** 20%

Composition: Mammalian; Terran 30%

Powers: Entrapment 85%; camouflage 100%; heightened smell 90%

• **Warning:** You hear a rustling noise from the trees above.

• **Sight:** A 1.5 meter tall monkey-like entity with two long tentacles (2 meters each) instead of arms, a circular, sharp-toothed mouth, single central eye. Hairless. Skin appears to change colour.

CREATURE Nr. 21: 4 hex

Restrictions: Volcanic hills; volcanic mountain; crater hills; crater mountain; crater flat; barren flat; barren hills; barren mountain. Must have atmosphere. Gravity **0.2** to **0.8**. Temperature between **60°** and **200°**.

Combat: 12-15 **AY:** 9-12 **AG:** 9-12 **IN:** na **Initiative:** 20%

Composition: Protein; carbon 5%

Powers: Tunnelling 100%; entrapment 40%; poison attack 100%; camouflage 50%; regeneration 30%

• **Warning:** The earth begins to rumble and lose solidity.

• **Sight:** A gigantic (20-meter long, 7-meter thick) worm-like entity. Segmented. 5-meter maw at one end contains ridged muscles for crushing prey or defence.

• **Perception:** Maw also has poisonous digestive juices secreted from sacs inside muscle ridges. Heavily-lidded visual sensor located inside maw (protected by muscle).

CREATURE Nr. 22: 2 hex

Restrictions: Water. Must have some atmosphere. Gravity of **0.5** to **2.5**. Temperature between **50°** and **125°**.

Combat: 6-8 **AY:** 7-9 **AG:** 4-6 **IN:** na **Initiative:** 15%

Composition: Protein; Terran 20%

Powers: Radar sense 80%; energy ingestion 100%; balance disruption 100%; acidic circulatory fluid 70%; camouflage 15%

• **Warning:** You experience a sense of disorientation and your sensors begin to give off "jangled" readings indicating a large power source nearby.

• **Sight:** A 9-meter long by 2-meter thick eel-like entity without apparent head or tail. Glows slightly.

• **Perception:** Entity "eats" and stores energy (like a large battery). Retractable eye stalks at both ends used for guidance.

CREATURE Nr. 23: Large Restrictions: Barren flat; barren hills; light vegetation flat; light vegetation hills; crater flat. Non-poisonous, non-corrosive atmosphere. Gravity of **0.4** to **1.0**. Temperature between **20°** and **80°**.

Combat: 4-7 **AY:** 7-10 **AG:** 4-6 **IN:** na **Initiative:** 6%

Composition: Protein; Terran 5%

Powers: Radar sense 80%; poison 100%; camouflage 5%; psionic communication 60%; web shooting 5%

• **Warning:** You observe a large, many-legged entity skittering away from you.

• **Sight:** Entity appears to be a giant spider-like being, with a dozen legs meeting in a smooth, round body. Each leg is about 3 meters in length.

• **Perception:** Entity is actually two species. Spider-like entity has low-level nervous system. Higher level system is provided by symbiotic moss growing on body. Moss is poisonous. "Spider" is herbivore.

CREATURE Nr. 24: Man sized

Restrictions: Any environ containing a large body of water nearby (ocean, lake, or large pond). Must have atmosphere. Gravity of **0.4** to **1.4**. Temperature between **50°** and **150°**.

Combat: 4-6 **AY:** 5-8 **AG:** 3-5 **IN:** 1-3 **Initiative:** 10%

Composition: Protein; Terran 5%

Powers: Capture 80%; inky discharge 40%; poison attack 10%; camouflage 100%

• **Warning:** A scaled humanoid appears before you.

• **Sight:** Entity has webbed feet, gills, bluish scales, and is 3 meters tall.

• **Perception:** Entity is adapted to both surface atmosphere and water. Hands have retractable claws. Teeth indicate entity is a carnivore.

CREATURE Nr. 25: Large

Restrictions: Found only in the absence of atmosphere.

Combat: 10-12 **AY:** 8-10* **AG:** 6-8 **IN:** 5-7 **Initiative:** 20%

Composition: Carbon; non-carbon 40%

Powers: Unknown propulsion 75%; energy drain 100%; energy blast 40%

• **Warning:** You see a floating red, pulsing light with a radius of about 3 meters. It gives off a constant discharge of heat (350°) and radiation.

• **Perception:** All equipment being drained of power by entity.

• **Examination:** Entity views energy sources as "life." Draws no distinction between man and machine. Will neither attack nor flee.

*Agility is "na" if entity does not have unknown propulsion.

CREATURE Nr. 26: Small

Restrictions: Air. Any atmosphere. Gravity between **0.2** and **0.8**. Temperature less than **200°**.

Combat: na **AY:** 4-7 **AG:** 2-4 **IN:** 3-5 **Initiative:** 5%

Composition: Carbon; protein 30%

Powers: Unknown propulsion 100%; radar sense 30%; psionic communication 20%; poison discharge 50%; heightened hearing 70%

• **Warning:** You see a balloon-like object in the distance.

• **Sight:** Object is living entity composed of gasbag body and half a dozen 2-foot trailing tendrils grouped on underside.

• **Perception:** Being maintains altitude via gases produced by body and stored inside entity. Same gases can be vented out underside as means of protection having same effects as poison.

• **Examination:** Tiny tendrils are sensors and manipulative appendages at the same time. Entity is simple-minded floating plant which converts air and sunlight into gases to feed itself.

CREATURE Nr. 27: Large

Restrictions: Volcanic; crater; barren. Must have some atmosphere. Gravity of **0.6 to 1.6**. Temperature between **50°** and **250°**.

Combat: 8-10 **AY:** 4-6 **AG:** 9-12 **IN:** 2-4 **Initiative:** 20%

Composition: Non-carbon; carbon 20%

Powers: Camouflage 100%; entrapment 40%; armoured carapace 65%; tunnelling 100%; acid 100%

- **Warning:** You catch a movement out of the corner of your eye.
- **Sight:** Movement generated by nearby rock. Appears to be somehow animated. Rock is 3 meters in diameter by 1 meter high.
- **Perception:** Rock is living entity capable of disappearing by burrowing into and eating rock.
- **Examination:** Emily secretes acid which "digests" rock. Entity is apparent creator of nearby tunnel system.

CREATURE Nr. 28: Small

Restrictions: Air. Some atmosphere required. Any gravity. Any temperature.

Combat: na **AY:** na **AG:** na **IN:** na **Initiative:** 0%

Composition: Carbon; non-carbon 30%

Powers: Swarm mind 100%; energy absorption 100%; energy ingestion 5%; energy drain 10%; kinetic absorption 100%

- **Warning:** The air is increasingly filled with sticky scraps of some diaphanous membrane.
- **Sight:** Membrane is crossed with tiny silver filaments that catch sunlight.
- **Perception:** Scraps are sometimes blown apart or together by the wind. Larger scraps pulse with light. Appear to absorb energy.
- **Examination:** The membranes are cells which when separate are harmless, if annoying. When the number which blow together reaches a critical mass (several thousand), they form a single entity which *may* even develop a rudimentary intelligence.

CREATURE Nr. 29: Man-sized

Restrictions: Any land environ. Gravity of **0.2 to 0.6**. Non-corrosive atmosphere.

Combat: 6-8 **AY:** 6-9 **AG:** 8-10 **IN:** 2-4 **Initiative:** 10%

Composition: Terran; mammalian 20%

Powers: Heightened visual sense 60%; adhesive secretion 70%; flying 100%

- **Warning:** You observe a large bat-like creature about 2 meters tall with a wingspan of 4 meters.
- **Sight:** The entity has a somewhat humanoid torso and face, but no arms and long (2 meter) tendrils instead of legs. The initial batlike appearance is a result of the large leathery wings.
- **Perception:** Entity has compound eyes, is carnivorous, aggressive, and seemingly intelligent.

CREATURE Nr. 30: Minuscule

Restrictions: Any environ except water. Must have atmosphere. Only encountered if party are not wearing expedition suits or one or more such suits have been punctured.

Combat: na **AY:** na **AG:** 7-8 **IN:** 8-10* **Initiative:** 20%

Composition: Protein; Terran 10%

Powers: Unknown propulsion 100%; radar sense 80%; psionic communication 40%; mental attack 10%; mind control 100%

- **Warning:** One or more party members begin to behave erratically, picking fights with others in the party, breaking equipment, and so forth.
 - **Perception:** Disturbed party members infected by foreign organism.
 - **Examination:** Attacking organism identified as almost microscopic tick-like entity of malevolent intent. Never attacks. Uses mind control instead.
- *Entity will possess intelligence only if psionic communication is possessed.

CREATURE Nr. 31: Man sized

Restrictions: Any environ. Only thin atmosphere or no atmosphere. Any gravity. Any temperature.

Combat: 10-13 **AY:** 9-12 **AG:** 5-8 **IN:** na **Initiative:** 5%

Composition: Carbon; non-carbon 50%

Powers: Unknown propulsion 100%; energy ingestion 100%; energy blast 20%; energy drain 60%; radar sense 100%

- **Warning:** A sphere of plasma appears. It glows intensely from inner light.
- **Sight:** The sphere is perfectly rounded and undulates slightly as it moves. It has a diameter of 2 meters. Floats several centimetres from earth. Rotates slowly clockwise.
- **Perception:** Area within 5 meters of entity is very hot (in terms of both thermal and radiation effects).
- **Examination:** Radiation lingers over area after passage.

CREATURE Nr. 32: Small (pod)

Restrictions: Light vegetation; woods. Non-poisonous, non-corrosive atmosphere. Gravity of **0.6 to 1.8**. Temperature less than **200°**.

Combat: 6-8 **AY:** 5-7* **AG:** 9-12 **IN:** 5-7 **Initiative:** 10%

Composition: Protein; carbon 40%

Powers: Unknown propulsion 10%; swarm mind 80%; mind control 100%; psionic communication 90%; multiple attack 100%

- **Warning:** Character with Mental Power of 4 or greater will experience a premonition of evil so strong as to be a physical force.
- **Sight:** A patch of tangled plants containing watermelon-like pods about a meter long. Plants are knee high.
- **Perception:** Psions will perceive this as the source of the "evil" emanations.
- **Examination:** Pods weigh 35 pounds. Clear skin reveals seed-like forms inside. Pods attack by bursting and squirting seeds 3 meters in all directions. "Seeds" fold out upon leaving pod and take on a manta ray form. Attach to spinal column from whence they can control the entity to which they are affixed.
- Agility refers to "seeds" only.

CREATURE Nr. 33: Large**Restrictions:** Woods; forest; jungle. Must have atmosphere. Gravity of **0.6** to **1.2**. Temperature between **50°** and **100°**. **Combat:** 9-13**AY:** 9-13* **AG:** 11-12 **IN:** 6-8 **Initiative:** 20%**Composition:** Protein; Terran 20%**Powers:** Heightened smell 100%; adhesive secretion 80%; edible 10%; psionic communication 20%; vegetation control 5%

- **Warning:** You see what appears to be a giant mushroom about 3 meters tall. A character with a Mental Power of 4 or greater will experience a feeling of being watched.

- **Sight:** Object pulses slightly and is covered with secretion.

- **Perception:** Tentacle or appendage hidden within broad head.

- **Examination:** Appendage is eating orifice on neck-like muscle which leaps out to devour prey. Appendage range is 5 meters (one hex).

*Refers to neck orifice only; the plant itself is not mobile.

CREATURE Nr. 34: Small**Restrictions:** Light vegetation; woods; forest. Non-corrosive, non-poisonous atmosphere. Temperature between **30°** and **100°**.**Combat:** 5-8 **AY:** 4-7 **AG:** 6-8 **IN:** 8-12 **Initiative:** 20%**Composition:** Humanoid; mammalian 5%**Powers:** Invisibility 100%; illusions 90%; mind control 60%; psionic communication 90%; mental attack 30%

- **Warning:** A character with Mental Power of 4 or greater feels that he is being watched.

- **Sight:** When visible, appears to be a tiny humanoid one meter tall with large (8-inch long) pointed ears. Has two tentacles instead of arms.

CREATURE Nr. 35: Large**Restrictions:** Woods; forest; jungle; marsh. Non-poisonous, non-corrosive atmosphere. Gravity of **0.6** to **2.6**. Temperature between **50°** and **100°**.**Combat:** 9-12 **AY:** 4-6 **AG:** 6-8 **IN:** 2-4 **Initiative:** 10%**Composition:** Mammalian; Terran 20%**Powers:** Heightened smell 60%; tunnelling 80%; radar sense 50%

- **Warning:** You feel as though you are being watched.

- **Sight:** A gigantic, 3-meter tall shaggy teddy bear-like creature with 6 arm-like appendages (also serving as legs). Has large, toothy maw. Eyeless.

- **Perception:** Shape of teeth indicates that entity is omnivorous.

CREATURE Nr. 36: Small**Restrictions:** Air. Must have atmosphere. Gravity **0.2** to **1.2**.**Combat:** na **AY:** 12-15 **AG:** 6 **IN:** 10-12 **Initiative:** 10%**Composition:** Carbon; non-carbon 20%**Powers:** Unknown propulsion 100%; Psionic communication 60%; heightened hearing 30%; immaterial 100%

- **Warning:** One character cannot get an unknown tune out of his head.

- **Sight:** You see a murky gas cloud from which emanates a strange, almost musical sound.

- **Perception:** Gas cloud is non-hostile entity composed of energy.

- **Examination:** Entity dissipates if stunned.

CREATURE Nr. 37: Man sized**Restrictions:** Non-volcanic land environ. Non-corrosive, non-poisonous atmosphere. Gravity of **0.4** to **1.6**. Temperature between **40°** and **120°**.**Combat:** 8-12 **AY:** 10-12 **AG:** 10-12 **IN:** 2-4 **Initiative:** 5%**Composition:** Humanoid; mammalian 40%**Powers:** Chameleon 100%; illusions 80%; heightened smell 90%; mind control 10%; Psionic communication 20%

- **Warning:** One or more members of your party have strangely disappeared from sight.

- **Sight:** In own shape, entity is 2-meter tall humanoid covered with long silken fur. Head features pointed ears, muzzle (with rows of sharp teeth) and whisker-like sensors much like cat whiskers. Long tail emanates from lumbar region. Hands and feet are partly tentacle, partly clawed (retractable).

- **Examination:** Entity is carnivore which will stalk party, adopting forms of members already killed until all are dead. Entity will then return to kills, eating some and stashing others. Entity is unable to communicate unless psionic communication is possessed and will have only the physical appearance of an object it is simulating, not its mental powers.

CREATURE Nr. 38: 2 hex**Restrictions:** Land environs only. Non-corrosive atmosphere. Gravity **1.2** to **2.6**. Temperature **100°** to **250°**.**Combat:** 11-13 **AY:** 1-3 **AG:** 6-9 **IN:** 9-12 **Initiative:** 5%**Composition:** Terran; protein 30% **Powers:** Armoured carapace 40%; mind control 5%; heightened vision 5%

- **Warning:** A large shape moves at the edge of the party's sight.

- **Sight:** You observe a large humanoid approximately 12 meters high. Though the torso, head, and arms seem Terran enough, the entity has four legs radiating from its torso in a spider-like manner. Primitive clothing covers the torso.

- **Perception:** Clothing hides the fact that torso structure is somewhat arachnid and features carapace.

Creature will always communicate on an "ignore" result.

CREATURE Nr. 39: 2 hex**Restrictions:** Any land environ. Must have atmosphere. Gravity of **0.4** to **0.8**. Temperature between 0° and **150°**.**Combat:** 12-15 **AY:** 10-12 **AG:** 10-12 **IN:** 10-12 **Initiative:** 20%**Composition:** Terran; protein 20%**Powers:** Capture 90%; regeneration 60%; heightened vision 50%; psionic communication 20%; Chitinous carapace 100%• **Warning:** You hear an oddly pitched humming sound.• **Sight:** Entity is a 3-meter tall, 8-meter long insectile being much like a praying mantis. Has large, strong mandibles as primary weapon. Front legs appear to have almost humanoid gripping members. Has compound eye.• **Examination:** Entity is carnivorous and will either attempt to capture party members for food or will rip open their bodies and use them as repositories for larvae.**CREATURE Nr. 40:** Man size**Restrictions:** Any land environ. Any type of atmosphere. Gravity of **0.4** to **1.0**. Temperature between **50°** and **250°**. **Combat:** 2-3 **AY:** 11-12 **AG:** 5-8 **IN:** 7-10 **Initiative:** 15%**Composition:** Protein; carbon 5%**Powers:** Swarm mind 100% psionic communication 60%; mental attack 25%; mind control 80%; poison discharge 100%• **Warning:** You see a glowing dust cloud hanging in the air.• **Sight:** Cloud is filled with sparkling lights. Appears gaseous.• **Perception:** Lights are actually tiny firefly sized insectile entities, which flit about within a cloud of gases that they discharge in flight. Gases are poisonous.• **Examination:** If a character with a Mental Power of 4 or greater is within 5 meters (same hex) of the cloud, one or more of the entities which make up the cloud will land on him and lay its eggs. Treat eggs as acidic.**EXPLANATIONS OF CREATURE POWERS**

A power improves or specializes a creature's attributes, giving it advantages when interacting with characters.

The GM secretly determines which powers a creature will possess by rolling percentile dice once for each power listed in the creature's description. The GM may use any of these powers in a logical manner when designing his own creatures and may introduce new powers of his own devising to the already existing creatures. Certain powers provide a creature with psionic skills, like those available to the characters. A creature that uses such powers may also suffer psionic backlash (see 10.3). Explanations of all creatures powers follow, in alphabetical order. Each power lists one of the four creature description categories (warning, sight, etc.). Unless the power is used in such a way that it is immediately obvious to the players, it is revealed to them when they are read the listed description.

Acid (Perception). Substance on some part of creature's exterior will eat through expedition suit in one Action Round and, at the GM's discretion, through armour at a slow rate. May be combined with poison (see below).**Acidic Circulatory Fluid** (Examination). Identical to acid; released if creature is punctured.**Adhesive Secretion** (Perception). Skin, suckers, or web strands contain sticky substance which easily restrains any individual the creature attacks. Hits received by a character attacked by a creature with adhesive secretion and *capture* are not reduced as listed in the capture description.**Armoured Carapace** (Perception). Armour with beam projectile Defence Strengths ranging from 3 to 5.**Balance Disruption** (Examination). Ambient energy emissions that scrambles the human sense of balance. Roll one die; every character with a Mental Power Rating less than the die result immediately suffers the effects of shock (see 30.3). This is not considered an attack; it occurs automatically during the creature's turn of the Action Round.**Camouflage** (Sight). The creature may only be seen at half the normal range or less. Add 5 to the creature's Initiative Percentage.**Capture** (Perception). When attacking a character, reduce any hits received by the character by 3. If the adjusted number is 0 or higher, the character is considered restrained by the creature (suffering the adjusted number of hits), and remains restrained until the creature is stunned, passes out or dies.**Chameleon** (Perception). The creature may assume the form of any living entity within its sight. If the party is unaware of the creature, it may appear to the party as one of their own when they see it. The creature's Combat and Agility Ratings are *halved when* assuming another form. One Action Round is required for the creature to change shape (it may not attack or move while changing).**Chitinous Carapace** (Perception). Armour with a projectile Defence Strength ranging from 3 to 5 and a Beam Defence Strength of 1.**Dart Shooting** (Perception). May attack by projecting quills or other natural projectiles. Its range (in hexes) equals one half of its Combat Rating (rounded down). The Hit Strength of a dart equals half the creature's Combat Rating minus the range.**Edible** (Examination). Fit for consumption by humans.**Energy absorption** (Examination). Stun weapons and beam weapons have no effect on the creature.**Energy Blast** (Perception). Emits powerful blasts of heat, electricity or radioactivity. The creature may attack one character at a range (in hexes) equal to its Combat Rating. The attack is resolved by subtracting the range from the creature's Combat Rating (only). Roll one die, add the modified rating to the result, and locate the sum on the Hit Table to determine the hits received by the character. Armour may be used to aid defence.

Energy Drain (Perception). The creature lives off the surrounding electrical energy. At the beginning of each Action Round, one item belonging to the party that is within a number of hexes of the creature equal to or less than its Combat Rating immediately loses all its power. This will affect beam weapons, scientific equipment, and any other electrical/electronic devices. The creature will always move toward such items.

Energy Ingestion (Perception). The Combat Rating of the creature is *increased* by the number of hits it receives. The Agility Rating is reduced normally. The first time the creature ingests energy, its Aggression Rating is increased to **12**. The creature is killed if it is attacked with a stun weapon.

Entrapment (Perception). The creature has constructed or is able to construct simple traps to capture unwary passers by. A creature with tunnelling creates camouflaged pits. A creature with web shooting creates a net or large web. If the party is *unaware* of such a creature, the GM should have one character (determined at random) fall into one of the traps.

Flight (Sight). The creature is winged and capable of flight. When flying, its Movement Rate is three times its current Agility Rating. Its normal Agility Rating is always used when calculating its strength. If the creature's Agility Rating is reduced to less than half its original value, the creature can no longer fly.

Heightened Hearing/Smelling (Examination). The creature may see twice as far as humans can. It sees as well in darkness as humans do in the light. The creature is never unaware during an encounter and no character may successfully perform an ambush skill task against it.

Illusions (Perception). May create immaterial, harmless but entirely convincing visual illusions of anything within its sight. The creature may not move or attack while doing so.

Immaterial (Perception). The creature possesses no solid form and is not affected by projectile fire, beam fire, poisons, or close attack. It is visible and may suffer the effects of a stun weapon. The GM may allow it to pass through solid objects.

Inky Discharge (Examination). Emits opaque substance that creates total darkness, Emission counts as the creature's attack for one Action Round. The discharge spreads one hex in every direction each Action Round (two hexes in Round of Emission). Usually restricted to underwater use.

Invisibility (Perception). The creature is not placed on the Action Display. The GM notes the position and movement of the creature in his mind, informing the characters when the creature performs any visible actions. The creature is not *immaterial*, it may be affected by attack and may not move through solid objects.

Kinetic Absorption (Perception). Projectile weapons and blows have no effect on the creature.

Mental Attack (Perception). If the creature is not moving, it may attack by directing a blast of psionic energy at one character. Roll one die. If the result is greater than the character's Mental Power Rating, the character is stunned for a number of Action Rounds equal to the difference. **Exception:** If a **10** is rolled, the character's Endurance Rating is immediately reduced to 0 (he passes out). If a 1 is rolled, roll percentile dice, locate the result on the psionic Backlash Table (10.4) and apply the outcome to the creature.

Mind Control (Examination). The creature possesses this skill at a level ranging from **6** to **10** and a Mental Power Rating of **4** to **7** (see 10.0).

Multiple Attack (Perception). May attack each and every character within its range once during its turn of the Action Round.

Poison (Examination). Skin or other exterior area is coated with a toxin (to humans at least). If the character touches a poisoned area with his bare skin, the GM should implement one or more of the following:

- **Virulent.** The character loses one point from his Endurance Rating each Action Round. When that reaches **0** (and the character passes out), he loses one point off his Strength Rating each Action Round. When that reaches **0**, the character is dead.
- **Virus.** Same effects as virulent poison. However, the unit of time per point lost is increased to one minute, one hour or one day, at the GM's discretion.
- **Paralytic.** The character's Dexterity and Agility Ratings are immediately reduced to 0 (he may not move or handle devices at all). If he receives successful treatment, he heals at four times the normal rate.
- **Psychotic.** The character immediately goes into fits of hallucination, paranoia and mindless babble. The GM should control the character when it seems appropriate. These effects cease immediately upon successful diagnosis and treatment. No characteristics are affected.
- **Spore.** The character suffers no effects at all until some future moment determined by the GM. At that point, implement the effects of any of the above poisons.
- **Infectious.** Any of the above poisons may be made contagious at the GM's discretion, and will spread to any character that is exposed to it.

Successful diagnosis of a poison stops any additional damage from occurring to the victim. Treatment must succeed to reverse the effects of poison (to begin the healing process). The GM may wish to reduce the Skill Level of a character attempting to diagnose or treat a character suffering from alien poisons.

Poison Attack (Perception). Toxin on the creature's primary attack appendage (claw, stinger, tail, fangs, quills, etc.). If a character's protective attire is punctured when attacked, he suffers the effects of poison (see above).

Poison Discharge (Examination). Creature may attack by emitting toxin in gas or liquid form from its mouth or other orifice. Substance may be projected a number, of hexes equal to half the creature's Combat Rating. A character in a hex entered by the substance is poisoned if not wearing protective attire, see preceding.

Psionic Communication (Examination). The creature possesses this skill at a level ranging from **6** to **9** and a Mental Power Rating ranging from **4** to **7** (see 10.0).

Psychokinesis (Examination). The creature possesses this skill at a level ranging from **6** to **10** and a Mental Power Rating ranging from **4** to **7** (see 10.0).

Radar Sense (Perception). The creature "sees" by emitting energy waves. The creature may be visually blind but sees as well as a human and is not affected by darkness.

Reflective Carapace (Perception). Armour with beam Defence Strength ranging from **3** to **5** and with a projectile Defence Strength of **1** or **2**.

Regeneration (Perception). The creature regains one lost Combat or Agility Point at the beginning of each Action Round (unless the Rating has been reduced to **0**).

Swarm Mind (Perception). All the creatures in the encounter share one mind. What one sees or feels, all see or feel (although hits suffered by one are not suffered by all). If more than one creature is eligible to attack a single character in one Action Round, they may combine their strengths into one total (instead of attacking separately).

Time Dilation (Perception). The creature may conduct two attacks (against the same character or different characters) during its turn of an Action Round. Its Agility Rating is subtracted from the chance to hit the creature with ranged fire.

Tunnelling (Perception). The creature has a network of tunnels with various openings determined by the GM that it may move through at its full Agility Rating. The creature may create new tunnels at the rate of one hex per every two Action Rounds (the GM may reduce or increase this rate). One Action Round must be spent for the creature to create an opening into or out of the ground.

Unknown Propulsion (Sight). Floats with no apparent means of support. The creature may move its full Agility Rating each Action Round, regardless of what is in its hex or along its intended path (however, it may not move through walls). Until its Agility Rating is reduced to **0**, the creature may always move at its full Agility Rating.

Vegetation Control (Examination). The creature is one with the vegetation around it. Any movable parts of plants and trees (branches, vines, roots, etc.) may be called upon to entwine or strike one character as the creature's attack for an Action Round.

Web Shooting (Perception). The creature spins webs and shoots web strands to entwine its prey. May conduct a close attack (see 29.9) from a distance of three hexes or less.

[48.0] Non-Player Characters

The GM should choose one of the following non-player characters when an NPC encounter occurs. Being careful not to disrupt the adventure in progress (unless the GM wishes to do so), these NPC's are extremely useful in spicing up an otherwise slow-moving section of the adventure or to set up plot lines which the players might want to follow up in the future.

These NPC's are presented in a format, which gives the GM enough information to play them on the spur of the moment, yet does not restrict the GM by being too specific. The GM is free to use these listings as he sees fit; he should change whatever does not suit his tastes.

The Characteristic Ratings of each NPC are given as letters, which represent ranges for each characteristic. Before actually placing the NPC's into play, the GM should choose a value for each characteristic from the range indicated in the following table.

LETTER	ALL CHARACTERISTICS EXCEPT MENTAL POWER	MENTAL POWER
A	Poor (1,2)	0
B	Mediocre (3, 4)	1, 2
C	Average (5,6)	3
D	Good (7, 8, 9)	4, 5
E	Exceptional (10, 11, 12)	6

An NPC's Environ Skill Level is for the environ in which he is encountered. If in a spaceport, the GM chooses a home environ for the **NPC**. All other Environ and Gravity Skill Levels for the **NPC** are determined in accordance with 5.4.

Some NPC encounters involve a group of NPC's. In such a case, the GM rolls one die to determine how many there are.

[36.1] Common NPC's

NPC Nr.C1: Drug Dealer

Spaceport

ST (B) **EN** (C) **DX** (C) **AY** (B) **IN** (C) **MP** (B) **EM** (A) **LD** (B) **AG** (C) **SS**: Lower middle class

Skills: Urban **2**; Grav **HY-1**; Temp **HO**; Environ **2**; Trading **2**; Transport Econ **4**; Handguns **2**; Law **1**; Ambush **1**.

Possessions: Plastic pistol.

• **First Description**: As the characters are preparing to leave on their voyage, they are approached by a man who asks if he could talk to them in private.

• **GM's Description**: This individual is attempting to get past customs officials with a great deal of illegal drugs. He has such a vast amount he cannot get all of them on his ship. Without telling the party what the shipment is, he asks them if they would help him deliver an over order of material. He will pay them handsomely and asks their discretion. If the party shows any inclination to turn down the offer, the man will withdraw, not wanting to arouse suspicion.

NPC Nr. C2: Diplomat

Spaceport

ST (B) **EN** (B) **DX** (C) **AY** (B) **IN** (D) **MP** (C) **EM** (E) **LD** (C) **AG** (A) **SS**: Skilled tech

Skills: Urban **3**; Grav **EX-1**; Temp **HO**; Environ **4**; Diplomacy **6**; Linguistics **8**; Law **4**; Streetwise **2**; Laser pistol **1**.

Possessions: Audio-sealed case, laser pistol, translator.

• **First Description**: As the characters prepare to leave the spaceport, they are called into the security office where they meet this individual.

• **GM's Description**: This person is a diplomat from the planet the characters are on to the planet for which they are bound. He needs immediate transport and asks the characters if they are willing to take him on. He is all he seems to be; the characters will be rewarded financially for their efforts on his behalf. If they refuse, no harm will come to them in any way.

NPC Nr. C3: Scholar

Spaceport

ST (B) **EN** (A) **DX** (A) **AY** (A) **IN** (D) **MP** (B) **EM** (C) **LD** (A) **AG** (A) **SS**: Family dominates planet

Skills: Urban **2**; Grav **LT-1**; Temp **NL**; Environ **1**; Economics **5**; Mining **4**; Geology **3**; Physics **1**.

Possessions: Camera.

• **First Description**: As the characters load or unload their ship in port, they see someone taking pictures of them.

• **GM's Description**: This is a scholar on vacation who has chosen this planet to visit. The character's ship looked interesting, and he wanted a picture.

NPC Nr. C4: Smuggler

Spaceport

ST (B) **EN** (C) **DX** (C) **AY** (B) **IN** (C) **MP** (B) **EM** (B) **LD** (C) **AG** (D) **SS**: Independent trading family

Skills: Urban **2**; Grav **LT-1**; Temp **CD**; Environ **2**; Handguns **2**; Automobile **1**; Forgery/Counterfeiting **1**.

Possessions: Stun gun.

• **First Description**: The characters see a person shoving large boxes down a waste disposal chute.

• **GM's Description**: The person is a smuggler whose partner is downstairs at the other end of the chute waiting for the contraband. This individual is very jumpy and will not hesitate to fire upon the party if approached too closely.

NPC Nr. C5: Trader*Spaceport***ST** (B) **EN** (B) **DX** (C) **AY** (B) **IN** (D) **MP** (B) **EM** (C) **LD** (C) **AG** (C) **SS**: Independent trading family**Skills**: Urban 2; Grav **NW-1**; Temp **CD**; Environ 2; Trading 6; Economics 3; Handguns 2; Pilot 2; Streetwise 3; Diplomacy 2; Shuttle 1; Planetology 4.**Possessions**: Stun pistol, portable computer, Geoscanner, expedition suit, camera, trade stuffs.

- **First Description**: As the characters are talking to the booking agent at the Starport, a distinguished looking person approaches them and asks for a minute of their time.

- **GM's Description**: This person is an important interstellar trader who has overheard the players state their next port of call. He may ask them to deliver something; find their ship valuable for a separate trip after the next; ask them to pick something up and deliver it on further; etc. He is what he appears to be.

NPC Nr. C6: Reporter*Spaceport, Urban***ST** (B) **EN** (B) **DX** (C) **AY** (C) **IN** (C) **MP** (B) **EM** (C) **LD** (A) **AG** (C) **SS**: Fallen on hard times**Skills**: Urban 2; Grav **LT-1**; Temp **NL**; Environ 2; Automobile 2; Direct-lift 1; Disguise 1; Streetwise 4; Diplomacy 3; Linguistics 1.**Possessions**: Automobile, camera, audio recording equipment.

- **First Description**: While the party is in the spaceport, they are witness to an important incident of the GM's creation (a murder, the arrival of a celebrity, an escaped criminal). They are then accosted by an individual asking them a lot of questions.

- **GM's Description**: This reporter works for a planetary news service and will press the characters for all the information they have to give and then some. It will become very annoying very quickly as this individual is both tenacious and intimidating.

NPC Nr. C7: Religious Fanatics (one die)*Spaceport, Urban***ST** (B) **EN** (B) **DX** (B) **AY** (A) **IN** (C) **MP** (B) **EM** (C) **LD** (A) **AG** (A) **SS**: Poor colonist family**Skills**: Urban 1; Grav **LT-1**; Temp **NL**; Environ 2; Recruiting 1; Streetwise 2; Diplomacy 1.**Possessions**: None.

- **First Description**: The characters are approached by a group of people who begin to talk about the party's obvious lack of belief.

- **GM's Description**: These apparent fanatics are actually a front for a political organization skirting taxes by using a religious front. The group will try to sell the party books or buttons or some worthless junk for exorbitant prices. They will give the party a hassle if nothing is purchased. If the party refuses any offers at all, the GM must determine whether this group becomes unruly.

NPC Nr. C8: Robbery Victim*Urban, Suburban***ST** (B) **EN** (B) **DX** (B) **AY** (B) **IN** (C) **MP** (A) **EM** (B) **LD** (A) **AG** (A) **SS**: Local establishment**Skills**: Urban 1; Grav **LT-1**; Temp **NL**; Environ 2; Law 1; Automobile 1.**Possessions**: An automobile.

- **First Description**: The characters find the unconscious body of a male lying in an alleyway.

- **GM's Description**: The man has been mugged and robbed. He is a lawyer who might have been carrying valuable papers (GM's discretion) which were also snatched. At first he will be groggy with a small chance of mistaking the characters for his assailants. After fully awakening, he will need the characters' help to reach the authorities.

NPC Nr. C9: Fence*Urban***ST** (B) **EN** (B) **DX** (C) **AY** (C) **IN** (D) **MP** (A) **EM** (B) **LD** (C) **AG** (C) **SS**: Lower middle class**Skills**: Urban 2; Grav **LT-1**; Temp **NL**; Environ 2; Streetwise 4; Gambling 2; Disguise 3; Forgery/Counterfeiting 3; Handguns 3.**Possessions**: False identity, plastic pistol, various stolen items.

- **First Description**: As the characters are strolling down a street, they are approached by an individual who tries to entice them to buy some goods.

- **GM's Description**: At first, the items offered by this individual will be typical: cameras, watches, jewellery, etc. If the characters express enough interest, the fence will begin to offer harder to find high-tech items for very low prices. The fence is not hostile and will back off if threatened.

NPC Nr. C10: Street Person*Urban, Suburban***ST** (B) **EN** (B) **DX** (B) **AY** (C) **IN** (A) **MP** (A) **EM** (B) **LD** (B) **AG** (C) **SS**: Unfostered orphan**Skills**: Urban 1; Grav **HY-1**; Temp **HO**; Environ 2; Streetwise 4; Gambling 2; Automobile 1; Ambush 1.**Possessions**: None.

- **First Description**: The party is spoken to by a figure in a shadowy doorway as they travel through the streets.

- **GM's Description**: This figure could be any number of things: a beggar asking for money; a drug seller hawking his wares; a hustler looking for an easy mark in a card game; a pimp. How far the street person will go to engage the party is up to the GM.

NPC Nr. C11: Sanitation Engineer*Urban, Suburban***ST** (A) **EN** (A) **DX** (B) **AY** (B) **IN** (A) **MP** (A) **EM** (B) **LD** (A) **AG** (A) **SS**: Lower middle class**Skills**: Urban 1; Grav **LT-1**; Temp **NL**; Environ 1; Streetwise 1.**Possessions**: None.

- **First Description**: The characters see a person walking down the street next to a moving truck.

- **GM's Description**: This is a sanitation engineer collecting garbage. If this has already been played, the person could be something else in disguise - a lawman, perhaps, or a spy.

NPC Nr. C12: Thieves (one die)*Urban, Suburban***ST (B) EN (C) DX (B) AY (B) IN (C) MP (A) EM (B) LD (C) AG (C) SS:** Oppressed minority**Skills:** Urban 1; Grav **LT-1**; Temp **NL**; Environ 2; Streetwise 1; Automobile 3; Laser Pistol 2; Blades 2; Ambush 2; Unarmed Combat 1.**Possessions:** Automobiles, laser pistols, knives.

- **First Description:** As the party travels in their vehicle down a semi-deserted street in a city, they are sideswiped by another car and stopped. As they get out, another vehicle pulls up behind them.

- **GM's Description:** These individuals are part of a highly organized auto theft ring. They will pull out their weapons, order the party to stand against the wall, and drive off with the party's vehicle, also taking any equipment inside. If the party puts up no resistance, there will be no cause for combat. This gang is willing to engage in a quick fire fight and then escape in their vehicles.

NPC Nr. C13: Thieves (one die)*Urban***ST (C) EN (B) DX (C) EN (B) IN (B) MP (A) EM (A) LD (C) AG (D) SS:** Poor colonist family**Skills:** Urban 3; Grav **LT-1**; Temp **ML**; Environ 2; Streetwise 3; Battlefield 2; Jetpack 1; Handguns 2; Blades 2; Ambush 3; Unarmed Combat 1.**Possessions:** Pistols, daggers, stun guns.

- **First Description:** The first description in this case may be a hit on the head; the group of thieves will attempt to ambush and rob the party.

- **GM's Description:** Basically the same as preceding; the thieves will not kill the party except in open combat. If the party gives in, no one will be seriously harmed.

NPC Nr. C14: Travelling Doctor*Road***ST (A) EN (B) DX (C) AY (A) IN (C) MP (B) EM (C) LD (A) AG (A) SS:** Skilled tech**Skills:** Urban 1; Grav **LT-1**; Temp **NL**; Environ 2; Diplomacy 2; Chemistry 1; Diagnostics 3; Treatment 2; Biology 1; Programming 1; Compu/Robot Tech 1.**Possessions:** ATV (Civ Level 6), robot with medical systems (Civ Level 7).

- **First Description:** As the party travels along, they are hailed by a man and his robot by the side of the road. Their vehicle is parked nearby.

- **GM's Description:** This doctor's vehicle has broken down and he cannot fix it. He roams the countryside helping the populace and keeping them fit. He needs the party for either help or transportation to the local town. He will offer money or services if the party seems hesitant.

NPC Nr. C15: Recalcitrant Farm Boys (two dice)*Small settlement***ST (B) EN (B) DX (C) AY (B) IN (A) MP (B) EM (B) LD (B) AG (C) SS:** Communal colony**Skills:** Urban 0; Grav **LT-1**; Temp **CD**; Environ 4; Blades 2; Longarms 1; Unarmed Combat 2; Agriculture 4.**Possessions:** Horse cart, farm equipment, truck, rifle.

- **First Description:** The party comes upon a small farming community, which is in obvious need of some new equipment. They are greeted by some of the locals.

- **GM's Description:** These are a bunch of very proud people. They separated themselves from the rest of the population to prove their project could be done without assistance. If the party tries to leave and get them help, or suggests they do that, the farmers, led by the young men, will hinder the party from leaving. They do not want the knowledge they are actually struggling to leak out. Depending on the circumstances, violence is not impossible.

NPC Nr. C16: Land Owner*Environ***ST (B) EN (B) DX (A) AY (A) IN (B) MP (A) EM (B) LD (A) AG (D) SS:** Local establishment**Skills:** Urban 0; Grav **LT-1**; Temp **NL**; Environ 3; Trading 2; Agriculture 3; Geology 1; Longarms 1.**Possessions:** Truck, rifle, short wave radio.

- **First Description:** The party sees a sign stating "No Trespassing" followed shortly by a man in a truck pulling up behind them.

- **GM's Description:** The man is a loner who has retreated to his tract of land hidden from society and deeply resents intrusions by anyone. If the party does not leave (as he will insist they do) he will not hesitate to fire on them. He is a bit nuts.

NPC Nr. C17: Colonist*Environ***ST (B) EN (C) DX (B) AY (A) IN (B) MP (B) EM (A) LD (B) AG (B) SS:** Poor colonist**Skills:** Urban 0; Grav **HY-2**; Temp **HO**; Environ 4; Trading 2; Life Support 2; Shuttle 1; Agriculture 2; Mining 2; Glider 1.**Possessions:** Glider, knife, expedition suit, respirator helmet.

- **First Description:** As the party travels cross-country, they find a person sitting on a rock looking very dejected.

- **GM's Description:** This person is very tired of being a colonist and wants to leave. He will attempt to convince the characters to take him along anywhere they are going. If they refuse, he will not get violent, just more depressed.

NPC Nr. C18: Miner*Mountains***ST** (B) **EN** (C) **DX** (C) **AY** (B) **IN** (D) **MP** (A) **EM** (C) **LD** (C) **AG** (C) **SS:** Lower middle class**Skills:** Urban **0**; Grav **HY-1**; Temp **NL**; Environ **5**; Planetology **4**; Trading **3**; Sled **4**; Mining **3**; Geology **5**; Handguns **1**; Laser Pistol **3**.**Possessions:** Jetpack, Expedition Suit, Auto Sled, Laser Pistol, Rifle, Stun Gun, Shortwave Radio, Geoscanner, Chemanalysis Lab, Mining Robot.• **First Description:** The party stumbles upon a very small mining operation with a few people and robots.• **GM's Description:** This trader has discovered a very rich gem deposit, which he slowly mines, using the gems for barter to receive supplies. He will claim he mines a low-yield ore deposit, which barely pays for itself. He is hiding the real information because he likes living relatively alone and independent.**NPC Nr. C19:** Lawman*Road***ST** (C) **EN** (C) **DX** (D) **AY** (C) **IN** (B) **MP** (A) **EM** (B) **LD** (D) **AG** (D) **SS:** Skilled tech**Skills:** Urban **0**; Grav **LT-2**; Temp **NL**; Environ **4**; Machine Gun **2**; Longarms **2**; Handguns **4**; Helicopter **3**; Battlefield **2**.**Possessions:** Helicopter, machine gun, needle pistol, impact armour, short wave radio.• **First Description:** As the party drives along a road, they are hailed and told to stop by an individual in a helicopter.• **GM's Description:** The person is a lawman looking for a group who stole a vehicle like the one the party is riding in. If the party's papers and ID's are in order, they will not be hindered; otherwise the lawman will detain and possibly arrest the party, depending on how suspicious the party is.**NPC Nr. C20:** Villagers (two dice)*Jungle, Forest***ST** (C) **EN** (C) **DX** (B) **AY** (B) **IN** (B) **MP** (A) **EM** (A) **LD** (B) **AG** (C) **SS:** Communal colony**Skills:** Urban **0**; Grav **LT-1**; Temp **HO**; Environ **5**; Animal Drawn **4**; Bows **4**; Blades **2**; Survival **4**; Ambush **2**.**Possessions:** A blade weapon, a bow weapon, arrows.• **First Description:** As the characters are foraging through the undergrowth, they run into a group of backward natives, who are very curious about these strange looking individuals.• **GM's Description:** The villagers are harmless unless provoked, in which case they will fight to kill. They have valuable information concerning the area (flora, fauna, gaudy mineral deposits) and, if communication is possible, they will serve as guides and helpers given good treatment by the party.**[36.2] Rare NPC's****NPC Nr. R1:** Psion*Spaceport***ST** (B) **EN** (B) **DX** (B) **AY** (C) **IN** (D) **MP** (D) **EM** (B) **LD** (A) **AG** (C) **SS:** Independent trading family**Skills:** Urban **4**; Grav **NW-3**; Temp **CO**; Environs (all) **-4**; Handguns **1**; Pilot **1**; Navigation **6**; Psionic Boost **4**; Mind Control **3**;Psionic Comm **4**; Psion Tech **2**; Life Sense **2**; Glider **1**.**Possessions:** Expedition suit, Stun Gun, Internal Gravity Web, Propulsion Gun.• **First Description:** In the course of tiding over between trips, the characters meet a Psion who has just had a falling out with her old ship and crew.• **GM's Description:** The psion is a very beautiful woman who was relieved of her duties due to an ill-fated liaison with the pilot. Her career is chequered with this kind of behaviour; her love affairs affect her performance too much. She will attempt to hide this as she needs work, and will try to sell herself just on her skills, which are impressive.**NPC Nr. R2:** Stowaway*Spaceport (just before or after leaving)***ST** (C) **EN** (C) **DX** (B) **AY** (C) **IN** (D) **MP** (A) **EM** (B) **LD** (B) **AG** (B) **SS:** Lower middle class family**Skills:** Urban **1**; Grav **LT-1**; Temp **NL**; Environ **2**; Programming **6**; Chemistry **4**; Geology **3**; Asteroid Mining **2**; Planetology **1**; Laser Pistol **1**.**Possessions:** None.• **First Description:** In a pressurized part of the ship, the characters discover a stowaway. He is unarmed, with little inclination to fight.• **GM's Description:** This human is trying to escape from an insane asylum. He has determined the planet, which the characters are leaving, is in danger of a huge seismic shock, which will cause great damage. The authorities locked him up to prevent panic; they think he *is* crazy; the GM should decide for himself.**NPC Nr. R3:** Stowaway*Spaceport***ST** (A) **EN** (B) **DX** (B) **AY** (B) **EM** (C) **MP** (A) **EM** (B) **LD** (A) **AG** (A) **SS:** Local establishment**Skills:** Urban **0**; Grav **LT-1**; Temp **HO**; Environ **3**; Streetwise **1**; Glider **1**; Blades **1**.**Possessions:** None.• **First Description:** In a stateroom, the characters find a lovely young girl attempting to hide in a closet. She is very docile and very nervous.• **GM's Description:** The girl is running away from her parents who treat her fairly well. She simply has never been in space and wants to see what it's all about.

NPC Nr. R4: Clergyman
*Spaceport, Urban***ST** (B) **EN** (B) **DX** (C) **AY** (B) **IN** (B) **MP** (B) **EM** (B) **LD** (B) **AG** (C) **SS**: Skilled tech family**Skills**: Urban 1; Grav **LT-1**; Temp **HO**; Environ 2; Streetwise 2; Disguise 4; Forgery/ Counterfeiting 2; Blades 1.**Possessions**: Knife.

- **First Description**: The party is approached by a man wearing odd clothes but with a strange smile on his face.
- **GM's Description**: This individual will claim to be part of a local religion whose purpose is to try to convince people to stay home rather than wander around the galaxy. He will engage the characters in conversation for as long as they will listen. During this time, he will pick their pockets. If caught, he will feign amnesia (or some other malady) and play upon the party's sympathy. If it looks as if he will be turned in, he will fight, but only to free himself and run away.

NPC Nr. R5: Lawmen (one die)*Spaceport, Urban***ST** (B) **EN** (C) **DX** (C) **AY** (B) **IN** (B) **MP** (A) **EM** (B) **LD** (C) **AG** (C) **SS**: Communal colony**Skills**: Urban 1; Grav **LT-1**; Temp **NL**; Environ 2; Streetwise 1; Laser Pistol 3; Automobile 2; Body Armour 1.**Possessions**: Laser pistol, stun pistol, needle pistol, reflective armour.

- **First Description**: As the characters are strolling through the Starport, a figure rushes by them followed shortly by other figures obviously chasing the first one.
- **GM's Description**: These lawmen are chasing an escaped criminal and will enlist the aid of the characters if they wish. This will be done by asking the crowd in general to help stop him. If the party aids and the criminal is apprehended, the lawmen will be extremely grateful and offer to assist the party in any logical way they can.

NPC Nr. R6: Entertainer*Urban, Town***ST** (A) **EN** (B) **DX** (C) **AY** (C) **IN** (B) **MP** (A) **EM** (B) **LD** (A) **AG** (A) **SS**: Family runs planetary corporation**Skills**: Urban 0; Grav **LT-1**; Temp **NL**; Environ 1; Disguise 8; Linguistics 3; Streetwise 1; Diplomacy 1.**Possessions**: None.

- **First Description**: As the characters are walking down a street, a luxurious ground vehicle stops and out steps a well-dressed individual.
- **GM's Description**: This person is an entertainer in an opera being performed tonight at this location. Unless the party makes some move to communicate with this person, the encounter will pass on by. If approached by the characters, the entertainer will gladly talk to them, being off-worlders as they are.

NPC Nr. R7: Runaway 'Bot*City***Civ Level 8 Robot (#3)****Systems**: Aerodynamic, learning, self-activation, weapon, weapon targeting.

- **First Description**: The party sees a bot flying through the air toward them, firing a laser at random.
- **GM's Description**: The bot has malfunctioned en route to its owner, and has taken flight thinking it is mining for certain minerals. It must be disabled and brought under control.

NPC Nr. R8: Police Vehicle*Road***ST** (C) **EN** (C) **DX** (C) **AY** (C) **IN** (B) **MP** (A) **EM** (C) **LD** (D) **AG** (C) **SS**: Skilled tech family**Skills**: Urban 2; Grav **HY-1**; Temp **HO**; Environ 3; Streetwise 3; Battlefield 1; Laser Pistol 4; Handguns 2; Longarms 2; Unarmed Combat 1; Automobile 3; Body Armour 1.**Possessions**: Automobile, stun gun, laser pistol, rifle, impact armour, short wave radio, photographic equipment, jetpack.

- **First Description**: If the party is driving, the vehicle pulls them over. If they are on foot, the vehicle pulls up next to them.
- **GM's Description**: These are lawmen who saw the party, became curious, and decided to investigate. Unless there are any discrepancies, they will just ask routine questions and depart.

NPC Nr. R9: Police Impostors*Road***ST** (C) **EN** (B) **DX** (B) **AY** (B) **IN** (B) **MP** (A) **EM** (B) **LD** (B) **AG** (C)**SS**: Poor colonist family**Skills**: See R8.**Possessions**: See R8.

- **First Description**: A police vehicle pulls the party over to the side of the road.
- **GM's Description**: A group of thieves have stolen this vehicle and are out to make the most of the situation. They will, at the very least, claim the party's vehicle has improper registration and attempt to impound the vehicle. If the party is not riding, they will attempt to appropriate the party's weapons and equipment, claiming their possession is illegal. They will fight if pushed far enough.

NPC Nr. R10: Rangers (one die + 2)*Environ***ST** (C) **EN** (B) **DX** (C) **AY** (C) **IN** (B) **MP** (A) **EM** (B) **LD** (C) **AG** (D) **SS**: Family fallen on hard times**Skills**: Urban 1; Grav **LT-1**; Temp **NL**; Environ 4; Battlefield 2; Machine Guns 3; Paint Guns 2; Military Ground Vehicles 2; Vehicle Tech 2; Treatment 1.**Possessions**: ATV (Civ Level 8), submachine guns (Civ Level 5), paint guns (Civ Level 6), reflect/impact armour (Civ Level 6), vehicle kit, first aid kit.

- **First Description**: As the party is traversing a marsh, they come upon another vehicle paralleling their course.
- **GM's Description**: This vehicle contains two rangers with the rest of them scattered in the marsh away from the party. Upon encountering the characters, the rangers will regroup and view the party with great suspicion. The rangers are searching for a downed satellite containing valuable information. It is suspected a military power wanted the satellite and the rangers are wary the party may be involved.

NPC Nr. R11: Hunter*Woods, Forest, Jungle***ST (D) EN (C) DX (C) AY (C) IN (B) MP (A) EM (A) LD (C) AG (D) SS:** Independent trading family**Skills:** Urban **0**; Grav **HY-1**; Temp **HO**; Environ **4**; Bow **6**; Longarms **6**; Ambush **7**; Unarmed Combat **5**; ATV **4**; Streetwise **1**; Weapon Tech **1**; Battlefield **1**.**Possessions:** One of the following: long bow and arrows; rifle, Neuroscanner; weapon kit.• **First Description:** As the characters are travelling overland, they come upon a figure moving slowly through the brush.• **GM's Description:** This is a hunter who is after illegal game. He is extremely wary to the authorities and will be hesitant to deal openly with the characters. If he is questioned about what kind of game he is hunting, he will lie or divert the question, because poaching carries extreme punishment. He will resist capture violently.**NPC Nr. R12: Archaeologist***Ruins***ST (B) EN (B) DX (B) AY (B) IN (E) MP (C) EM (C) LD (A) AG (B) SS:** Family runs planetary corporation**Skills:** Urban **1**; Grav **HY-2**; Temp **HO**; Environ **4**; Handguns **1**; ATV **3**; Sled **2**; Diplomacy **1**; Agriculture **2**; Planetology **2**; Programming **2**; Biology **1**; Geology **4**; Construction **4**; Linguistics **3**.**Possessions:** ATV, life support equipment, one laser pistol, Superoid camera, Chemanalysis Lab, Bioscanner.• **First Description:** As the characters are exploring ruins (or possibly just passing the time) they notice a woman carefully picking her way through some rocks.• **GM's Description:** She is an archaeologist looking for information concerning elder civilizations. She is convinced man explored this part of the galaxy in a previous generation; these are the ruins of that exploration. She will calmly present her evidence to the party. She is totally wrong.**[36.3] Unique NPC's****NPC Nr. U1: Civil Inspector***Spaceport***ST (A) EN (A) DX (B) AY (B) IN (C) MP (A) EM (C) LD (B) AG (C) SS:** Lower middle class family**Skills:** Urban **0**; Grav **LT-1**; Temp **NL**; Environ **3**; Streetwise **1**; Handguns **1**; Unarmed Combat **1**; Agriculture **1**; Planetology **2**.**Possessions:** Stun gun, briefcase with forms and papers.• **First Description:** As the characters lounge in the spaceport bar, a man approaches them with a very curious look on his face.• **GM's Description:** The man is an inspector looking for planetary exploiters and abusers. Men whose descriptions match the characters were seen in this bar just last week. He is highly suspicious of the party and will probably call in the lawmen unless truly convinced of his error. The odds of this happening are small.**NPC Nr. U2: Technician***Spaceport, Urban***ST (C) EN (C) DX (C) AY (B) IN (C) MP (B) EM (C) LD (C) AG (D)****SS:** Oppressed minority**Skills:** Urban **1**; Grav **LT-1**; Temp **IML**; Environ **3**; Streetwise **4**; Demolitions **3**; Handguns **3**; Blades **5**; Disguise **3**; Electro Tech **3**.**Possessions:** Plastic explosives, timing device, pistol (Civ Level 6), knife, Electrokit.• **First Description:** The party is informed while in port that electrical repairs have become necessary on their vehicles due to new fire control regulations. A repairman shows up to effect the repairs.• **GM's Description:** The man is an agent of an organization dedicated to random violence. Unless the characters take some precautionary measures, a timed explosive device will be implanted in either their ship or vehicle, whichever is applicable. The agent, by the way, has mistaken the characters' ship or vehicle for someone else's.**NPC Nr. U3: Spy***Urban***ST (C) EN (D) DX (D) AY (C) IN (C) MP (C) EM (B) LD (D) AG (D) SS:** Poor colonist family**Skills:** Urban **2**; Grav **LT-2**; Temp **NL**; Environ **3**; Demolitions **3**; Longarms **3**; Handguns **4**; Paint Gun **7**; Linguistics **2**; Disguise **5**; Weapon Tech **2**.**Possessions:** Needle pistol, plastic pistol, dagger, false ID.• **First Description:** A man in the same place as the characters is shot by an unknown assailant.• **GM's Description:** If the characters help this man, they will eventually discover he is a federal spy operating to uncover a black market in computer parts which is undercutting the federally-sponsored corporations. The headquarters is on this world. The spy may die and leave the characters with clues and information; he may live and ask the party for some sort of aid in his task.**NPC Nr. U4: Local Doctor***Town***ST (B) EN (B) DX (C) AY (B) IN (C) MP (A) EM (B) LD (B) AG (C) SS:** Skilled tech family**Skills:** Urban **1**; Grav **LT-1**; Temp **HO**; Environ **2**; Teaching **1**; Diagnosis **3**; Treatment **2**; Handguns **1**; Chemistry **1**.**Possessions:** Medical scanner (Civ Level 8), Chemanalysis lab (Civ Level 6), Chemsynthesis lab (Civ Level 7), plus various laboratory items such as flasks, microscope, etc.• **First Description:** As the party enters a small settlement out in the wilderness, they are introduced to the local doctor who, they are told, is also the mayor.• **GM's Description:** This individual has discovered rare trace elements in the drinking water which, when augmented with additives of his own creation, cause the local populace to be very docile. He is in semi-retirement and wishes nothing more than to remain here with the adulation of this town. He is not dangerous and will give up his dream if he is threatened.

NPC Nr. U5: Art Dealer*Urban, Suburban***ST** (A) **EN** (A) **DX** (A) **AY** (B) **IN** (A) **MP** (B) **EM** (B) **LD** (A) **AG** (A) **SS:** Family dominates planet**Skills:** Urban **1**; Grav **LT-1**; Temp **NL**; Environ **1**; Diplomacy **1**; Trading **1**; Forgery/ Counterfeiting **1**.**Possessions:** Outside of his shop and clothing, none.

- **First Description:** The party sees an interesting work of art in the window as they walk into an art shop.

- **GM's Description:** The work of art has been created to cover a masterpiece which was thought lost ages ago. The exact type of piece is left up to the GM. If the players are enticed to purchase the item, examination with a Chemlab will give information as to the existence of the hidden work. The storeowner will be very affable and will not push the item, which he believes to be a worthless piece of junk.

NPC Nr. U6: Slaver*Farmland***ST** (B) **EN** (C) **DX** (B) **AY** (B) **IN** (C) **MP** (A) **EM** (A) **LD** (C) **AG** (D) **SS:** Lower middle class family**Skills:** Urban **0**; Grav **NW-1**; Temp **NL**; Environ **3**; Agriculture **6**; Animal Drawn **1**; Tractor **1**; Truck **1**; Trading **4**; Longarms **2**.**Possessions:** A hydroponic farm, farm equipment, rifle, slaves.

- **First Description:** The party happens upon a huge hydroponic farm with many workers, and their owner approaches them.

- **GM's Description:** This farm owner is also a slaver, the workers all being owned by him. On this planet there is no law preventing humans from owning others, and he has made such an arrangement economically feasible. He will hide the fact that he owns the workers for as long as possible and, if found out, will evict the characters from his land. He will fight if provoked.

NPC Nr. U7: Artist*Hills, Mountains***ST** (A) **EN** (B) **DX** (D) **AY** (C) **IN** (C) **MP** (C) **EM** (C) **LD** (B) **AG** (B) **SS:** Oppressed minority**Skills:** Urban **0**; Grav **LT-1**; Temp **NL**; Environ **2**; Glider **1**; Teaching **2**; Survival **2**.**Possessions:** Foodstuffs and sculpting tools.

- **First Description:** As the characters round a bend on a backwoods road, they see an incredible edifice; it reflects light in all directions and seems unworldly.

- **GM's Description:** This is a piece of sculpture created by a hermit artist who lives in a hut nearby. The artist retreated away from society to create this masterpiece; even to the untrained eye it is beautiful. It is so large that moving it would be impossible without heavy equipment. Thus, there is little the party can do to hurt it. If the characters take hostile action, the artist will hide, confident his work will remain after the party has left.

NPC Nr. US: Disease Carrier*Jungle, Forest, Woods***ST** (B) **EN** (B) **DX** (B) **AY** (B) **IN** (B) **MP** (B) **EM** (C) **LD** (B) **AG** (B) **SS:** Poor colonist family**Skills:** Urban **0**; Grav **NW-1**; Temp **CD**; Environ **3**; Agriculture **4**.**Possessions:** Farm tools.

- **First Description:** As the party forages through the brush, they come upon a small farm growing wild exotic tubers.

- **GM's Description:** The farmer and his family all are carriers for a dread disease (the exact type is left up to the GM). They are immune because they eat the tubers daily. If the characters take some of the food (which the farmer will offer), they will avoid getting ill until the supply runs out.

[49.0] Spaceship Encounters

A spaceship encounter may occur when using the *Deep Space* or *Planet Space* column of the Encounter Table. The following encounter descriptions indicate whether they occur in deep or planet space and are divided into common, rare, and unique categories. Remember, when the party is travelling in a spaceship, an encounter check is conducted *once per day* (24-hour period).

[49.1] Common Spaceship Encounters

1. Deep Space. While heading out of the system, the characters are hailed by a trading vessel heading into the system with some refined ore for the settlements. The vessel is a Corco *Mu*, and the voice on the radio is friendly. The GM should decide where this vessel is from and what world it is heading to. It poses no threat to the party.

2. Planetary Space. The party's vessel is approached by a *Dagger* bearing federal ID and hailing the party to stop. This is a federal ship calling for routine inspection of the goods and material the ship is carrying. They will inspect closely and will hand out fines and arrest guilty parties if such items are found.

3. Planetary Space. While in orbit, the party finds that a *Piccolo* has gained rapidly on them and hails them to slow up and prepare to be boarded.

This is the Astroguard needing to ascertain where the party's vessel came from, where it is going, and with what purpose.

4. Deep Space. The party's ship passes a Corco *Gamma* heading out of the system.

This is a Biological Survey Mission heading for a new system. The presence of habitable worlds has just been confirmed and this is the first survey mission to go there to collect specimens. There is a suspicion of danger, and the ship has brought along some weaponry to defend itself. The crew is hopeful no danger will be present.

5. Planetary Space. At first radar indicates and then visual sightings confirm a *Terwillicker 5000* is rapidly tumbling end over end toward the party's vessel.

A collision is imminent unless the pilot can avoid the accident. Make a check for collision, using the accident procedure (see 27.8). The rationale for this out-of-control spacecraft is left up to the GM.

[49.2] Rare Spaceship Encounters

1. Deep Space. As the party heads into a system from the jump point, they notice a Corco *Zeta* heading toward them at a brisk clip. No radio contact can be made, and there is no possibility of collision.

The ship has been disabled by a meteor strike and cannot hail the party's ship nor manoeuvre in any fashion. If the party does not attempt to change course and catch them (a manoeuvre the GM should play out), they will drift helplessly into interstellar space. If it appears the party will not stop to help, the *Zeta* will attempt to gain their attention by firing their burster.

2. Deep Space. Near the jump point into the system, the party encounters a Corco *Gamma* drifting slowly.

If the party attempts to raise the ship by radio, they will receive a brusque reply indicating that all is well. Actually, on board that vessel an argument is taking place between the navigator and the captain concerning the fact they have jumped to a system they did not wish to. The psion on the *Gamma* will attempt to contact the Psion on the party's vessel to ask for help.

3. Planetary Space. The party's vessel passes a *Clarinet*.

This is a scientific mission carrying supplies to a colony on a far-off star. The colony is new and needs all the help it can get. The *Clarinet*'s communications officer asks if any on the party's ship are interested.

[49.3] Unique Spaceship Encounters

1. Deep Space. A *Piccolo*, obviously damaged, is drifting out near the jump point.

The crew of 10 are criminals and wish to hijack the party's vessel. Their manoeuvre power is gone, but they can still fight. They will feign innocence and will try to get on board the other vessel armed and try for a take over. They jumped into this system escaping from authorities.

2. Planetary Space. A ship of totally unknown design is in a slow elliptical orbit around a moon.

This ship is either (a) an old space probe or (b) a wrecked alien craft. The GM should decide for himself, as he should also decide why it is derelict. This encounter may need a great deal of time to play out.

[50.0] Accidents

The accidents listed fall into two categories: those the characters can prevent and those they cannot. The GM may choose from either category. The accidents they can prevent will involve a check, which determines whether their skill has avoided the unfortunate occurrence. When any incident occurs in which equipment becomes damaged, the characters' tech skills may be called upon to effect repairs.

The procedure for affecting the repair of an item is detailed in 13.1. See 27.8 for additional information on accidents.

The base chance to avoid a common **(C)** accident is **75%**; a rare **(R)** accident, **50%**; and a unique **(U)** accident, **25%**. Each of the following accident types can occur in any *one* of the three possible degrees indicated (**C**, **R**, or **U**).

[50.1] Avoidable Accidents Vehicle Accidents

- (C)** A rut in the road causes possible loss of control.
- (R)** An underground stream has caused a sinkhole to appear just in front of the vehicle; try to avoid getting stuck. **(U)** A landslide threatens to bury the vehicle.
- (C)** While travelling near a marsh, the ground begins to sink away; try to avoid being mired.
- (R)** A sudden seismic tremor causes possible loss of control.
- (U)** A sudden increase in volcanic activity causes magma to spurt toward the vehicle; try to avoid it.
- (C)** While travelling along a cliff, a wheel slips toward the edge; try to avoid becoming stuck.
- (R)** Brakes begin to act sporadically while rolling down a hill; try to avoid possible accident.
- (U)** Earthquake causes large fissure to form in road; try to avoid falling in.
- (C)** In a city, another vehicle ignores a traffic signal and heads directly toward your vehicle; try to avoid it.
- (R)** While driving by a construction site, a beam has broken loose; try to avoid it falling on you.
- (U)** A crazed pedestrian steps right out in front of your vehicle; try to avoid running him over (an NPC encounter may result if you succeed).

Suit/Armour Accidents

- (C)** If character's Gravity Skill Level is less than **1** a fall is possible.
- (R)** The character has wedged his boot into a crevice; try to extricate it without causing damage.
- (U)** A violent windstorm has sprung up carrying with it debris and small rocks; try to reach cover without being pummelled.
- (C)** A boulder comes rolling down a hill; try to avoid being struck.
- (R)** Ice cracks open in front of you; try to avoid falling in.
- (U)** Jet-pack is buffeted by winds; try to land safely.

Air Vehicle Accidents

- (C)** Downdraft threatens to pull craft off course; try to regain control. **(R)** Electrical storm causes instrument loss; try to land safely. **(U)** Violent hailstorm forces an emergency landing.

Marine Vehicle Accidents

- (C)** Large swells cause difficulty in reaching land; try to return safely.
- (R)** Violent storm threatens to swamp vessel.
- (U)** Huge creature collides with vessel and possibly capsizes it.

Outer Space Accidents

- (C)** As you try to land your shuttlecraft, unexpected terrain threatens to cause landing problems.
- (R)** As your ship comes out of hyperjump, you encounter a meteor storm; try to avoid collision.
- (U)** Flying through the tail of a comet causes instrument malfunction; the ship must be flown manually.
- (C)** Near the spacecraft, a shuttle loses control and heads for your craft; try to avoid collision.
- (R)** Some unexplained disturbance causes your orbit to decay; try to avoid falling into atmosphere before gaining control.
- (U)** Shuttle landing gear fails; try to avoid crash.

[50.2] Unavoidable Accidents**Common**

- If in a poison or corrosive atmosphere, a scanner will stop giving correct readings.
- If in a thin atmosphere, a Chemsynthesizer will stop cold.
- If in any star system other than an "M" spectral class, star flares cause photographic equipment to malfunction.
- If in a contaminated atmosphere, any radio will not work.
- If in a vacuum, any holographic equipment will not work.
- A violent storm brews up and any exposed equipment is damaged.
- A mild seismic quake topples any exposed equipment.
- If in a temperature zone above 100°, any cooling system will malfunction.
- If in a corrosive atmosphere, any air system will shut down.
- The ignition for any ship drive system fails.
- Computer freezes up.

Rare

- Any character in a temperature type (CD or HO) 2 removed from his home type contracts a disease.
- A captured creature destroys its cage and attempts to escape.
- A robot stop following commands.
- A meteor strikes ship causing damage.
- In a stressful situation, any force field overloads.

Unique

- If in a corrosive atmosphere, any equipment exposed will deteriorate.
- Any hand-held energy weapon explodes.
- Any grenade explodes.
- Any spaceship pod begins to leak.
- Any computer will not allow access to information.
- Any Civ Level 8 robot attacks its owner.

As with the other lists, this one is intended to guide and inspire the GM, not limit him. Feel free to invent your own accidents.

XI. Adventure: Lost on Laidley

This chapter presents a complete star system and adventure for use by the GM and a suggested five players. It is recommended that this adventure be played before the GM starts designing his own worlds and adventures, so that all concerned get a good grasp of the many game systems and opportunities that are available. Before beginning the adventure session, the GM should read all the Sections of the Chapter. He should allow the players to see Sections 39.0 and 40.0, the Orionis Star System Log, the three World Logs, and the Environ hex map only. The GM should have a good grasp of the rules in the GM Guide and the players should at least be aware of the importance of their characteristics, skills and equipment.

The adventure takes place in the Orionis star system (see 39.0). However, use of the star system need not stop with this adventure. The GM may wish to begin his own adventures in this system or borrow ideas from it when creating his own systems. The Orionis system was generated in exact accordance with the rules of Chapter VI and serves as an example when learning the world generation system.

[51.0] The Orionis System

The GM and the players should look over the Orionis Star System Log and the three World Logs included in this booklet. All the basic information about the system is explained on the logs. Historical information and additional details can be found in this section. With the exception of some undiscovered resources on Laidley, all the information would be known by the characters.

Orionis is an F6 type star (yellow-white) 26 light years from Sol. It is the most distant system to be extensively colonized by the federation. Eighty years ago (in 2251), exploration and colonization of the system opened with the arrival of an expedition financed by a South American conglomerate. Its efforts to colonize Titus were soon overshadowed by the arrival of a Scandinavian coalition on Kryo. The Nordic settlers quickly turned their small, cool planet into the centre of activity in Orionis. The system is peaceful, and federal control is thus light. A volunteer Astroguard squadron operates out of the Kryo spaceport, and a federal ranger brigade bivouacs in New Oslo (with a battalion detached to Titus). If necessary, federal naval and trooper forces will hyper-jump in from sector headquarters.

Aside from the information on the System Log, no details are provided for Acarpous, a huge, hostile world. If the GM wishes to use the planet or its moons for an adventure, he should complete the procedures outlined in 24.0 and 25.0 of World Generation.

[51.1] Titus is a large, humid planet with 20,000 settlers living on its scattered islands.

When colonization of the Orionis system began, Titus was considered the prime candidate for system supremacy. However, the lack of high value resources and its restrictive escape velocity retarded development; Kryo became the centre of Orionis commerce. Titus has a spectacular set of rings and, orbiting further out, a small moon (**1HP**, not shown). A small spaceport is located in Orion, the planet's capital and largest town, with limited freight service to Kryo, but no interstellar facilities. The colonists generally live in a manner similar to life in 1900 — some industrialization combined with heavy agriculture. The major resource of Titus is its delicious high-protein fruits, found in great abundance throughout the temperate climates. Demand for this fruit keeps merchants coming to Orion to take the delicacies to other worlds (where they are sold at exorbitant prices). Surface shipping is the main form of transportation on the calm seas of Titus, and most of the settlements hug the coastlines.

The following environs of **Titus** are of special interest. Titusian fruits exist in each environ with edible plants.

n02 Edible plants

n03 2,000 people, iron, edible plants

n06 Edible plants

n09 9,000 people (including 6,000 in Orion and a federal ranger battalion), edible plants, caesium, iron

n12 3,000 people, edible plants, copper

n18 Iron

n20 Helium

n23 1,000 people, copper

s02 Edible plants

s04 Chlorine

s07 Edible plants

s08 Edible plants

s10 Edible plants

s11 Edible plants, 5,000 people

[51.2] Kryo, the capital world of the Orionis system, is a small cool planet with 10 million inhabitants.

A coalition of Scandinavian countries began colonization of Kryo soon after Titus was settled. Taking advantage of the planet's slight gravity and its abundance of natural resources, the colonists quickly set up a viable industrial base. Kryo's major exports include precision machine tools, tech kits, light weaponry, and high-quality optical equipment. Kryo is prevented from full financial independence by its lack of resources necessary to manufacture armour, spaceships, medicines, and related goods. These things and such basics as wood and fertilizers must be imported. Kryo's orbiting spaceport provides freight service and limited passenger service to and from Sol and a few nearby systems. The installation is small, supporting an Astroguard squadron, light repair facilities, and a combined Kryo/Federal staff of 60. A shuttle service flies between the spaceport and New Oslo twice daily.

The environs of **Kryo** contain the following:

n01 Iron, argon

n02 1 million people, edible plants, light fibre plants, carbon chemicals

n03 7 million people (including 1 million in New Oslo), federal ranger brigade, carbon chemicals, edible plants, light fibre plants, iron, phosphorus

n04 200,000 people, aluminium, sulphur

n05 Iron, aluminium, carbon chemicals

s01 Iron

s02 500,000 people, nitrogen chemicals, carbon chemicals, edible plants, iron, silver

s03 Iron, aluminium

s04 1.3 million people, nitrogen chemicals, edible plants, carbon chemicals, iron

s05 1,000 people, nitrogen chemicals, carbon chemicals, edible plants, iron

[51.3] Laidley is an unsettled planet on which most of the adventure occurs.

As described in 40.1, Laidley recently hosted an unsuccessful exploration mission of about 100 explorers and pioneers from Kryo. One side of the planet always faces Orionis; thus, temperatures vary on the planet much more than on most worlds (see below). Although Laidley has no appreciable surface water, the warmer environs show traces of moisture. A network of small streams has been observed in a lightly vegetated area (Environ 7).

The environs of **Laidley** have the following average temperatures and resources:

n01 0°

n02 25°, nitrogen chemicals

n03 -25°, radioactives

n04 -25°, silver

n05 25°, nitrogen chemicals, silver

n06 75°, nitrogen chemicals, silver, phosphorus

n07 50°, nitrogen chemicals, edible plants, adamantite

n08 0°, caesium

n09 -50°, radioactives

n10 -75°, ammonia

n11 -50°, mercury

n12 0°, silver

n13 50°, nitrogen chemicals, edible plants

s01 0°, germanium

s02 25°, silver, germanium

s03 -25°, germanium

s04 -25°, phosphorus, germanium

s05 50°, silver, nitrogen, phosphorus

Note: Many of these resources may be undiscovered. If the GM wishes, he may conceal their presence from the players. These resources have little effect on the enclosed adventure, but the GM may come up with a geological expedition to Laidley to hunt for undiscovered resources (radioactives, silver, and adamantite would certainly be finds).

[52.0] The Players and the Characters

Once the GM has assembled the players who are going to participate in this adventure, they should decide whether or not to generate their own characters. *Lost on Laidley* is designed as a learning experience for all concerned, and it might be better if each player is free to experiment with the game systems without the fear that a mistake would cause his character's death. To facilitate this, five pre-generated characters are detailed in 40.2 through 40.6. These characters are varied in their characteristics and skills to allow many game systems to be used during the adventure. They are also designed to mesh well with the mission as it stands. These characters may only be used until the end of the adventure on Laidley. After that the GM should have players generate their own.

If there are five players, the GM assigns each player one character or allows them to be chosen randomly. With fewer than five players, certain players may play more than one character or the GM may play any which are left over. It is not normally recommended that a player control more than one character, but for this adventure the GM may allow it. If the GM decides not to use all five characters, they should be chosen by priority. Each character is listed in order of his importance to the successful completion of the mission. Character #1 is the most important, character #5 the least. The players should be informed of this information only if they question the selection of characters; otherwise they may receive clues as to the proper way to resolve the adventure they might not have thought of themselves.

If the players wish to generate their own characters, the GM should allow it, reminding the players of the rationale discussed above. To aid in the successful completion of the mission, the GM may assign one or two of the pre-generated characters to aid the fledgling party. Characters #1 or #2 (or both) would be ideal choices. As before, the players could run these additional characters, or the GM may run them as NPC's.

Once the players have their characters, the GM should examine their Character Records for completeness and accuracy.

If the players are using the pre-generated characters, the players should give their character a name.

Note: The Environ Skill Level is listed for each character's Home Environ only; all other environ Skill Levels should be extrapolated as explained in Case 5.4.

[52.1] The GM should read or paraphrase the following background of the adventure for the characters.

This is the story of the ill-fated expedition that Darmath Svenson, the adventure's sponsor, will present to the characters as he heard it from the expedition's commander. The characters have been hired by Svenson to go on this mission. If the players are using the pre-generated characters, it was through their explorer character that the initial contact was made with Darmath's secretary. If the players are using their own characters, the GM should invent the connection. The characters are escorted into Darmath's personal office, located somewhere in downtown New Oslo. It is the office of a man who is president of his own trading firm, a firm which is doing very well financially. Darmath is a dashing middle-aged man in good shape. For a complete description, see 41.1. He will ask the characters to make themselves comfortable and will then relate this tale:

One year ago, a scientific expedition set out from New Oslo for Laidley (see 39.0 for information concerning the system, which should be shown to the players). The expedition was concerned with exploration *and* mapping of that world in preparation for possible colonization. They landed without incident, set up Laidley Base 1, and then proceeded to investigate the area (Environ 13 of the World Log). Laidley proved very inhospitable, having a poison atmosphere and almost no water. A great deal of the expedition's time was spent synthesizing oxygen and water. Some readings seemed to indicate there was some water underground. One favourable attribute was the plant life; not only was it edible, but very flavourful as well. Another interesting item was a strange creature which the expedition called an Auroch. It was a docile herd animal, vaguely swine-like, which roamed the world. The Aurochs never threatened the expedition, being herbivores and appearing very stupid. Various sighting of other creature types excited zookeepers on Kryo, and a biological survey mission had been planned for early next year. These detailed creature reports had been sent back by the expedition's biologist, Mordecala Svenson, Darmath Svenson's sister.

After eight months of painstaking exploration and examination, the expedition was ready to give up on Laidley. There was not enough water to justify active colonization. Then one day scanning revealed traces of surface water 8,000 km west of Laidley Base 1.

Mordecala was chosen to lead a small scouting party to the site to investigate. They chose a Floater to avoid the volcanic range to the west.

This scouting party consisted of 10 expedition members, all of whom disappeared.

Their journey took 200 consecutive hours of flying. The trip was uneventful until the end. (At this point, Svenson will play a tape of the scouting party's last radio transmission. They had been having trouble with the radio's transmitter and the message is garbled as a result.)

"....having a.....with monopole electrical sy.....possibly.....land the Floater here.....water!.....oh, no.....Cord, help steady the.... .going to land.... .the lake...—"

The voice was a female, and Darmath will tell the characters the voice was Mordecala's.

Three days after the last transmission, the volcanic range became active, and the expedition's safety was in jeopardy. Because the world showed so little promise, the expedition commander (Svenson here indicates extreme disgust with the choice) chose to leave the world. Knowing the fate of the scouting party was in doubt (but fearing the worst) the commander ordered a fly-by of the area from where the party's last transmission was received. Upon seeing no trace of them, not even the wreckage of the Floater, the commander ordered a state funeral for the 10 and returned to Kryo. Questioned upon his return, the commander admitted that, because no trace at all had been spotted, there was doubt as to the fate of the scouting party. The funerals were cancelled. All investigators admitted the curious fact was the absence of any metal debris, but most concluded the party's Floater had sunk into the lake, which was mentioned.

Svenson believes there were no remains because the party had landed the Floater, repaired it, and proceeded to return to Laidley Base 1. Their radio was inoperative, so they could not have radioed in, and the expedition left without them. At least, this is the hope he is clinging to. The accident occurred four weeks ago.

Svenson will supply the party with all the necessary equipment and transportation to Laidley. He will drop them off on the world at Laidley Base 1 on his way out-system to complete a business deal. His ship, the *Star Vision* (Corco *Iota* class), will carry the characters, a crawler, and plenty of equipment to Laidley, and the ship's Lander will provide transportation to the surface. If the missing expedition has not returned to the base, the characters will have 18 days to complete their mission, for then Svenson will be returning to Kryo, and will stop at Laidley to pick them up. The characters will be able to contact the ship from anywhere on Laidley via their vehicle's radio and they will be picked up wherever they are at the moment.

Their mission is to first find out what happened to Mordecala. Svenson wishes concrete proof of one form or another; he wants to be sure of what happened to her. Second, any unusual creatures the characters can capture and bring back with them they will be paid for (Svenson is not interested in the Aurochs).

The characters are offered 5 Trans apiece for completing the mission, and double that if any interesting creatures are captured. Svenson will pay triple that if concrete evidence of Mordecala's fate is brought back.

Svenson will gladly answer any questions the characters present to him, then he will urge them to prepare themselves for the mission, as he wishes to leave tomorrow.

[52.2] Character #1: Explorer

ST: 5 **EN:** 4 **DX:** 4 **AY:** 5 **IN:** 7 **MP:** 3 **LD:** 7 **EM:** 4 **AG:** 8 **SS:** Family fallen on hard times

Age: 28 **Money:** 600 Mils

Skills: Urban 1; Grav **NW (-1)**, **LT (2)**, **HY (-1)**, **EX (-3)**; Temp **NL**; Environ **MN/LV (4)**; EVA 2; Handguns 2; Pilot 2; Survival 2; Ground Vehicles **ATV 3**; Biology 1; Geology 1; Streetwise 1.

Possessions: None except clothing.

[52.3] Character #2: Scientist

ST: 4 **EN:** 5 **DX:** 5 **AY:** 3 **IN:** 9 **MP:** 2 **LD:** 3 **EM:** 4 **AG:** 3 **SS:** Skilled Tech Family.

Age: 32 **Money:** 10 Trans, 500 Mils

Skills: Urban 0; Grav **NW (1)**, **LT (-1)**, **HY (-3)**, **EX (-5)**; Temp **CD**; Environ **PK/WD (3)**; Chemistry 3; Planetology 3; Biology 3; Geology 1; Laser/Stun Pistol 1; Ground Vehicles **Truck 1**; Vehicle Tech 1; Streetwise 1.

Possessions: Civ Level 6 Chemsynthesizer, clothing.

[52.4] Character #3: Space Trooper

ST: 6 **EN:** 6 **DX:** 7 **AY:** 6 **IN:** 4 **MP:** 2 **LD:** 6 **EM:** 3 **AG:** 8 **SS:** Lower Middle Class.

Age: 32 **Money:** 3 Trans, 600 Mils.

Skills: Urban 1; Grav **NW (-3)**, **LT (0)**, **HY (2)**, **EX (0)**; Temp **HO**; Environ **HL/VO (4)**; Body Armour 4; Machine Gun 2; Paint Gun 3; Suit Tech 1; Ground Vehicles **ATV (1)**; Laser/Stun Pistol 3.

Possessions: Reflect/impact armour (Civ Level 7), clothing.

[52.5] Character #4: Doctor

ST: 4 **EN:** 4 **DX:** 8 **AY:** 4 **IN:** 9 **MP:** 2 **LD:** 2 **EM:** 6 **AG:** 4 **SS:** Local Establishment.

Age: 36 **Money:** 4 Trans, 600 Mils.

Skills: Urban 2; Grav **NW (-1)**, **LT (1)**, **HY (-1)**, **EX (-3)**; Temp **NL**; Environ **FL/JU (2)**; Teaching 3; Diagnostics 4; Treatment 3; Ground Vehicles **Automobiles 1**; Laser/ Stun Pistol 1; Electro Tech 2; Physics 1.

Possessions: Mediscanner (Civ Level 6), clothing.

[52.6] Character #5: Ex-Scout

ST: 4 **EN:** 3 **DX:** 4 **AY:** 4 **IN:** 6 **MP:** 2 **LD:** 3 **EM:** 7 **AG:** 5 **SS:** Skilled Tech Family.

Age: 24 **Money:** 1 Tran, 300 Mils.

Skills: Urban 0; Grav **NW (1)**, **LT (-1)**, **HY (-3)**, **EX (-5)**; Temp **HO**; Environ **PK/VO (2)**; EVA 2; Handguns 2; Pilot 2; Survival 2; Air Vehicles **Glider (1)**, **Direct Lift (1)**; Treatment 1; Biology 1; Suit Tech 2.

Possessions: None except clothing.

[52.7] Darmath Svenson will provide the characters with the following equipment for their use on Laidley.

Crawler (ATV). See 21.1 and the Land Vehicle Chart for all specifications on this vehicle. The crawler has an oxygen synthesis system programmed to work in the poison atmosphere of Laidley. Four weeks of food and water for five are aboard. The rear of the vehicle is sealed off from the passenger compartment to provide 10 cubic meters of space to store creatures in their own atmosphere. An air lock large enough for one man separates the two compartments. Built into the crawler are a planetary Shortwave and a Neuroscanner.

The following items are loaded into the crawler: six Civ Level 7 expedition suits (character #3 will probably want to use his armour instead); one Civ Level 8 Bioscanner; one Civ Level 8 chemsynthesizer; one first aid kit; one energy scanner; one basic repair kit; one suit kit; one Civ Level 8 Electrokit; one Civ Level 6 vehicle kit; four force cages; one super cage (eight cubic meters); two metal cages (one cubic meter each); three Civ Level 8 laser pistols; two Civ Level 5 pistols; two Civ Level 8 stun pistols; one Civ Level 6 paint gun; one Civ Level 8 needle pistol; and binoculars. The characters may also bring along any equipment they already own. If they wish to leave any behind, Svenson's associates in New Oslo will watch it.

[53.0] The Gamemaster's Background

The situation as Darmath Svenson described it to the characters is accurate as far as it goes. His suppositions concerning the fate of the missing expedition are erroneous, however. Nothing of the fate of the missing explorers is known to anyone but its five surviving members, and the players should not be able to find out any of it unless they find the explorers.

The description of Svenson is a guide as to how his part should be played by the GM. The final interpretation of his personality is up to the GM, as he is the one who will be "acting" the part of Svenson for the player's benefit.

The Fate of the Missing Explorers

The floater carrying Mordecala Svenson, Cord Tenon, and their eight companions suffered electrical problems as it flew over the jagged peaks of the Kishtu Heights. After their radio failed, they spotted the lake (hex 1622 of the environ map) and chose to land the craft on its surface. Immediately after the floater settled on the lake, acidic agents in the water began corroding the metallic underside of the craft. The explorers threw a large life raft in the water, correctly assuming the acid would not eat through its synthetic construction. Wearing expedition suits and carrying what equipment they could, the 10 made for the shore 500 meters away. Looking back, they saw a transparent slug-like thing (*the* slug in mutant form, see 42.3) drag their dissolving floater beneath the surface of the rolling lake.

Mordecala lead the party away from the deadly lake northeast to a cave in hex 1522. There Cord set up their chemsynthesizer to purify water from a nearby stream and to synthesize oxygen from the atmosphere. However, it soon became clear that the initial supply of oxygen in their suits and the amount the synthesizer could produce would not be enough to support more than five people after five days. They were saved from a grisly decision when the four days were nearly up by the horrifying arrival of the slug in its new

incarnation. Three explorers died right away during the slug's attack and two others died due to exposure to the poison atmosphere when their suits were punctured in combat. Mordecala discovered that beam weapons hurt the creature terribly and thus was able to drive it away. Rather than chase the slug, Cord, Mordecala and the other three survivors tended to their fallen comrades and then moved their camp to a large clearing with a good field of vision.

The five remained there for days, exerting themselves as little as possible so as to conserve oxygen. There was plenty of purified water and they knew that some of the plants around them were edible. The slug returned a few times but was easily driven off with beam and stun weapons. Ten days after the crash, they were finally able to repair their radio and attempted to contact Laidley Base. Unbeknownst to the survivors, the Laidley expedition had already departed (they had been in the cave during the flyover). Totally unaware of the departure plans, Mordecala and Cord could only assume that their radio had an undetectable transmission problem.

Unless the characters are delayed, they will touch down at Laidley Base 30 days after the crash of the floater. The survivors are totally bewildered by the lack of a rescue attempt, but refuse to give up hope. Occasionally they will shoot off a flare or transmit with their seemingly defective radio. The slug has not bothered them for the past 15 days.

[53.1] Darmath Svenson hires the characters to undertake the adventure while in New Oslo on the planet Kryo.

A wealthy interstellar trader (dealing in high quality optics), Darmath Svenson had very little to worry him. He had cut quite a swath through the society of New Oslo. Having inherited the business from his entrepreneur father, his own acute trading instincts had set him up for life financially, and his taste for sporty ground cars and even sportier women was legendary. His exotic whims ranged from various spices to strange alien creatures. This devil-may-care existence was shattered with the news his sister Mordecala had been lost on an expedition to the planet Laidley.

News of her demise was sketchy at best, but Darmath was determined to discover what had happened. Along with his sincere concern for his sister was his curiosity regarding rumours of very strange creatures inhabiting the planet. He instructed his secretary to examine his company's files for an explorer he could hire for this mission. She discovered a man who had grown up in an environ similar to the one in which his sister was lost, and also knew how to operate an ATV. A man of such qualifications could retrieve any creatures encountered and also search for any trace of Mordecala. Darmath was not quite sure his sister was dead (although he feared the worst), and would not truly accept her fate without concrete proof. His characteristic ratings are:

Darmath Svenson

ST: 5 **EN:** 6 **DX:** 3 **AY:** 3 **IN:** 8 **MP:** 2 **LD:** 6 **EM:** 4 **AG:** 2 **SS:** Independent Trading Family.

Skills: Urban **2**; Gravity **Lt 1**; Temp **NL**; Environ **N/W (2)**; Pilot **2**; Economics **4**; Trading **5**; Automobile **3**; Shuttle **2**; Motorboat **2**; Gambling **2**; Biology **1**.

Darmath is a handsome male of Scandinavian descent; he is middle-aged, but in very good shape. He does not wish to actually risk his own skin and instructs the party as such. His little sister Mordecala was/is very close to him and resembles him slightly (enough so that the characters would notice).

[53.2] The adventure begins as the characters board a transporter shuttle with Darmath Svenson at the New Oslo terminal to fly to the Kryo orbiting spaceport.

The trip to the spaceport takes about an hour. Six hours after the characters arrive at the spaceport, the *Star Vision* is ready to depart. While waiting, the characters will undergo a short courteous federal inspection (Svenson is known and trusted at the Kryo spaceport). The rest of the time is the character's to do with what they will. The journey from Kryo to Laidley in the *Star Vision* takes about four days (calculated in accordance with 33.0).

The *Star Vision* is a Corco *Iota* Class luxury freighter with the following pods:

light weapon, augmented jump, energy, full service luxury, crew, Lander, standard cargo, buffered cargo, living cargo. All pods are armour Class 1. The ship is fully crewed; the characters may relax during the voyage.

After going into orbit around Laidley, the characters will be directed to the ship's Lander pod where they will board the *Spectral Dancer*. *Dancer's* pilot informs the characters that the craft cannot land in steep, mountainous terrain (anything greater than Terrain Value 2), so when the characters call for pick-up in 18 days, they should be in an accessible area. The Lander will depart the *Star Vision* and deposit the party, and all their equipment about 100 meters from the remains of Laidley Base 1. No sign of the missing expedition will be found at all. The characters are on their own.

During the transit from New Oslo to Laidley Base 1, the GM should check for encounters in accordance with 27.1, using the appropriate column of the Encounter Table. It is possible that an encounter on the way to Laidley will delay or alter the conduct of the mission.

[54.0] Laidley

Once the characters have landed at Laidley Base and the Lander has departed, they have entered into the heart of the adventure. The GM should read this Section carefully, to familiarize himself with the overall situation on Laidley so that he may properly interact with the characters as they seek their goals.

Environ 13 (containing Laidley Base) and the environs lying between it and the survivors' environ do not have environ hex maps. The characters will probably plot a route of travel between the base and the lake area in Environ 7. A likely route will take them through 2,000 km of Environ 13, 2,000 km of Environ 5, and 2,000km of Environ 2, from which they would enter Environ 7 in hex 0130 to 0135. Of course, the GM should not suggest this route, but should keep in mind that if the party is not travelling the entire length or width of an environ, he should estimate the distance they traverse.

Laidley Base is a group of simple huts, which may be sealed, from the poison atmosphere. Some heavy equipment has been left behind, including an operable oxygen synthesizer that will provide for at least 30 people. The party will find nothing of use that may be carried in the crawler (the synthesizer is the size of a small hut).

[54.1] A hex map of Environ 7 on Laidley is provided for use by the GM and the players.

The GM should show the players this map before starting the adventure. It is assumed all the information on the map was gathered during an orbital mapping flight well before the character's mission.

Environ 7 is a light vegetation/mountainous environ, and most of the map shows features of this type. Some variation in the form of peaks, hills, flat areas, barren areas, and woods are also present. Some volcanic areas exist on the east and south edges (adjacent to environs 6 and 18). The mass of peaks in the middle of the environ form the *Kishtu Heights*, a series of canyons and steep mountains. Winding through the Kishtu is a network of small streams and dry stream beds that lead to the lake in which the missing explorers lost their floater (hex 1622). The lake has a diameter of about 40 km. The GM should remember that the terrain and contour of any hex the party currently occupies is considered their environ for purposes of encounters and movement, regardless of the overall nature of Environ 7.

[54.2] The five surviving members of the missing expedition are encamped in a clearing in hex 1522 of the Environ 7 hex map.

Two of the survivors are Mordecala Svenson (Darmath Svenson's sister), and Cord Tenon, the original mission's chemist. Mordecala was the biologist, and her skill and knowledge saved the remaining members from the slug during the attack in which it killed the five others. Both Mordecala and Cord are residents of New Oslo, and knew each other before this ill-fated mission. They have become very close due to the fear and tension, and will try and protect each other in any pressure situation. Cord's skill as a chemist has kept the group alive by synthesizing water and oxygen with his lab. Mordecala knows all the information concerning the slug as listed for the GM except the tunnelling ability. As far as they are aware, the thing is still in the lake.

Mordecala's characteristic ratings are:

ST: 3 **EN:** 4 **DX:** 4 **AY:** 4 **IN:** 7 **MP:** 2 **LD:** 7 **EM:** 6 **AG:** 7 **SS:** Independent Trading Family.

Skills: Urban 1; Grav Lt 1; Temp NL; Environ N/W (3); Laser/Stun Pistol 2; Direct Lift 1; Programming 1; Biology 6; Geology 1.

Cord's characteristic ratings are:

ST: 4 **EN:** 5 **DX:** 4 **AY:** 4 **IN:** 6 **MP:** 3 **LD:** 5 **EM:** 5 **AG:** 5 **SS:** Skilled Tech Family.

Skills: Urban 1; Grav Lt 1; Temp NL; Environ N/W (2); Laser/Stun Pistol 1; Handguns 2; Pilot 1; ATV 1; Chemistry 6; Programming 1; Electro Tech 1.

The possessions for the group as a whole: planetary Shortwave radio; basic repair kit; expedition suits; laser pistols (Civ Level 8); stun pistols (Civ Level 7); pistols (Civ Level 5); Chemsynthesizer (Civ Level 8); flare gun and 1 dozen rocket flares, life raft, sundry minor miscellaneous items (knives, personal effects).

The three other remaining members should be named and personalized by the GM, remembering that if any die (as described in 42.4), these will be the first to go. Their characteristic ratings are:

ST: 3 **EN:** 3 **DX:** 3 **AY:** 5 **IN:** 5 **MP:** 1 **LD:** 4 **EM:** 2 **AG:** 2 **SS:** Skilled Tech Family.

Skills: Urban 0; Grav Lt 1; Temp NL; Environ N/W (2); Laser/Stun Pistol 1; Handguns 1; Direct Lift 1; Biology 1; Geology 1; Any skills the GM sees fit 1.

[54.3] The slug is a dangerous creature that wanders the Kishtu Heights and surrounding area in Environ 7.

The slug is encountered in accordance with 42.4 and 42.5.

Size: Two Hex (large in first hex, one hex in second hex).

Combat: 14 **AY:** 4 (12 when in water) **AG:** 11 **IN:** No **Initiative:** 10%

Composition: Carbon-based

Powers: Heightened smelling, regeneration and kinetic absorption.

Dart shooting: May shoot one metal spike from above its mouth as an attack each Action Round. Chance to hit man is 80% minus 10 percentage points for each hex distant. Hit Strength and range as in power description.

Acid: Teeth and mouth secrete acid for dissolving metal. Acid will not harm expedition suit. Reduce effectiveness of character's armour by one when attacked by slug. **Tunnelling:** Will always have a tunnel entrance within 10 hexes each time encountered. Agility Rating doubled when in tunnel. See notes below for further information.

• **Warning:** A glistening trail of rusty powder leads towards a large quivering shape in the distance; or slurping sounds are heard within the entrance to a tunnel encrusted with red powder.

• **Sight:** Eight-meter long slug-like creature covered with a sticky, rust-coloured powder constantly dropping off its body and forming a trail behind it. Blue-green splotches are visible beneath the coating. Large cog-like teeth at its front end seem to make up its mouth.

• **Perception:** The slug's teeth drip an organic acid capable of dissolving metals. The acid neutralizes after a few minutes in the open. The creature's coating and trail are its perspiration and excrement, the metallic residue of its digestive process. A small orifice directly above its mouth looks as if it emits matter rather than taking it in.

• **Examination:** The slug lives on the metallic elements it ingests. Some of its intake is converted into small adamantite spikes that the creature shoots to break rock as it tunnels, searching for new concentrations of food. The acidic water of the lake and the streams running into the lake are the source of the creature's power. If the creature is hurt and returns to its water before dying, it regenerates immediately (it also regenerates when out of water, at a slower rate). The creature dislikes plastics and other non-metallic elements and may be easily restrained in two force cages or a sturdy, non-metallic container (if large enough).

History and Additional Information:

Prior to the arrival of the stranded explorers, the slug existed in another form. It floated through a lake (hex 1622 of the environ hex map) like a jellyfish, ingesting metallic elements brought into the lake by many small streams. The slug was very similar to the lake it festered in; they both dissolved and ingested metals using powerful acids. The creature however, had a distinct form and a mind. When the explorer's floater settled on the lake and started to corrode, the slug went wild; never before had it received so much concentrated food at one time. Along with the floater's hull, the slug took in the craft's source of power, a plate of magnetic monopoles. This caused violent reactions and mutations in the creature, which almost killed it. The creature did not die, however; after three days it slithered ashore in a new amphibian form with abilities that enabled it to travel and tunnel in its craggy environment.

Though aggressive, the creature likes to live and will flee if it is being hurt. The creature will always head for water or, if no water is nearby, to a tunnel entrance.

If the characters encounter the slug when they have the crawler, the slug will be much more interested in attacking the vehicle than the characters. If the characters leave the crawler behind when an encounter with the slug occurs, the GM may have the creature destroy the crawler, unbeknownst to the characters.

[54.4] While the characters are on Laidley, the GM uses the "100 Thousand or less" column of the Encounter Table for all encounter checks.

The procedure in 27.1 is used with the following modifications:

Common NPC: No NPC encounter. The survivors are transmitting with their radio. If the characters are in the crawler and its radio is on, they receive the message and may respond. The survivors can give the characters exact co-ordinates of their location.

Rare NPC: Treat as no encounter. One of the five survivors dies.

Unique NPC: Choose a unique NPC from 36.0.

Common Creature: Always treat as an encounter with a herd of *Aurochs* (creature #1 in 35.0). Roll *percentile* dice to determine how many are present.

Rare Creature: Choose an appropriate creature from 35.0.

Exception: If the party is within sight of a stream on the Environ 7 hex map, they encounter the slug.

Unique Creature: Choose an appropriate creature from 35.0.

Exception: If the party is within 200 km of a stream on the Environ 7 hex map, they encounter the slug.

Common, rare or unique accident:

Choose an appropriate accident from 38.0.

No event: Locate the dice result among the following list of events:

82-88. If the party is within 300 km of a stream on the environ 7 hex map, they come across a trail of rust-like powder about three meters wide (the slug's path). Following the path in one direction will lead the party to the nearest stream; the other direction will lead them to a tunnel entrance (roll percentile dice for the number of kilometres distant).

89-96. The survivors shoot off a flare. If the characters are in hex 1522, they may follow the flare's trail to the survivor's camp. If the characters are within two hexes of 1522, they see a reddish glow on the horizon in the general direction of 1522. The GM should keep track of flares fired by the survivors. When 12 have been used, no more are available.

97-98. The survivors have turned their radio on for 1 hour to listen for transmissions. If the characters transmit with the crawler's radio during this time, contact is established. The survivors can give the characters exact co-ordinates of their location.

99. The survivors have turned their radio on for 2 hours to listen for transmissions. See above.

100. The survivors have turned their radio on for 4 hours to listen for transmissions. See above.

[54.5] The following events occur automatically if the appropriate conditions are met.

1. Each time the party comes to a stream hex side, the GM rolls *two* dice and subtracts the hex side's distance (in hexes) from the lake (1622) from the dice result. Locate the modified result in the following list:

0 or less: The stream is dry.

1-4: The stream is a trickle of water or puddles no more than 1/2-meter wide and 10 cm deep. The water is drinkable if boiled.

5-7: The stream is a flow of water about two meters wide and 1/2-meter deep. Easily traversable. The water is drinkable if purified (a simple synthesis task; refer to the chemistry skill).

8-10: The stream is a rushing brook with steep banks. Dangerous to cross on foot, no problem for crawler. The water is slightly acidic but may be made drinkable with heavy purification (advanced synthesis task; see chemistry skill).

11 or more: The stream has cut a deep wide gorge and is totally impassable. The water is very acidic and may not be made drinkable. The GM may wish to check for damage to any metallic equipment that comes in contact with the water.

Exception: A stream hex side may not have less water than a part of the same stream fork further away from the lake. For example, if a stream hex side of 0716 has a trickle of water, a stream hex side of 0918 may not be dry if encountered by the characters later on.

2. If the party comes to the shore of the lake, and the slug has not yet been killed, they automatically encounter the creature here. The water in the lake has the same properties as that in an impassable stream, (see preceding).

3. If the party travels along the stream separating hex 1522 from 1623, they will encounter the survivors 200 meters from the north side of the stream (in 1522).

4. Exactly 18 days after the party is dropped off at Laidley Base, Darmath Svenson's spaceship will be in orbit around Laidley attempting to contact them. Radio contact may be established with the crawler's radio or with the survivor's radio. Once contact is achieved, the GM rolls one die to determine how many hours will pass before the shuttle touches down to pick them up. **Note:** The shuttle may not land in an area with a Terrain Value above 2.

[55.0] Adventure Afterward

Lost on Laidley was designed to be a teaching adventure and an introduction to *Universe* for both the players and the GM. The GM must keep this in mind while running the adventure, and freely discuss any problems, which he or the players might have.

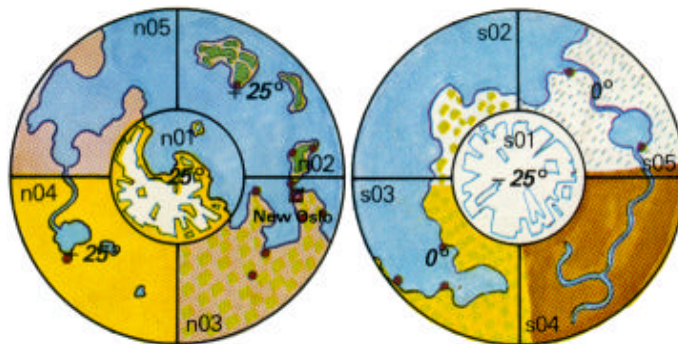
The information presented in the adventure cannot cover all possible contingencies, and the GM must be prepared to flesh these areas out. If any of the players own a copy of *Universe*, it would be wise to insist they do not read *Lost on Laidley*, as it would greatly detract from their enjoyment of the adventure. In this regard, the GM may want to alter a few pertinent details to prevent any player from becoming overconfident.

The Orionis system holds many interesting adventures in addition to the one presented. Perhaps the biological survey mission to Kryo could be played, for instance. The GM should use this star system to its fullest extent, thus giving himself time to set up adventures of his own and become confident in his abilities as a GM.

Once the campaign has begun, the GM should feel free to alter any details mentioned concerning the settlement and colonization of the Orionis system to be consistent with his own ideas.

WORLD LOG: Size 3 (KRYO)

Gravity: 0.4 (NW) Action Round Movement: +4



NAME Kryo **TYPE** Earth-Like **MOONS (nr.)** 0 **DISTANCE FROM STAR** 2.5 AU's **ATMOSPHERE** Thin

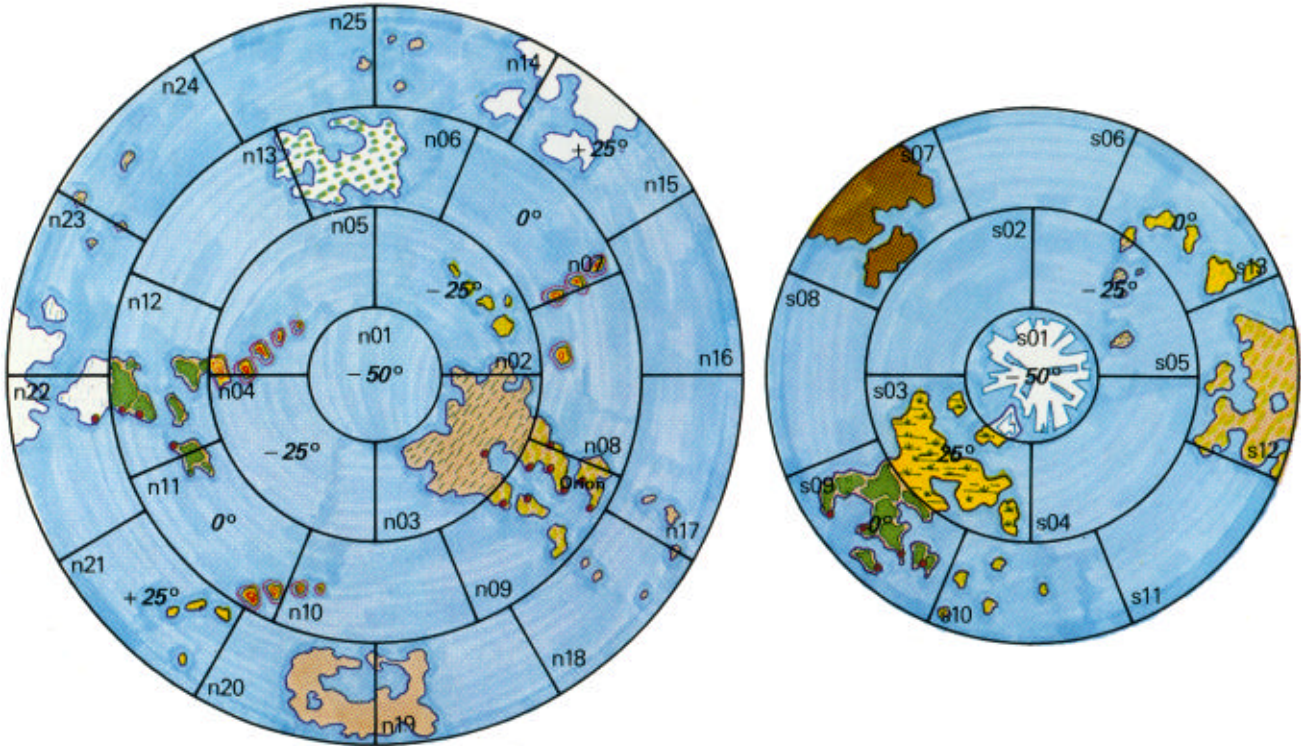
MEAN TEMP 25°F **HYDROGRAPH** 40% **DAY LENGTH** ? **HUMAN POPULATION** 10 million

SETTLEMENT STATUS Full-Tech Colony

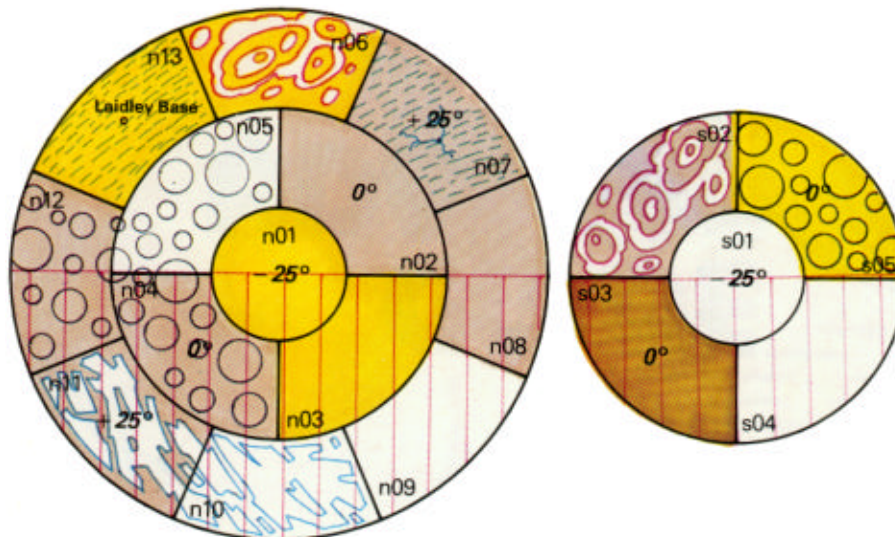
LAW LEVEL 3 **CIV LEVEL** 7 **SPACEPORT CLASS** 2

RESOURCES Iron (exportable), Carbon chemicals (exportable), Aluminium, Light fibre plants, Edible plants, Sulphur, Argon, Nitrogen chemicals, Silver, Phosphorus.



WORLD LOG: Size 6 (TITUS)**Gravity: 1.3 (HY) Action Round Movement: -2**

NAME *Titus* **TYPE** *Earth-Like* **MOONS (nr.)** *2* **DISTANCE FROM STAR** *1.5 AU's* **ATMOSPHERE** *Normal / Contaminated*
MEAN TEMP *75°F* **HYDROGRAPH** *80%* **DAY LENGTH** *?* **HUMAN POPULATION** *20,000*
SETTLEMENT STATUS *Pioneer Colony*
LAW LEVEL *2* **CIV LEVEL** *4* **SPACEPORT CLASS** *½*
RESOURCES *Edible plants (exportable), Helium, Chlorine, Iron, Caesium, Copper.*

WORLD LOG: Size 4 (LAIDLEY)**Gravity: 0.7 (LT) Action Round Movement: +2**

NAME *Laidley* **TYPE** *Tolerable* **MOONS (nr.)** *1HP* **DISTANCE FROM STAR** *5 AU's* **ATMOSPHERE** *Poison*
MEAN TEMP *0°F* **HYDROGRAPH** *0%* **DAY LENGTH** *?* **HUMAN POPULATION** *0*
SETTLEMENT STATUS *Explored Abandoned*
LAW LEVEL *0* **CIV LEVEL** *1* **SPACEPORT CLASS** *0*
RESOURCES *Nitrogen chemicals (exportable), Silver (exportable), Germanium (exportable), Edible Plants, Ammonia, Phosphorus, Radioactives, Caesium, Adamantine, Mercury.*

REMARKS *Laidley orbits Orionis like Earth's moon. The shaded side is always in darkness, while the other side is always in light.*

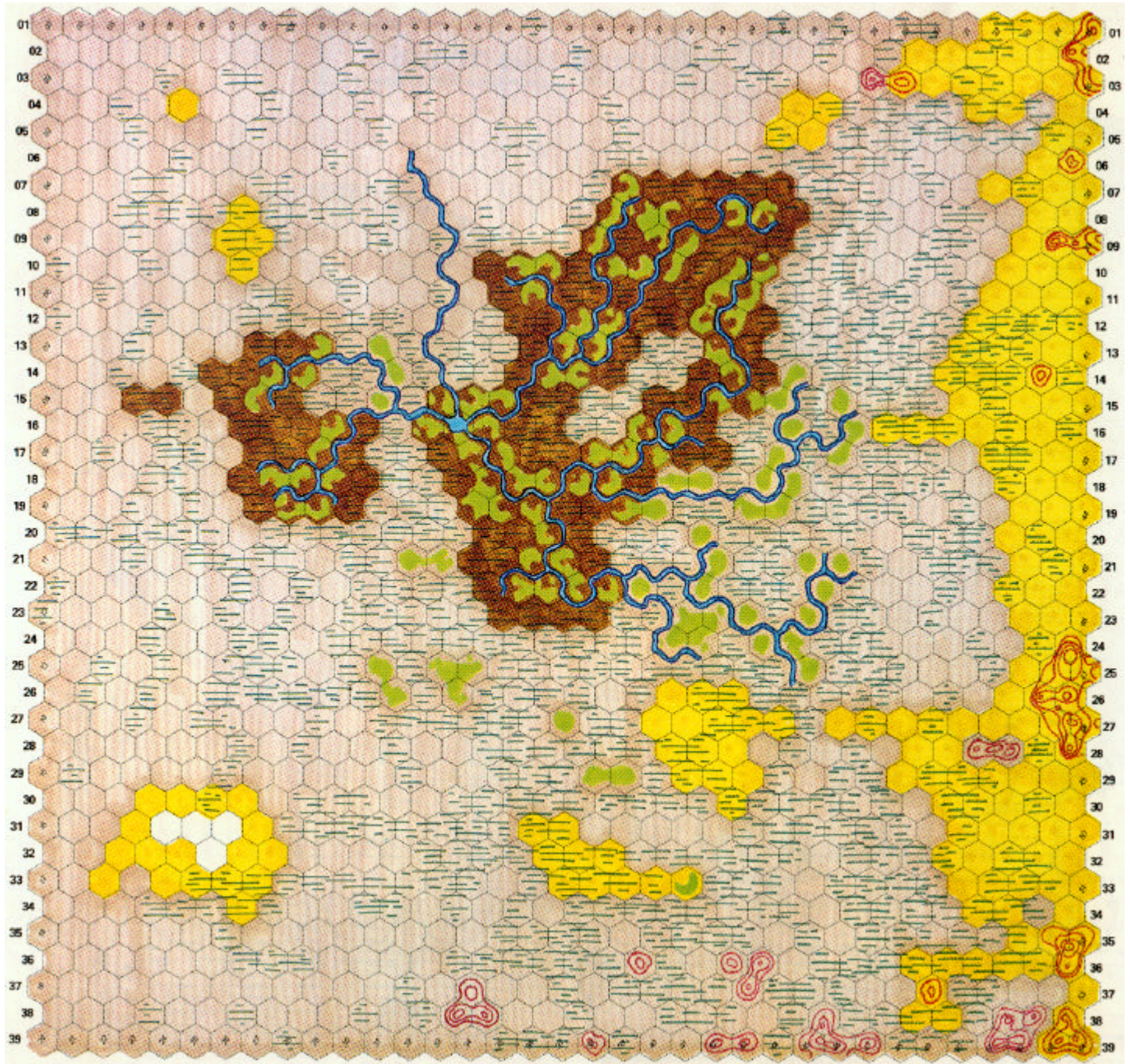
LAIDLEY ENVIRON HEX MAP

1 hex = 100Km

Environ nr. **n07** of Laidley

Average Temperature 50°F

Top of map is North, leading to Environ **n02**



XII. Appendices

(Please note this section is incomplete and will be amended in later versions)

Measurement Conversions:

TEMPERATURE CONVERSIONS

Conversion	Formulae:
Celsius °C to Fahrenheit °F:	°F = (C x 9/5) + 32
Fahrenheit °F to Celsius °C:	°C = (F- 32) x 5/9
Celsius °C to Kelvin °K:	°K = C -273
Kelvin °K to Celsius:	°C = °K +273

DISTANCE CONVERSIONS

Distance	AU	Kilometres	Miles
1 AU	1	149597870	92960116
Speed of Light			
1 Light Second =	499/Sec	300000/Sec	186000/Sec
1 Light Minute =	29940		
1 Light Hour =	1796400		
1 Light Day =	4113600		
1 Light Week =	301795200		
1 Light Month =	1207180800		
1 Light Year =	63240	9.46053e12	5.88e12
1 Parsec = 3.26LY			