

Book 3
Worlds and Adventures

TRAVELLER

*Science-Fiction Adventure in
the Far Future*

Game Designers' Workshop



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TRAVELLER, Volume 3

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Although this game (as presented in Volumes 1, 2, and 3) envisions a referee or umpire to supervise play or to resolve questions, the publisher is prepared to answer questions or inquiries on *Traveller* provided a stamped, self addressed envelope accompanies the request.

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The referee has the responsibility for mapping the universe before actual game play begins. The entire universe is not necessary immediately, however, as only a small portion can be used at any one time. In unsupervised play, one of the players can generate worlds and perform mapping on a turn by turn or adventure by adventure basis.

Generally, the universe is mapped in convenient segments, called subsectors. A convenient size for subsectors is that of the hex grid sheet printed in this booklet on page 3. Each hex in a subsector represents the distance that may be covered by an interstellar jump of distance 1 (1 hex = 1 parsec, or 3.26 light years). In mapping, each hex is examined to determine if a world (and its attendant star system) is present; the quality of the local starport is then determined. Finally, jump routes or space lanes connecting worlds are determined.

Initially, one or two sub-sectors should be quite enough for years of adventure (each sub-sector has, on the average, 40 worlds), but ultimately, travellers will venture into unknown areas and additional subsectors will have to be charted.

STAR MAPPING

To create an initial subsector, use the following procedure:

1. World Occurrence: There is a basic one-half chance normally that a world (and its attendant stellar system) will be in a hex. Systematically check each hex, throwing one die and marking the hex with a circle if the result is a 4, 5, or 6. This indicates that a world is present; otherwise, leave the hex blank.

The referee may elect to alter the normal chances of worlds, making them more frequent or less frequent to correspond to specific regions of the galaxy. This is easily accomplished by imposing a DM of +1 or -1 on the whole subsector, or on broad areas within a subsector.

2. Starport Type: Many worlds have starports, their presence being essential to interstellar trade and commerce. Each world must be checked for its starport type; throw two dice for each world in the subsector, and mark the world with the letter indicated on the starports table.

The starports table indicates one specific distribution of starports as a basis for star mapping. Just as the distribution of stars can be altered (as indicated in item 1), the referee is also free to create his own starports tables, perhaps as many as one for each subsector.

Starports are further described in the starport chart. In many cases, starports will be accompanied by naval or scout bases, and will have a wide range of facilities. In nearly all cases, a planet will consider that a starport is extraterritorial, and not subject to local law, but will also enforce strict entrance and exit controls.

3. Route Determination: The worlds of a subsector are connected by the charted space lanes, which mark the regular routes travelled by commercial starships. While it is possible for starships to travel without regard to the lanes charted, individuals

STARPORTS

<i>Die</i>	<i>Type</i>
2	A
3	A
4	A
5	B
6	B
7	C
8	C
9	D
10	E
11	E
12	X

JUMP ROUTES				
World	----- <i>Jump Distance</i> -----			
Pair	Jump-1	Jump-2	Jump-3	Jump-4
A-A	1	2	4	5
A-B	1	3	4	5
A-C	1	4	6	—
A-D	1	5	—	—
A-E	2	—	—	—
B-B	1	3	4	6
B-C	2	4	6	—
B-D	3	6	—	—
B-E	4	—	—	—
C-C	3	6	—	—
C-D	4	—	—	—
C-E	4	—	—	—
D-D	4	—	—	—
D-E	5	—	—	—
E-E	6	—	—	—

who do not own or control starships are generally restricted to commercial travel on ships which ply to routes which are mapped.

For each world, note the starport type for it and for its neighbors. Consult the jump routes table, throwing one die. Four columns are provided, corresponding to jump distances one through four. Determine the distance between the two worlds, and the relationship between the starports. At the intersection of the distance column and the world pair row, a number is stated. If the one die throw is equal to, or greater than the number, a

space lane exists. Draw a line connecting the two worlds on the map. Each specific pair of worlds should be examined for jump routes only once.

This procedure is followed for most worlds within four hexes of each other; some worlds will obviously not have connecting space-lanes, and others will obviously have many. The nature of interstellar jumps is such that a jump-2 may be made over two connecting jump-1 links; by remembering this facet of star travel, it is possible to ignore some potential connections because they are already present through the use of shorted connecting lanes. This may well help in the creation of legible subsector maps.

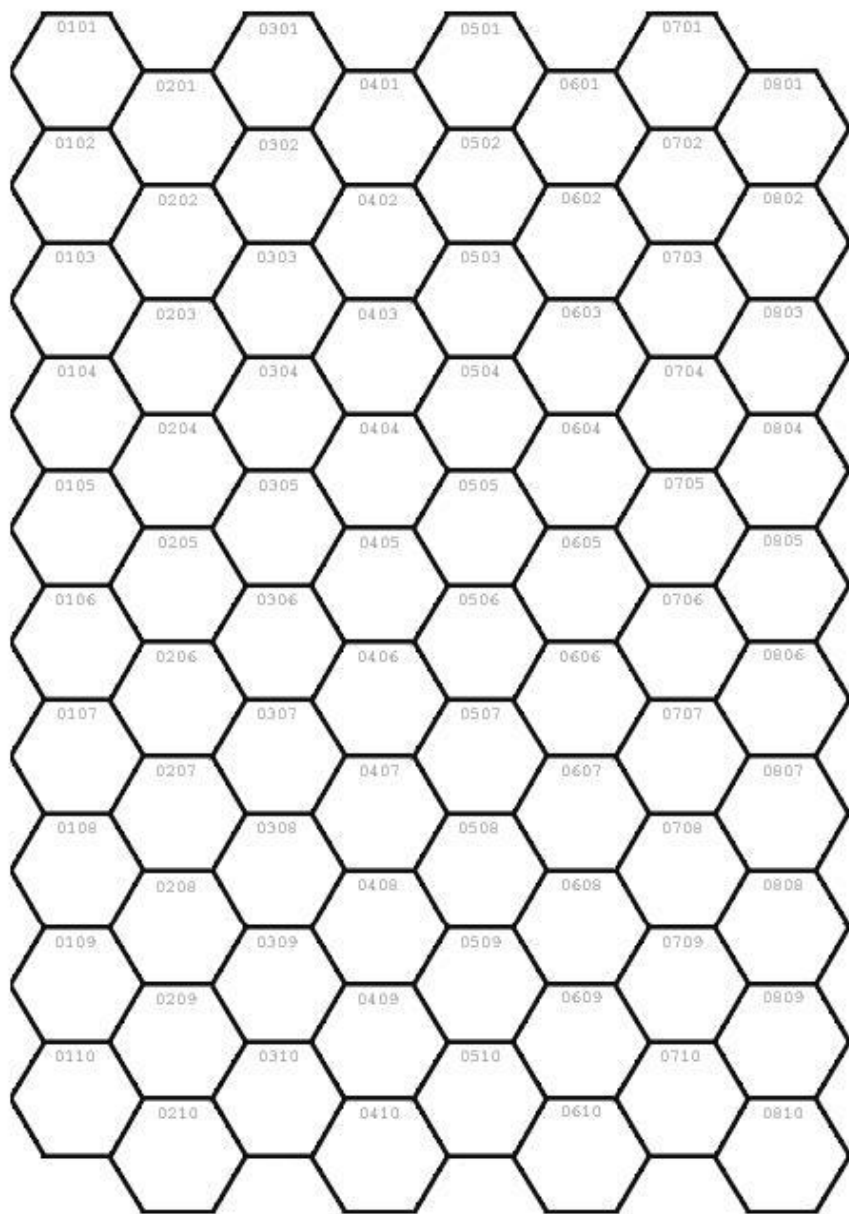
The star map, once generated, shows the distribution of star systems in space, and shows their relationships to each other in terms of relative distance and commercial space-lane connections.

WORLD CREATION

The worlds contained in the star systems on the subsector map may be further classified in terms of their gross physical characteristics and their effects on persons living on them or travelling to them. These characteristics (seven basics, plus a technological index) indicate specific facts about a world through the use of single digits (the numbers 0 though 9) and letters (A through Z, omitting O and I as they may be confused with numbers). In most cases, the instructions below concentrate on numbers, reserving letters for use by the referee to describe extraordinary situations.

This world creation process applies only to the single inhabited world in a star system; additional planets in a system should be generated as necessary.

The seven basic planetary characteristics are generated using two dice throws, with DMs applied based on other characteristics. After these seven are established, a technological index is created from the information they contain. In addition to these eight characteristics, any number of other descriptive characteristics are possible, and should be generated to more fully describe the specific world.



SUB-SECTOR HEX GRID

This hex grid is intended for use in the generation of stellar subsectors. Permission is granted to Traveller players to photocopy this page for personal use.

PLANETARY CHARACTERISTICS

Starport Type
Planetary Size
Planetary Atmosphere
Hydrographics
Population
Government
Law Level
Technological Index

Each world should be allocated at least one (and preferably several) pages in a central notebook maintained by the referee. As characteristics are generated, they should be recorded along with the name of the world and its location (generally its subsector and hex number). In addition, the referee should generate other information which may be pertinent; this may include details of other planets in the star system, radiation characteristics of the star, the types of terrain present on the planetary surface, unique encounter tables (as prescribed by the section on animal encounters), data on flora and fauna, industrial or agricultural capacity, data on social structure and government, or possibly actual

maps of the planetary surface.

For convenience, planetary characteristics should be expressed as a string of digits, in much the same manner as the Universal Personality Profile is used for the easy identification of persons.

Starports: The starport digit ranges from A (the best) through E (the worst); also included is X (indicating no starport). Starport type is generated using the starports table presented in the section on star mapping. Starport type indicates the type and quality of facilities present for the handling of interstellar commerce and travel. See the starport table.

Planetary Size: The digit representing planetary size indicates the diameter of the planetary sphere stated in thousands of miles. This size is used in book 1 to compute varying gravitational strengths. It is used in book 2 for the creation of planetary templates for miniature space combat. See the planetary size table.

Planetary size is generated using a two dice throw, minus an automatic DM of -2. The resulting value ranges from 0 to 10. Zero indicates an asteroid/planetoid complex. In addition, certain alternative world forms are possible; these are discussed in greater detail in the comments at the end of this section.

Planetary Atmosphere: The digit indicating planetary atmosphere represents the type of atmosphere encountered on the world. Varying types of atmospheres require the use of protective clothing or masks. See the planetary atmosphere table.

Planetary atmosphere is generated using a two dice throw, minus an automatic DM of -7 and with a further DM of + planetary size. A planet of size zero automatically has an atmosphere of zero.

Hydrographic Percentage: The digit indicating hydrographic percentage represents the percentage of planetary surface (in increments of 10%) covered by seas or oceans. For normal worlds, this will be water; on other worlds (with corrosive or exotic atmospheres), it may instead be other liquids or fluids such as ammonia. See the hydrographic percentage table.

Hydrographic percentage is obtained from a two dice throw, with an automatic DM of -7 applied. A further DM of + planetary size is also applied (a planetary size of 0 or 1 indicates an automatic result of 0). If planetary atmosphere is 0, 1, or greater than 9, apply a DM of -4.

STARPORTS

Type	Description
A	Excellent quality installation. Refined fuel available. Annual maintenance overhaul available. Shipyard capable of both starship and non-starship construction present. Naval base present on a throw of 8+; scout base present on a throw of 10+.
B	Good quality installation. Refined fuel available. Annual maintenance overhaul available. Shipyard capable of constructing non-starships present. Naval base present on a throw of 8+; scout base present on a throw of 9+.
C	Routine quality installation. Only unrefined fuel available. Reasonable repair facilities are present. Scout base (with refined fuel available for scouts) is present on a throw of 8+.
D	Poor quality installation. Only unrefined fuel available. No repair or shipyard facilities present. Scout base (with refined fuel available for scouts) is present on a throw of 7+.
E	Frontier installation. Essentially a bare spot of bedrock with no fuel, facilities, or bases present.
X	No starport. No provision is made for any starship landings.

PLANETARY SIZE

Digit	Description
0	Asteroid/Planetoid Complex.
1	1000 miles diameter.
2	2000 miles diameter.
3	3000 miles diameter.
4	4000 miles diameter.
5	5000 miles diameter.
6	6000 miles diameter.
7	7000 miles diameter.
8	8000 miles diameter.
9	9000 miles diameter.
A	10000 miles diameter.
B	11000 miles diameter.
C	12000 miles diameter.

PLANETARY ATMOSPHERE

Digit	Description
0	No atmosphere.
1	Trace.
2	Very thin, tainted.
3	Very thin.
4	Thin, tainted.
5	Thin.
6	Standard.
7	Standard, tainted.
8	Dense.
9	Dense, tainted.
A	Exotic.
B	Corrosive.
C	Insidious.

Atmosphere Notes:

No atmosphere and trace approximate the effects of vacuum, and require the wearing of protective vacc suits at all times.

Very thin atmospheres require the use of respirator/compressors to insure sufficient oxygen is available to breathe.

Thin, standard and dense atmospheres are breathable without assistance.

Tainted atmospheres are artificially or naturally polluted, and require filter masks in addition to any other required apparatus.

Exotic atmospheres require the use of oxygen tanks, but protective suits are not required.

Corrosive atmospheres require the use of protective suits and measures similar to that required for vacuum.

Insidious atmospheres are similar to corrosive atmospheres, but will defeat any personal protective measures in 2-12 hours.

HYDROGRAPHIC PERCENTAGE

<i>Digit</i>	<i>Description</i>
0	No free standing water.
1	10%
2	20%
3	30%
4	40%
5	50%
6	60%
7	70%
8	80%
9	90%
A	All water. No land masses.

POPULATION

<i>Digit</i>	<i>Description</i>
0	0. No inhabitants.
1	10
2	100
3	1,000
4	10,000
5	100,000
6	1,000,000
7	10,000,000
8	100,000,000
9	1,000,000,000
A	10,000,000,000

GOVERNMENTAL TYPE

<i>Type</i>	<i>Description</i>
0	No government structure. In many cases, family bonds will predominate.
1	Company/Corporation. Ruling functions are assumed by a company managerial elite, and most citizenry are company employees or dependents.
2	Participating Democracy. Ruling function decisions are reached by the advice and consent of the citizenry directly.
3	Self-Perpetuating Oligarchy. Ruling functions are performed by a restricted minority, with little or no input from the mass of citizenry.
4	Representative Democracy. Ruling functions are performed by elected representatives.
5	Feudal Technocracy. Ruling functions are performed by specific individuals for persons who agree to be ruled by them. Relationships are based on the performance of technical activities which are mutually beneficial.
6	Captive Government. Ruling functions are performed by an imposed leadership answerable to an outside group. A colony or conquered area.
7	Balkanization. No central ruling authority exists; rival governments compete for control. Law level refers to government nearest the starport.
8	Civil Service Bureaucracy. Ruling functions are performed by government agencies employing individuals selected for their expertise.
9	Impersonal Bureaucracy. Ruling functions are performed by agencies which have become insulated from the governed citizens.
A	Charismatic Dictator. Ruling functions are performed by agencies directed by a single leader who enjoys the overwhelming confidence of the citizens.
B	Non-Charismatic Leader. A previous charismatic dictator has been replaced by a leader through normal channels.
C	Charismatic Oligarchy. Ruling functions are performed by a select group of members of an organization or class which enjoys the overwhelming confidence of the citizenry.
D	Religious Dictatorship. Ruling functions are performed by a religious organization without regard to the specific individual needs of the citizenry.

LAW LEVELS

<i>Law Level</i>	<i>Description and Prohibitions</i>
0	No laws affecting weapons possession or weapons ownership.
1	Certain weapons are prohibited, including specifically 1) body pistols which are undetectable by standard detectors, 2) explosive weapons such as bombs or grenades, and 3) poison gas.
2	Portable energy weapons, such as laser rifles or carbines are prohibited. Ship's gunnery is not affected.
3	Weapons of a strict military nature (such as machine guns or automatic rifles, though not submachine guns) are prohibited.
4	Light assault weapons (such as submachine guns) are prohibited.
5	Personal concealable firearms (such as pistols and revolvers) are prohibited.
6	Most firearms (all except shotguns) are prohibited. The carrying of any type of weapon openly is discouraged.
7	Shotguns are prohibited.
8	Long bladed weapons (all blade weapons except daggers) are strictly controlled. Open possession in public is prohibited. Ownership is, however, not restricted.
9	Possession of any weapon outside of one's home is prohibited.

Note: Each law level includes all prohibitions and conditions of levels numbered lower than it. Thus, shotguns are prohibited at all law levels from 7 higher.

In addition to weapons and arms controls, law levels indicate the general throw for police or enforcement harassment for violations. Thus, a person on a world of law level 4 would have a saving throw of 4 or more to avoid arrest when encountering an enforcement agent such as a policeman or customs agent.

Law level does not apply to persons and ships at a starport, as local laws do not apply in such areas.

Population: The digit indicating population is an exponent of 10. This may be viewed as the number of zeros following a one. Thus, a population digit of 6 indicates a population of approximately 1,000,000. See the population table.

Population is generated with a two dice throw, subject to an automatic DM of -2. The result is a range from 0 to 10. Also see the notes on population at the end of this section.

Planetary Government: The digit representing planetary government indicates a range of possible ruling systems, from anarchy to totalitarianism. The planetary government table gives a brief précis of the general characteristics of each government type. Balkanization is a special result, and indicates that there is no world government; instead several rival territorial governments exist. In such cases, the referee should generate the specific qualities of each territory on the planet separately.

Planetary government is generated using a two dice throw, subject to an automatic DM of -7, and a further DM of + the planet's population digit.

Law Level: The digit representing law level indicates the relative force of law extant on the world. The level specifically states the restrictions in force concerning the possession and use of weapons by individuals. See the law level table.

Law level is obtained from a two dice throw, subject to an automatic DM of -7, and a further DM of + the government type.

This procedure for world creation is intended to provide a wide variety of features for worlds to which adventurers will travel. Specific characteristics should be taken as guides rather than strict statistics.

For example, a population digit of 6 indicates a population of 1,000,000; it can be construed to actually cover a range from slightly more than the next lowest level (100,000) to slightly less than the next highest level (10,000,000). Similarly, a world with 100% water would still possibly have small islands capable of serving as a star-port or land base.

At times, the referee (or the players) will find combinations of features which may seem contradictory or unreasonable. Common sense should rule in such cases; either the players or referee will generate a rationale which explains the situation, or an alternative description should be made.

Finally, the referee should always feel free to impose worlds which have been deliberately (rather than randomly) generated. Often such planets will be devised specifically to reward or torment players.

COMMENTS ON BASIC PLANETARY CHARACTERISTICS

Some comments and several exceptions, are possible to the basic characteristics indicated above. Their use and implementation are up to the presiding referee.

Alternate World Forms: Several alternatives to the traditional spherical world form are possible. Most occur when a civilization wishes to trap and use energy from its central star, and needs great land surface to do so. In addition, population pressure (especially on a civilization unable to develop interstellar travel on a large scale) may be a contributing factor. Alternate world forms are not included in the world creation sequence, but may be provided on a sparing basis by the referee. They are ideal for large population worlds, but may also be populated by smaller numbers, as in degenerate or decimated worlds.

Rosettes: Three or more equal masses (worlds) set at the points of an equilateral polygon, and with the correct equal angular velocities about their center of mass, will have a stable orbital configuration. In fact, no central star is required for the group. Rosettes will almost never occur naturally.

Ringworlds: An incredibly strong band may be set rotating about a central star, making a ringworld which uses centrifugal force to provide a simulation of gravity. Such a ringworld, of 93 million miles radius, and with a width of 1 million miles, has a usable surface area equal to about 3 million Earths.

Sphereworlds: Using materials similar to those in a ringworld, and adding gravity generators where necessary for strength and comfort, a spherical shell could be used to completely enclose a star. Such a shell would then trap all stellar radiation for use by the civilization. With a radius of about 93 million miles, the internal surface area would equal about one billion Earths.

Population Density: For comparison, the following population densities are common on twentieth century Earth. Earth on the whole, has a population of about three billion (population level 9); this is approximately 5 persons per square mile, or 16 persons per square mile of land area. Europe is populated at about 151 persons per square mile, the equivalent of population level 10. The Netherlands contain 1500 persons per square mile, or about population level 11. Hong Kong has 10,000 persons per square mile, the equivalent of population level 12.

TECHNOLOGICAL INDEX

The degree of technological expertise, and thus the capabilities of local industry, depends greatly on the basic characteristics of a world. This technological index is generated based on a one die throw, modified by DMs dependent on planetary characteristics.

Consult the technological index matrix, and reference the appropriate planetary values with the descriptions; note all DMs indicated, and sum them to form one total DM. Throw one die, and modify the result, thus determining the local technological index. Note the result in the appropriate records.

Technological index may vary from zero to 18, more commonly ranging from 4 through about 10. Higher numbers indicate greater capability.

The technological index is used in conjunction with the technological level table

TECHNOLOGICAL INDEX MATRIX						
<i>Value</i>	<i>Starport</i>	<i>Size</i>	<i>Atm</i>	<i>Hyd</i>	<i>Pop</i>	<i>Govt</i>
0	—	+2	+1	—	—	+1
1	—	+2	+1	—	+1	—
2	—	+1	+1	—	+1	—
3	—	+1	+1	—	+1	—
4	—	+1	—	—	+1	—
5	—	—	—	—	+1	+1
6	—	—	—	—	—	—
7	—	—	—	—	—	—
8	—	—	—	—	—	—
9	—	—	—	+1	+2	—
A	+6	—	+1	+2	+4	—
B	+4	—	+1	—	—	—
C	+2	—	+1	—	—	—
D	—	—	+1	—	—	-2
E	—	—	+1	—	—	—
X	-4	—	—	—	—	—

TECHNOLOGICAL LEVELS

	----- <i>Weapons</i> -----				
	Personal	Armor	Special	Computers	Communication
0	Club, cudgel, Spear				Runners
1	Dagger, pike, Sword	Jack	Catapult	Abacus	Heliograph
2	Halberd, Broadsword		Cannon		
3	Foil, cutlass, Blade, bayonet				
4	Revolver, Shotgun	Cloth	Artillery	Adding Machine	Telephones
5	Carbine, Rifle, Pistol, SMG		Sandcasters, Mortars	Model/1	Radio
6	Auto Rifle		Missiles, Rocket Launchers	Model/1 bis	Television
7	Body Pistol	Mesh	Pulse Laser	Model/2	
8	Laser Carbine		Auto-Cannon	Model/2 bis	
9	Laser Rifle	Ablat	Beam Laser	Model/3	
10		Reflec		Model/4	
11				Model/5	
12				Model/6	
13		Battle Dress		Model/7	
14					
15					
16					
17				Artificial Intelligence	
18					

to determine the general quality and capability of local industry. The tables indicate the general types or categories of goods in general use on the world. In most cases, such goods are the best which may be produced locally, although better goods may be imported by local organizations or businesses when a specific need is felt. In most cases, local citizenry will not be armed with weapons of a type which cannot be produced locally, although police or military units may be armed with weapons up to several levels above local technology. Technological level also indicates the gen-

TECHNOLOGICAL LEVELS

	<i>----- Transportation -----</i>				
	Water	Land	Air	Space	Fuels
0	Canoes	Carts			Muscle
1	Galley	Wagons			
2					Wind
3	Sailing Ships		Hot air balloon		Water wheel
4	Steamships	Trains	Dirigibles		Coal
5		Ground cars	Fixed wing aircraft		Oil
6	Submersibles	ATV, AFV	Rotary wing aircraft		Fission
7	Hovercraft	Hovercraft		Non-starships	Solar
8			Air/Raft		Fusion
9				Starships	
10				Drives H or less	
11				Drives K or less	
12			Grav belts	Drives N or less	
13				Drives O or less	
14				Drives U or less	
15				All drives	
16	<i>----- Matter Transport -----</i>				
17					Anti-Matter
18					

eral ability of local technology to repair or maintain items which have tailed or malfunctioned.

The technological level tables have several spaces or holes, and such gaps should be filled in by the referee or the players when they discover items or devices of interest.

STAR MAPPING AND WORLD CREATION CHECKLIST

Use this checklist when mapping individual stellar subsectors.

1. Map local subsector.
 - A. Throw for each hex; 4, 5, or 6 indicates world is present.
 - B. Determine starport type; two dice throw and consult starport table.
 - C. Determine space lanes; check all possible jump routes.
2. Generate specific worlds.
 - A. Note previously generated starport type.
 - B. Generate planetary size. 2D-2.
 - C. Generate planetary atmosphere. 2D-7 +planetary size (size 0 requires atmos 0).
 - D. Generate hydrographic percentage. 2D-7 +planetary size. (size 0 or 1 requires hydrographic 0; Atmosphere 0, 1 or A+, DM -4.
 - E. Generate population. 2D-2.
 - F. Generate planetary government. 2D-7 +population.
 - G. Generate law level. 2D-7+ government type.
 - H. Generate technological index. Determine DMs from matrix and throw 1 die.
3. Name each world and note hex number location in subsector.

Equipment

The infinity of physical objects in the universe and the variation in their potential costs and values defy classification; it is impossible to note and define them all. The objects below are presented as basic indications of common qualities and values.

Each listing notes the object's name, followed by its technological index in parentheses, a price in credits, and a basic description. The technological level indicates local technology required for manufacture. Statistics such as price, weight, and dimensions are given as necessary (an item without weight or dimensions can usually be carried or worn without difficulty). Additional lines of explanation are given where considered necessary.

This listing may be considered a shopping list for travellers. When they originally outfit themselves for an adventure, each may purchase or acquire items from this list in preparation for action or mishap. For the most part, this list does not include weaponry, and all items are generally available for purchase without difficulty on worlds with a sufficient technology index (on other worlds, they may be available as imports at higher prices). Often, the base price for these items will be altered higher or lower using the trade and speculation rules for percentage price changes.

PERSONAL EQUIPMENT

The following are personal survival items often needed by individuals.

Respirator (5) CR 100. A compressor which allows breathing of atmosphere type 3.

Filter Mask (3) CR 10. A filter set allowing breathing of atmosphere types 4, 7 or 9.

Combination (5) CR 150. A combination of both filter mask and respirator which allows breathing of atmosphere type 2.

Oxygen Tanks (5) CR 500. A complete set of compressed oxygen tanks which allows independent breathing in smoke, dust, gas, or type A atmosphere. Two tanks last 6 hours, weigh 5 kg. Refill: CR 20.

Underwater Air Tanks (5) CR 800. Equivalent to oxygen tanks but designed for use underwater. Two tanks last 6 hours, weigh 5 kg. Refill: CR 20.

Artificial Gill (8) CR 4000. Extracts oxygen from water to allow unlimited time submerged. Functions only on worlds with atmosphere 4-9. Weighs 4 kg.

Swimming Equipment (3) CR 200. Includes swim fins, wet suit, face mask.

Protective Suit (5) CR 700. Protects against type B atmosphere. Weighs 5 kg.

Vacc Suit (7) CR 10000. Worn in vacuum or as protective suit. Includes oxygen tanks, radio communicators and other required equipment. Weighs 10 kg.

Cold Weather Clothing (1) CR 200. Protects against frigid weather.

PERSONAL DEVICES

The following is an assortment of devices which individuals may use:

Short Range Communicator (5) CR 100. Radio capable of 10 km range. .3 kg.

Medium Range Communicator (5) CR 200. Radio set capable of up to 30 km range, and contact with official radio channels. Weighs .5 kg.

Long Range Communicator (6) CR 500. Radio capable of ranges up to 500 km and contact with ships in orbit. Weighs 1.5 kg.

Magnetic Compass (3) CR 10. Indicates direction of magnetic north, if any exists.

Inertial Locator (9) CR 1200. Indicates direction and distance travelled from the starting location. Weighs 1.5 kg.

Metal Detector (6) CR 300. Indicates presence of metal. 1 kg.

Geiger Counter (5) CR 250. Indicates presence and intensity of radioactivity. Weighs 1 kg.

Bull-Horn (5) CR 120. Amplifies voice to very long range. Weighs .5 kg., but is very bulky and awkward to carry.

Hand Calculator (6) CR 250. Provides basic mathematical calculations. It is recommended that players using such devices be required to have their characters purchase them. Weighs .1 kg.

Hand Computer (11) CR 1500. Provides services of a programmable calculator, plus serves as a computer terminal when linked (by its integral radio, or by other circuit) to a computer. Weighs .5 kg.

Artificial Psionic Shield Helmet (8) CR 4000. Acts as a shield against psionic forces. Weighs 1 kg.

Handcuffs (2) CR 25. Weigh .3 kg. Higher tech levels produce lighter designs.

Wrist Watch (3) CR 25 to CR 1000. Price determines quality.

VISION AIDS

The following items are generally used to allow enhanced vision:

Binoculars (3) CR 75. Weigh 1 kg.

IR Goggles (6) CR 500. Allows wearer to see heat sources (infrared radiation) in the dark. Quality of vision is necessarily distorted.

Light Intensifier Goggles (9) CR 500. Allows vision in anything less than total dark.

Torches (1) CR 1. Last about 20 minutes. Each weighs .25 kg.

Electric Torches (3) CR 10. Last about 6 hours continuous use. Weigh .5 kg.

Gas or Oil Lamp (2) CR 10. Last about 6 hours. Weighs .5 kg.

Cold Light Lantern (6) CR 20. Lasts 3 days continuous use. Weighs .25 kg.

TOOLS

The following are examples of tools or tool sets available:

Carpentry Tools Set (2) CR 300. Includes basic tools necessary to cut, shape and build with wood. Boxed set weighs 25 kg.

Metalwork Tool Set (4) CR 1500. Includes basic tools necessary for metalworking, welding, shaping. Boxed set weighs 50 kg.

Chain Saw (6) CR 500. Motorized mechanical device for felling, cutting and shaping trees. Weighs 8 kg.

Mechanical Tool Set (5) CR 1000. Includes basic tools necessary to repair and alter mechanical devices. Boxed set weighs 20 kg.

Electronic Tool Set (7) CR 2000. Necessary tools for basic electronic assembly and repair. Boxed set weighs 5 kg.

Lock Pick Set (6) CR 400. Allows picking of most ordinary locks on a throw of 8+; throw once per 15 seconds. Weight is negligible.

Disguise Kit (7) CR 1000. Allows change of personal appearance on a temporary basis. Complete kit weighs 5 kg.

SHELTERS

The following are examples of portable or temporary shelters available to individuals:

- Tarpaulin (1) CR 10. A canvas or waterproof cloth sheet used to create a temporary shelter. 2 by 4 meters. Weighs 2 kg.
- Tent (2) CR 200. Basic shelter for two persons. Weighs 3 kg. Larger, more elaborate tents weigh and cost more.
- Pressure Tent (7) CR 2000. Basic shelter for two persons, providing standard atmosphere and conditions. Weighs 25 kg.
- Pre-Fabricated Cabin (6) CR 10,000. Modular unpressurized quarters for 6 persons. 2 by 6 by 6 meters. Can be carried in the hold of a starship. Weighs 4 tons.
- Advanced Base (8) CR 50,000. Modular pressurized quarters for 6 persons, with air lock, and atmosphere recirculating system. 2 by 6 by 6 meters. Can be carried in the hold of a starship. Weighs 6 tons.

FOOD AND OVERHEAD

The following are indications of the prices for food and basic survival:

Basic Cuisine on a Daily Basis: Food is available in a variety of forms and qualities. Prices indicated are per person.

Restaurant meals of ordinary quality cost CR 10 per day. Excellent quality meals range in price from CR 20 to CR 50 per person. Travellers' Aid Society facilities provide excellent quality meals to members and guests for CR 20.

Food purchased from vendors for preparation at home costs about CR 5 per day, and weighs about 1 kg.

Preserved foods for rations on expeditions may be canned or packaged (CR 20 per day, weighs .5 kg) or dehydrated (CR 25 per day, weighs .2 kg, dependent on locally supplied water).

Subsistence on a Long Term Basis: In situations where time passes quickly, personal survival or subsistence costs can be assumed to be the values given below:

Starvation Level- bare minimum of food, CR 60 per month. Dismal lodging, CR 60 per month.

Subsistence Level- reasonable food, CR 120 per month. Acceptable lodging, CR 180 per month.

Ordinary Level- good food, CR 200 per month. Good lodging, CR 200 per month.

High Living- Excellent food CR 600 per month. Excellent accommodations, CR 300 per month.

Ship Crews- Individuals living on ship—board have ordinary lodging and food taken care of, but generally spend much of their salary for expenses and other costs.

VEHICLES

Various forms of transportation will be required by adventurers as they travel farther away from the starport of a world. The following provide general guidelines for the use of various vehicles.

Primitive Transportation: On worlds with low technology levels (0 through 3), the local means of transportation will tend to depend on beasts of burden, animal drawn carts, and watercraft such as galleys and sailing ships. Prices for such items will depend on local situations; animals and wagons in hundreds of credits, ships in the thousands and ten thousands of credits.

Local beasts of burden and riding animals will be domesticated herbivores similar to animals in local encounter tables and generally of the 200 or 400 kilogram range or above. Note that low passage berths can be used to carry an animal of up to 400 kilograms if characters wish to bring along their own riding beasts to a particular world.

Land Vehicles: Several types of land vehicles are generally available. Persons with ATV skill may generally operate any type of land vehicle with expertise and to advantage; all characters can operate land vehicles with mediocre results. The following examples are given to indicate vehicle abilities and characteristics:

Ground Car (5) CR 40,000. This is an ordinary self-powered vehicle suitable for local use in civilized areas or on roads. It has a range of 1000 km before refueling and is capable of speeds up to 150 km per hour. Usually, this type of vehicle (a sedan) will hold six passengers. Note that other models (convertibles, sports models, limousines, trucks, motorcycles, unicycles, vans, etc) may be available at varying prices. Ground cars are unpressurized, and average about 2 tons in weight. The ground car is a mass production item specifically manufactured for a specific world; it will tend to malfunction when transferred to a world not similar to its world of origin.

All Terrain Vehicle (6) CR 3,000,000. Considerably more expensive than the ground car, the All Terrain Vehicle (abbreviated ATV) is designed to serve admirably on many different worlds under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. With a range between refuelings of 5000 km (refueling is performed from a ship's power plant), ATVs are capable of speeds up to 100 km per hour on roads, and about half that cross-country. The vehicle is fully pressurized and contains complete (though cramped) eating, sleeping and travel facilities for eight persons. The ATV weighs 10 tons.

Armored Fighting Vehicle (6) CR 7,000,000. Similar in form and bulk to the ATV, the armored fighting vehicle (abbreviated AFV) is identical, except: the vehicle is armored to withstand most forms of attack, and is equipped with a turret mounting a laser or auto-cannon of some form. A crew of three is required, with little or no interior facilities provided. The AFV weighs 10 tons.

Hovercraft (7) CR 2,000,000. Ground effect vehicles are capable of hovering at low altitude (about 1 meter). Usable only on worlds with an atmosphere of 4 or greater, hovercraft are capable of speeds up to 100 km per hour and have an operating range of about 1000 km. They may move over both land and water with equal ease, but encounter difficulty with broken ground or precipices. Hovercraft weigh about 8 tons, and carry up to 15 passengers plus operator.

Using Land Vehicles: When characters use land vehicles, the referee should note specific throws which will affect such use. Generally, throw 11+ for mechanical difficulty to occur, allowing DMs for personal expertise, terrain, and perhaps age and condition of the vehicle. Throw 11+ for terrain difficulty, or include such items with the animal encounter tables. Note also that local law level is the throw to avoid such things as speed traps or traffic violation arrests.

Most vehicles can be refueled/recharged from a starship power plant.

Air Vehicles: Most aircraft are advanced technology vehicles. In extreme situations, primitive types such as hot—air balloons or gliders may be locally produced to specification by some local artisans.

Air/Raft skill may be used beneficially by characters for all air vehicles; unlike as with land vehicles, persons without air/raft skill cannot operate air vehicles.

The following examples of air vehicles are given to indicate characteristics and costs:

Primitive Biplane Aircraft (4) CR 200,000. This is a very small early model aircraft capable of being produced by a world of technology level 4. The plane carries two persons and a payload of perhaps 100 kgs, and weighs one ton unloaded. The engine is dependent on chemical fuel and has an endurance of about three hours. Normal cruising speed is 150 km per hour.

Fixed Wing Aircraft (5) CR 1,000,000. A twin jet aircraft monoplane with a crew of 2 and capacity for 6 passengers. The aircraft weighs 5 tons with a cargo capacity of 5 tons. Wingspan: 15 meters. Length: 15 meters. Normal cruise speed is 600 km per hour with a range of 3500 km. Referee's options for the craft could include a seaplane version, hardpoints for ordnance or auto-cannon, larger versions, etc.

Helicopter (6) CR 1,000,000. Single engine rotary wing aircraft capable of vertical take-off and landing, as well as maneuverability in tight places. This craft weighs one ton with a capacity for one ton of cargo and passengers. Range: 600 km; maximum speed: 250 km per hour. A larger version would be a twin engine cargo helicopter costing CR 2,000,000; weighing ten tons, and capable of carrying ten tons.

Air/Raft (8) CR 6,000,000. Also known as a flier, the air/raft relies on solid state null gravity modules for lift and propulsion. Four independent, individually replaceable modules (CR 1,000,000 each) insure a maximum of safety. Loss of one module reduces lift by one-quarter. The standard air/raft weighs 4 tons and can carry a payload of up to 4 tons including pilot and passengers. Cruise speed is 100 km per hour with unlimited range and endurance. Normally, air/rafts are open topped; the referee may allow a pressurized version or such options as gun mounts, searchlights, crash cushions or larger capacities at higher prices.

Grav Belts (12) CR 1,000,000. Personal anti-gravity transportation using a single null gravity module and a personal harness. Otherwise similar in speed and range to the air/raft.

Air Vehicle Use: Nearly all air vehicles except for air/raft and grav belt, while not accident prone, do require frequent maintenance between uses to insure continued reliable performance. Basic throw for some form of mechanical failure is 11+, DM -1 for each missed maintenance.

Water Vehicles: Water craft require little skill to operate if under about 500 tons displacement. Larger vessels and sailing ships require hired crews which possess proper skills for ship operation.

Small Steamship (4) CR 600,000. Vessels of this type vary widely; most are capable of 30 KM per hour for sustained periods, and displace about 100 to 500 tons.

Motor Boat (5) CR 600,000. Advanced small craft utilize hydrofoils to allow speeds up to 100 KM per hour. Typical vessels are 25M in length and displace about 60 to 100 tons.

Submersible (6) CR 2,000,000. Underwater vessels are the safest of watercraft, not subject to surface weather conditions. On worlds with large water percentages (especially level A) submersibles ply the routes between underwater domed cities. Typically, a submersible (nuclear powered) displaces 500 tons and is capable of 40 KM per hour cruising speed. The vessel has indefinite endurance, airlocks, and facilities for 10 passengers.

Encounters

Non-player characters are frequently encountered by travellers in the course of their adventures. Such persons are manipulated or controlled by the referee; their actions and deeds influence and direct the activities of the actual player-characters in the game.

Encounters with non-player characters are of three general types: ordinary or routine encounters, random encounters, and encounters with patrons. When an encounter occurs, the identity or occupation of the encountered person or group is determined, their reaction to the adventurers is noted from the reaction table, and the players then indicate their activity in response.

Encounters with non-player characters serve as a vehicle for direction and input by the referee. They can offer information or assistance if their reaction is appropriate. They can hinder or redirect adventurers through the use of threat or violence. Encounters also serve as a method for players to gain comrades, weapons, vehicles or assistance where necessary.

ROUTINE ENCOUNTERS

Adventurers meet ordinary people in the course of ordinary activity. In many cases, adventurers actually ignore the persons (and are themselves little noticed), concentrating on the activity instead. Personal reactions are rarely of importance, and the individual merely performs his duties. For example, an encounter with a store clerk in the course of buying equipment is rarely of importance, and the process usually continues without trouble.

RANDOM ENCOUNTERS

Adventurers, as they travel about on planets, also have random encounters with an unpredictable variety of individuals or groups. Such individuals are themselves performing various tasks, which may complement, supplement, oppose, or be irrelevant to, the goals of the adventurers themselves.

Some random encounters are mandated by the referee. For example, a band may encounter a guard patrol at a building while in the course of visiting (or burglarizing) it. The referee is always free to impose encounters to further the cause of the adventure being played; in many cases, he actually has a responsibility to do so.

Other random encounters are dictated by the random encounter process. Usually, a random encounter point with humans will occur once per day. There is a one third chance that a group will be met (throw one die: a result of 5 or 6 indicates an encounter). Encounters with persons are independent of the procedure for encounters with animals described in the animal encounter section.

If a random encounter occurs, consult the person encounter table to determine the identity or occupation of the person or group encountered. Throw two dice consecutively, and index the result to the table. Indicated on the table are a basic description or identity for the encountered individuals, a dice throw to determine their number, an indication of their vehicle, if any, and a description of their weaponry and armor.

After determining the number in the group, roll two dice three times to determine respectively the strength, dexterity and endurance of the people in the group. Generally, it may be assumed that all individuals in an encountered group have the

same characteristics. Later, it may prove necessary to determine the intelligence, education and social standing of the individuals in the group; such data is not actually necessary upon initial encounter.

In addition to the weapons indicated on the table, there is a possibility that one of the group's members will be armed extraordinarily. Consult the weapons table: throw one die for column one. If a weapon is shown, one person is armed with it; if a dash is shown, re-roll on column 2. If a weapon is shown, one person is armed with it; if a dash is shown, re-roll on column 3. If a weapon is shown, one person is armed with it; if a dash is shown, no extraordinary weapons are present. Weapon skill is generally considered to be 1 for all encountered persons.

Six entries in the person encounter table are left blank; initially, they may be interpreted as no encounter. Later, they may be filled in by the referee for specific situations, as necessary.

Once an encounter occurs, a determination of attitude is made using the reaction table (later in this section). Combat may ensue. Under the provisions of the personal combat section of book 1, it is possible for either group to escape or avoid contact.

After an encounter has been resolved, there is the potential for small amounts of money to be on the persons (or bodies) of the vanquished. It is also possible to loot the vanquished of their equipment, vehicles, weapons or armor.

PATRONS

One specific, recurring goal for adventurers is to find a patron who will assist them in the pursuit of fortune and power. Such patrons will, if they hire a band of adventurers, specify a task or deed to be performed, and then finance reasonable expenses for the pursuit of that task. Some tasks may be ordinary in nature, such as hired guards or escorts; other tasks may be for the location and procurement of items of great value. Generally, a patron's agreement with a band of adventurers will specify that the patron will receive the item he is seeking while all other goods or items acquired will belong to the adventurers.

In a single week, a band of adventurers may elect to devote their time to encountering a patron. They may frequent bars, taverns, clubs, perhaps the Travellers' Aid Building, or any other likely places. One throw is allowed for the entire band: a result of 5 or 6 on one die indicates a likely patron has been found. Two dice are then thrown consecutively, and the patron table is consulted to determine the general character of the potential patron. If necessary, the patron's personal characteristics are generated at this point. The band then meets with the patron, and an interview takes place. Throw two dice on the reaction table to determine if the patron concludes that the band will be suitable (generally, a throw of 7+ on the reaction table is sufficient). The patron then discloses his task, and the adventurers may accept or reject the offer of employment.

Once the patron and the adventurers have met, the responsibility falls on the referee to determine the nature of the task the patron desires, the details of the situation (perhaps a map or some amount of information), and to establish the limits of the patron's resources in the pursuit of the task.

RANDOM PERSON ENCOUNTERS

<i>Die</i>	<i>Type</i>	<i>Qty</i>	<i>V</i>	<i>Weaponry</i>	<i>Armor</i>
11	Peasants	1D	—	Clubs and cudgels	—
12	Peasants	2D	—	Clubs and cudgels	—
13	Workers	2D	—	Clubs	—
14	Rowdies	3D	—	Clubs	Jack
15	Thugs	2D	—	Daggers	Jack
16	Thugs	2D	—	Revolvers	Jack
21	Soldiers	2D	—	Rifles and bayonets	Cloth
22	Soldiers	2D	V	Carbines	Mesh
23	Police	1D	V	Automatic Pistols	Cloth
24	Marines	2D	V	Revolvers and Cutlasses	Mesh
25	Naval Troops	3D	V	Carbines	—
26	Soldiers	2D	V	Submachine Guns	Jack
31	Adventurers	1D	—	Swords	Jack
32	Noble with retinue	2D	—	Foils	—
33	Hunters	2D	—	Rifles and Spears	Jack
34	Tourists	2D	V	—	—
35	Researchers	2D	V	—	—
36	Police	1D	V	Revolvers	—
41	Fugitives	1D	—	Clubs	—
42	Fugitives	2D	V	Blades	Jack
43	Fugitives	3D	—	Revolvers	—
44	Vigilantes	2D	V	Rifles and carbines	Jack
45	Bandits	3D	—	Swords and Pistols	—
46	Brigands	3D	—	Broadswords and Pistols	Cloth
51	Merchant	3D	V	Foils	—
52	Traders	2D	V	Blades	Jack
53	Religious Group	2D	—	—	—
54	Religious Group	3D	—	Daggers	—
55	Noble with retinue	2D	—	Swords and Pistols	Mesh
56	Guards	3D	—	Halberds and Daggers	Jack
61					
62					
63					
64					
65					
66					

WEAPONS

	1	2	3
1	Laser Rifle	Shotgun	Broadsword
2	Auto Rifle	Carbine	Sword
3	—	Revolver	Halberd
4	—	—	Cutlass
5	—	—	Foil
6	—	—	—

Notes:

Code V in the V column indicates the group has a vehicle, appropriate to the technology and terrain of the area.

Numbers in a group should be adjusted for balance where necessary.

Weaponry may be altered to conform to law level or technology index.

PATRON ENCOUNTERS

	1	2	3	4	5	6
1	Arsonist	Cutthroat	Assassin	Hijacker	Smuggler	Terrorist
2	Crewman	Peasant	Rumor	Clerk	Soldier	Shopkeeper
3	Shipowner	Tourist	Merchant	Police	Scout	Rumor
4	Diplomat	Courier	Spy	Scholar	Governor	Administrator
5	Mercenary	Navy Off.	Marine Off.	Scout	Army Off.	Mercenary
6	Noble	Playboy	Avenger	Émigré	Speculator	Rumor

Note: Rumors are, in effect, absent patrons. They impart knowledge which may be acted on by characters if they so choose.

EMPLOYEES AND HIRELINGS

When travellers require employees, for any purpose, they must find them in the course of their activities. This may require advertising, visiting union hiring halls, or active efforts in barrooms or clubs. Hiring is done by stating a requirement to the referee, who indicates persons presenting themselves for employment. The interview consists of generating the person's characteristics and experience. While decisions to hire are made on qualifications, the number of persons applying for employment may be limited.

NOBILITY

NOBILITY		Persons with social standing of 11 or greater are considered to be nobility, even in situations where nobility do not take active part in local government. Nobility have hereditary titles and high standing in their home communities.
11	knight/dame	
12	baron/baroness	
13	marquis/marchioness	
14	count/countess	
15	duke/duchess	At the discretion of the referee, noble persons (especially of social standing 13 or higher) may have ancestral lands or fiefs, or they may have actual ruling power. The nobility table indicates the actual designations or titles accruing to specific social standing values.

Ranking above duke/duchess are two levels not reflected in social standing: prince/princess or king/queen are titles used by actual rulers of worlds. The title emperor/empress is used by the ruler of an empire of several worlds.

NON-PLAYER CHARACTER REACTIONS

When non-player characters are encountered, their reactions will dictate their activity in terms of business deals, violence, assistance, charity, cooperation and a number of other actions. When an encounter occurs, throw two dice and consult the reaction table.

Dice throws of 2 and 12 (exactly) are not subject to DMs; any other result is subject to DMs, modified results of less than 3 becoming 3 and greater than 12 becoming 12.

The following general DMs apply to the reaction table; other DMs can and should be created to deal with specific situations. If a character has served 5 or more

REACTIONS

<i>Die</i>	<i>Reaction</i>
2	Violent. Immediate attack.
3	Hostile. Attacks on 5+.
4	Hostile. Attacks on 8+.
5	Hostile. May attack.
6	Unreceptive.
7	Non-committal.
8	Interested.
9	Intrigued.
10	Responsive.
11	Enthusiastic.
12	Genuinely friendly.

terms in the army, navy, marines or scouts, DM +1. If planetary population is 11 or greater, DM -1.

Reaction throws are made once, upon initial encounter. One throw is sufficient to determine the reaction of an entire group.

Reactions are used by the referee and by players as a guide to the probable actions of individuals. They may be used to determine the response of a person to business offers or deals (often admin or bribery expertise will be used as a DM in such cases). Reactions govern the reliability and quality of hirings and employees. Generally, they would re-roll reactions in the face of extremely bad treatment or unusually dangerous tasks.

Animal Encounters

Animals in any ecological system interact with each other, forming food chains, obeying instincts, defending territory, and generally living out their lives. When men enter such an ecological system, they will encounter the animals of the system, prompting natural reactions, such as attack or flight.

Although the precise nature of animals may change, and they may prove quite alien to ordinary experience, most will conform to the broad classifications given below. A referee may choose to establish his own ecological system on a specific world, ignoring the encounter system outlined here. This system, however, is intended to allow broad latitude in both animal types and attack/defense mechanisms, while remaining essentially logical and reasonable.

INTRODUCTION

Nearly all animals may be classified into four basic **categories**: herbivore, omnivore, carnivore and scavenger. Specific definitions for these terms are provided in a later section of these rules, and differ from the precise scientific definitions in current use. Within each category, a variety of animal **types** exist, based on specific feeding/hunting habits; examples of this concept are grazers, chasers and pouncers. Again, specific definitions are given later in these rules.

Animals which are encountered may be classified into various categories and types, and specific attack and defense mechanisms determined. The resulting description indicates the actions an animal will take without resorting to such confining labels as bear or tiger. While a referee may well elect to use such names, this system also allows the players freedom to encounter truly alien beasts as well.

PROCEDURE

The referee (or players, if there is no referee) must create a series of unique encounter tables, one for each world in the universe (not necessarily all are necessary before play begins), and each consisting of one encounter column for each relevant terrain type of the world. Generally, a referee will conceal the exact details of these encounter columns, so that persons will only have clues as to the relative abundance or scarcity of specific animals in any specific area.

Once these tables are created, they are used each day to determine if animals are encountered, the specific nature of such animals, and how they react to the adventurers. Hunting for sport or food is possible, and danger posed by animals may be great.

CREATING ENCOUNTER TABLES

Initially, the referee must prepare a blank encounter column for each terrain type on the world. The terrain DMs chart indicates the general types of terrain which might be expected on habitable worlds. On each blank encounter column, allow 11 entries, to correspond to dice throws 2 through 12. The example shown in the blank encounter column indicates the predetermined sequence of animal categories which should be used in most cases; this sequence may be varied by the referee to fit specific situations or world conditions.

For each category, throw two dice and consult the animal type table. Index the dice throw and correct category column to determine the specific animal type. DMs

must be applied as indicated on the terrain DMs chart, based on the terrain predominating.

The entries on the encounter column are then further elaborated with specific data indicating animal size, total hits, weaponry and armor, and special attributes such as flying or swimming ability.

The event portion of the encounter column is not determined from the animal table. Instead, the referee should insert an event from those described in these rules, or generate additional events using his own imagination.

BLANK ENCOUNTER COLUMN	
<i>Die</i>	<i>Terrain</i>
2	S (Scavenger)
3	O (Omnivore)
4	S (Scavenger)
5	O (Omnivore)
6	H (Herbivore)
7	H (Herbivore)
8	H (Herbivore)
9	C (Carnivore)
10	E (Event)
11	C (Carnivore)
12	C (Carnivore)

Special Attributes: Animals which adventurers will encounter will tend to be walkers, but may be flyers, swimmers, amphibians, or even triphibians. Throw two dice and consult the special attributes table. DMs are imposed for various world sizes and atmospheric types. Insure that the correct terrain column is used on the table. Four special attribute types are possible on the table:

Flyers— Animals capable of flying through the use of wings, levitating gas sacs, or other mechanisms.

Swimmers— Animals which live in liquid and swim through the use of fins, flippers, jets, or other mechanisms.

Amphibians— Animals which live in liquid, but are capable of emerging onto land.

Triphibians— Animals which live in liquid, but which can also emerge onto land, and which can fly.

Certain entries on the table are followed by a parenthetical DM which must be applied to the animal size throw; its general effect is to make flyers smaller, and swimmers larger.

Note the special attribute (if any) on the blank encounter column being filled in. Record any size DM temporarily for use in the size throw to come.

Animal Size: Animals range in size from small (massing about 1 kilogram) to giant (massing 6 tons or greater), and exhibit a variety of characteristics related to size. Throw two dice and consult the animal size column of the animals table. DMs are imposed on this throw based on planetary size, the terrain DM chart (by specific terrain type), and as required by special attributes, if present.

Animal size is expressed on the table in kilograms, and may be taken as a general indication of size in relation to man (man is assumed to be approximately 100 kilograms). All sizes may be construed to cover a range of plus or minus 20%. The size column also indicates the number of hits such an animal can take, expressed as a dice throw. When an animal has received wounds equaling or exceeding the first dice throw, the animal is considered to be unconscious. When it has received wounds equaling or exceeding its total hits, it is dead. If an animal receives wounds equal to twice its hits, it is destroyed, and has lost any food or pelt value. For exam-

TERRAIN DM CHART

<i>Terrain</i>	<i>Type</i>	<i>Size</i>
<i>Type</i>	<i>DM</i>	<i>DM</i>
Clear, Road	+3	—
Plain, Prairie	+4	—
Desert	+3	—3
Hills, Foothills	—	—
Mountain	—	—
Forest	—4	—4
Woods	—2	—1
Jungle	—4	—3
Rainforest	—2	—2
Rough, Broken	—3	—3
Swamp, Marsh	—2	+4
Beach, Shore	+3	+2
Riverbank	+1	+1
Cave	—	—1
Ruins	—2	—

ple, an animal listed on the animal size and weaponry table as taking 2D/2D hits would have two dice rolled twice: the first result would be the number of hits required to render the animal unconscious. The second two-dice throw would indicate the additional hits required to kill the animal. If more than twice this combined value is achieved, the animal is completely destroyed. Finally, the wounds column indicates the potential for wounding that the animal has by virtue of its size (thus, the notation —2D indicates that any wound inflicted by the animal is reduced by the throw of two dice). The result is that of two animals with the same weapon, the larger will tend to inflict a heavier wound.

Only one two-dice throw is required to determine weight, hit formula, and wound alteration.

Animal Weaponry: Animals are naturally equipped with weapons which enable them to

attack and defend. Familiar terms such as teeth and claws indicate the effects in the combat system, but should also be considered to approximate other equivalent systems if necessary. In some cases, unusual weaponry is indicated by the statement *as (weapon type)*, for example: *as pike*. The combat effect may be read from the weapons matrix (and wounding from the range matrix) of the personal combat system of book 1. Weapon types should always be considered to be descriptive of result rather than of strict process.

Throw two dice and consult the animal weapons column. Implement DMs as indicated on the table.

Animal Armor: Some animals have armor in some form, protecting them from attacks by other animals. Armor is expressed in the form *as (type)*, for example: *as mesh*, and is used in the combat system as indicated in the weapons matrix.

Throw two dice and consult the animal armor column. Implement DMs as indicated on the table.

Common Sense: Airless worlds will almost never have life of any consequence on them; if they do, animal life will still tend to follow the same broad outlines given above. Still, flyers and liquid breathers will be almost non-existent.

The referee should always be prepared to alter or restrain prescribed procedures if it is felt that they contravene logic or reason.

USING ENCOUNTER TABLES

Each day, an adventuring band may possibly have one or more encounters with some animal life forms. As a general rule, the referee will check for an encounter once while the band is travelling, and once while the band is halted (for rest, exercise, encampment, or whatever). There is a one-third chance (throw 5 or 6 on one die) that an animal encounter will occur in any of the specified terrain types. Referee-initiated modifications to this frequency may be instituted to cover greater or smaller probabilities based on planetary or local conditions.

In addition, specific encounters at specific locations are always possible. For example, the referee may have already populated a location (perhaps a ruin) with specific animals. These are not subject to normal random encounter rules.

ANIMAL TYPES				
<i>Die</i>	<i>Herbivore</i>	<i>Omnivore</i>	<i>Carnivore</i>	<i>Scavenger</i>
1	Filter	Gatherer	Pouncer	Carrion-Eater (2D)
2	Filter	Eater	Siren	Reducer (1D)
3	Intermittent	Gatherer	Pouncer	Hijacker (1D)
4	Intermittent	Eater (2D)	Killer (1D)	Carrion-Eater (2D)
5	Intermittent (1D)	Gatherer	Trapper	Intimidator (1 D)
6	Intermittent	Hunter	Pouncer	Reducer
7	Grazer	Hunter (1D)	Chaser	Carrion-Eater (1D)
8	Grazer (5D)	Hunter	Chaser (3D)	Reducer (3D)
9	Grazer (4D)	Gatherer	Chaser	Hijacker
10	Grazer (3D)	Eater (1D)	Killer	Intimidator (2D)
11	Grazer (2D)	Hunter (1D)	Chaser (2D)	Reducer (1D)
12	Grazer (2D)	Gatherer	Siren	Hijacker
13	Grazer (1D)	Gatherer	Chaser (1D)	Intimidator (1D)

Throws on this table are subject to DMs from the terrain DMs chart. Notes in parentheses indicate the dice throw for the quantity of animal occurring.

SPECIAL ATTRIBUTES					
Die	Beach, Shore	Riverbank	Swamp, Marsh	Sea, Ocean	Other
2	S +1	S +1	S -6	S +2	—
3	A +2	A +1	A +1	S +2	—
4	A +2	—	A +2	S +2	—
5	—	—	—	A +2	—
6	—	—	—	A	—
7	—	—	—	S +1	—
8	—	—	—	S -1	—
9	—	—	—	T -7	—
10	—	—	—	T -6	—
11	F -6	F -6	F -6	F -6	F -6
12	F -5	F -5	F -5	F -5	F -5
13	T -6	F -3	F -3	F -3	F -3

A = Amphibian, F = Flyer, S = Swimmer, T = Triphibian, — = None.

The positive or negative number indicates the size DM to be applied to the animal. For flyers, this is the only size DM used. For all other animals, also use the terrain size DM.

Procedure: Twice each day, the referee will throw to determine if an encounter occurs. If a band splits temporarily, each portion of the band should be liable for an independent encounter. When an encounter does occur, the correct (based on ter-

rain type) encounter column is then used to ascertain the class, type, quantity and characteristics of the animal encountered. It is possible, in some circumstances, for the encounter columns to dictate that a non-animal has been encountered instead. Using this information, the encounter is then resolved using the personal combat procedure of Book 1.

Special Effects: Animal encounters constitute the only general possibility of access that characters have to food, furs, or other valuable items. Guides may be hired or present for the purpose of assisting in the location of specific animals, contributing a DM of +2 or greater to influence encounter throws for a specific type of animal.

Animals which are encountered and killed are usually edible (throw 5+ to be edible, DM -3 if the atmosphere is tainted) provided the planetary atmosphere is between 2 and 9, and the animal does not have a poison weapon. Otherwise, the animal is inedible. From 5% to 30% (throw one die times 5%) of an animal's weight will be edible meat. A person requires 1 kilogram of meat per day when living off the hunt.

Animal Characteristics: The referee may elect to describe animals for the adventurers in order to allow a better image in their minds. The basic system may be used without this aspect, but descriptions such as lion-like, amoeboid, etc., may prove useful in some circumstances.

ENCOUNTER TABLE CREATION CHECKLIST

Use this checklist to create unique encounter tables.

1. Select terrain types for the world in question.
2. Draw up one blank encounter column for each terrain type.
3. Fill in specific animal types.
 - A. Throw two dice; modify from the terrain DM chart.
 - B. Determine the animal type from the animal type chart.
4. Determine special animal attributes.
 - A. Throw two dice; modify with the required DMs.
 - B. Note if a special attribute is called for, and the size DM.
5. Determine animal size.
 - A. Throw two dice; modify with the required DMs.
 - B. Note size called for.
 - C. Note hits and wound alteration called for.
6. Determine animal weapon.
 - A. Throw two dice; modify with required DMs.
 - B. Note weapon or weapons.
7. Determine animal armor.
 - A. Throw two dice; modify with required DMs.
 - B. Note armor type, if any.
8. Apply common sense as required.

BASIC ANIMAL CHARACTERISTICS

<i>Animal Types</i>	<i>To Attack</i>	<i>To Flee</i>	<i>Speed</i>
Herbivores			
Filters	If possible	8+	Ordinary/none
Intermittent	10+	9+	Double
Grazer	8+	5+	Double
Omnivores			
Gatherer	9+	8+	Ordinary
Hunter	If bigger, 6+	8+	Double
Eater	5+	10+	Ordinary/double
Carnivore			
Pouncer	If surprise	If surprised	Double
Chaser	If more	9+	Triple/double
Trapper	If surprise	9+	Ordinary/none
Siren	If surprise	10+	Ordinary/none
Killer	6+	11+	Double/ordinary
Scavenger			
Hijacker	7+	8+	Double
Intimidator	8+	7+	Double
Carrion-Eater	1+	8+	Ordinary
Reducer	10+	8+	Double

In order to determine the movement status of an animal in an encounter, throw for herbivore flight first, and if they do not flee, throw for attack. For all others, throw for attack first, and if they do not attack, throw for flight. If neither occurs, the animals stand. Throw for packs or groups of animals with one throw.

If animals are attacked, they will attack if their throw to attack is less than their to flee throw; otherwise they will flee. If no specific throw to attack is specified, the animal will attack if attacked (i.e., chasers).

Explanation of terms in the table:

If possible— Filters will attack if the range and situation allows.

If more— Chasers will attack on a throw of 6+ if there are more of them than in the encountered party.

If bigger— A hunter will attack if it is bigger than one member of the encountered party.

If surprise— Animals will attack if they have achieved surprise.

If surprised— Animals will flee if they are themselves surprised.

Speeds:

Animals will move at ordinary speed (one column per round) or at double or triple speed. Some animals may not move (speed = none). When two speeds are specified, the first applies on a throw of 7+, otherwise the second applies.

ANIMAL DEFINITIONS

The following definitions more fully detail the meanings of the descriptive terms used for animal categories and types.

Herbivores: Animals which eat unresisting food are generally classed as herbivores. While this is usually construed as covering plant eaters, the definition is extended here to cover the eating of unresisting animals as well. For example, the anteater and the whale eat effectively unresisting animals (ants and krill and are hereby classed as herbivores. Herbivores are of three types:

Grazers: Animals which devote most of their time to eating are termed grazers. They may be solitary, or grouped in herds. Their primary defense is flight, although such action may result in stampedes which could endanger adventurers in their path. When forced to fight, they will fight fiercely until killed or routed. Typical terran grazers are the antelope and the moose. The whale (which scoops krill from the sea as it swims through it is also a grazer.

Intermittent: Herbivores which do not devote full time to eating are termed intermittents. They tend to be solitary. Intermittents will usually freeze when an encounter occurs, fleeing if attacked by a larger animal. There is some potential that an intermittent will attack to protect territory or young. Typical terran intermittents are the chipmunk and the elephant.

Filters: Herbivores which pass the environment through their bodies are termed filters. Unlike grazers, which move to food, filters move a flow of water or air through themselves in order to gain food. Generally, filters will suck, trip, push, or pull anything (even animals) at close range into a digestive sac, inflicting automatic wounds of 1D per 50 kilograms or less of animal mass (wound alteration is ignored for filters). Filters are solitary and generally slow moving. They will attack reflexively (as indicated above), succeeding against adventurers with a throw of 6+. Prompt struggle by the adventurer (costing him an endurance point) will secure an escape on a throw of 7+, DM of +2 for each companion at close range assisting. Throw once per combat round, beginning on the round following attack. A filter can absorb an animal up to twice its own mass. Terran filters are generally aquatic, such as the barnacle.

Omnivores: Animals which eat food without regard to its resistance are termed omnivores. The bear, which will eat fruits and berries as readily as it will hunt for animals, is an omnivore. Omnivores are of three types: gatherers, hunters, and eaters.

Gatherers: Animals which display a greater tendency toward herbivorous behavior are termed gatherers. In most respects they are similar to intermittents. Typical terran gatherers are raccoons and chimpanzees.

Hunters: Animals which display a greater tendency toward carnivorous behavior are termed hunters. In most respects, they are similar to small or inefficient chasers. Typical terran hunters are baboons and humans.

Eaters: The true omnivore (in the sense that it will eat anything and everything) does not distinguish its food, consuming all that it is confronted with. Eaters present considerable danger in that they will not avoid adventurers when encountered. Typical of terran eaters is the army ant (when an entire swarm is considered to be one organism).

Carnivores: Animals which prey on other animals by attacking and killing them in the face of resistance are classed as carnivores. Carnivores are of five basic types: pouncers, chasers, trappers, sirens, and killers.

Pouncers: Animals which kill their prey by attacking from hiding, or by stalking and springing are termed pouncers. Because of the difficulty of coordinating such attacks, pouncers are solitary animals. In an encounter, pouncers which have achieved surprise have succeeded in their basic aim, and will attack regardless of range. If they do not have surprise, they will attack on a 9+. They will flee if surprised themselves. Typical terran pouncers are cats.

Chasers: Animals which kill their prey by attacking after a chase are termed chasers. They tend to be pack animals. Typical chasers are wolves.

Trappers: Animals which passively allow their prey to enter a created trap, wherein they are killed and then eaten are termed trappers. Trappers tend to be solitary and slow, but will attack any animal which enters their trap. Generally, any character which is surprised by a trapper at close or short range is then trapped on a throw of 5+. He may struggle to escape, (in lieu of making any swings or blows, but costing one endurance point) succeeding on a throw of 9+, DM of +1 for each assisting companion. Companions are subject to capture by the trap while providing assistance. Usually, a trap will not wound or damage a character, but it will hold

the adventurer to allow the trapper to attempt to kill him. A typical terran trapper is the spider. Less typical is the ant lion.

Siren: Distinct from the trapper, which creates a trap for its prey, a siren also creates a lure to draw prey to the trap. The trap is treated in much the same manner as that of a trapper, but the lure entails additional coverage. In most cases, the lure will be specific to some animal, but will be unnoticed by humans. In rare cases (throw 11+), the lure will be universal, perhaps a smell or scent, or a mirage or beautiful configuration, which will attract characters into a vulnerable position. Very rarely, the lure will be psionic in nature. Typical terran sirens are the angler fish (its mouth is the trap) and the Venus fly-trap.

Killers: Certain carnivores devote much attention to killing, often apparently for the act itself, in a kind of blood lust. Killers reason (such as territorial defense) is replaced by a raw killing instinct. Attacks by killers are fierce and violent. Killers will generally disregard the defenders size as a factor. A typical terran killer is the shark.

Scavengers: Animals which share or steal the prey of others, or take the remains of kills, are classed as scavengers. Scavengers are of four types: intimidators, hijackers, carrion-eaters, and reducers.

Intimidators: Scavengers which establish their claim to food by frightening or threatening other animals are termed intimidators. Their standard procedure is to approach a kill, and force other animals away by appearing to be a threat. A typical terran intimidator is the coyote.

Hijackers: Scavengers which establish their claim to food by simply taking it are termed hijackers. They rely on their superior strength or size to allow them to hijack food because other animals present cannot effectively object. A typical terran hijacker is the lion in a bad mood.

Carrion-eaters: Scavengers which take dead meat as it becomes available, often waiting patiently for all other threats to disperse before beginning, are termed carrion-eaters. Most typical of the terran carrion eaters is the buzzard.

Reducers: Scavengers which act constantly on all available food are termed reducers. They eat the remains of food after other scavengers are finished with it, consuming bone and other leavings. Terran reducers are bacteria, and to some extent vermin.

Events: Events are not necessarily animals, comprising instead both geographic or geologic dangers, and special types of animals not ordinarily encountered. The following examples are provided, but more should be generated by the referee to cover the wide range of possibilities in the universe.

Ravines and Precipices: The party has encountered unexpected geographic features which will retard progress by one day if travel is overland. If the encounter occurs at close range (to a party on foot) the lead member of the party will probably fall (throw 6+ to fall, DMs allowed based on personal expertise of the person), receiving from 1D to 6D in wounds. If this event occurs at close or short range to a party in a vehicle (AFV or ATV), it will topple (throw 8+ to fall, DMs allowed for driver expertise, DM -5 if the vehicle is moving at high speed), inflicting from 0D to 5D in wounds to each person in the vehicle.

Seismic Quake: A seismic disturbance occurs. Throw 2 dice, and if the result exceeds the strength of an adventurer, he is thrown to the ground by the force of the event. Throw 12 on two dice for this fall to inflict 2D wounds on each fallen adventurer.

Meteor Shower: Especially common in asteroid complexes, or on airless worlds, the meteor shower can puncture vacc suits or vehicles. Throw 2 dice to determine the size of the shower: a result of 7+ indicates a chance (1 in 6) that a meteor will puncture a vacc suit. A result of 9+ indicates a chance (1 in 6) that the shower will hole a vehicle in which the persons are riding.

Chameleon: These animals make use of camouflage very effectively. Throw to determine this animal's category and type, as well as other data, but the encounter will occur at close range. At that point, determine whether the animal flees or attacks using the normal encounter procedure.

Psionic Assaulters: From 1 to 6 telepathic animals (carnivores) will initiate an automatic attack on the party of adventurers. All persons not psionically shielded are immediately rendered unconscious and will receive 2D+6 in wounds. Psionically shielded individuals will undergo combat as indicated in the psionics rules. These animals always achieve surprise.

Storm: A violent rainstorm occurs abruptly, forcing the band to stop, or continue with increased danger.

ANIMAL SIZES AND WEAPONRY

<i>Die</i>	<i>Weight</i>	<i>Hits</i>	<i>Wounds</i>	<i>Weapons</i>	<i>Armor</i>
1	1	1D/0	-2D	•	as jack
2	3	1D/1D	-2D	Teeth	—
3	6	1D/2D	-1D	Horns	—
4	12	2D/2D	-1D	Hooves	as mesh
5	25	3D/2D	-1D	Hooves and Teeth	as cloth
6	50	4D/2D	-1D	Teeth	—
7	100	5D/2D	—	•	—
8	200	5D/3D	+1D	Stinger	—
9	400	6D/3D	+2D	Thrasher	—
10	800	7D/3D	+3D	Claws and Teeth	—
11	1600	8D/3D	+4D	Claws	—
12	3200	8D/4D	+5D	Teeth	—
13	•	•	•	•	—

Use this table to determine the physical abilities of animals for resolution of personal combat. In some cases, information as to some abilities will already be known from the animal's basic type. Throw two dice for each value: once for weight (which also includes hits and wound alteration), once for weaponry, and once for armor. If instructed to re-roll, do so.

This table should be used at the instant of encounter, each time an animal is met by adventurers.

Animal Size DMs: As required by attributes. As required by the terrain DMs chart. If planetary size is 8+, DM -1. If planetary size is 4-, DM -1.

Animal Weapon and Armor DMs: If carnivore, +6. If herbivore, -6. Scavengers automatically have teeth in addition. Flyers automatically have no armor.

• If this value is rolled, reroll one die and consult the appropriate column below:

1	6000	9D/4D	x2	as body pistol
2	12000	10D/5D	x2	as pike
3	18000	11D/6D	x3	as blade
4	24000	12D/6D	x3	as broadsword
5	30000	14D/7D	x4	stinger
6	36000	15D/7D	x4	as halberd

The powers of the mind are incredible; and some day the study of these powers will enable every individual to use them as an active part of his life. At the time in which *Traveller* occurs, however, universal psionic training does not exist; accurate information and quality training are available only through branches of the Psionics Institute, which is wholly devoted to the study of mental powers. Unfortunately, some prejudice exists, and the Institute maintains an extremely low profile.

THE PSIONICS INSTITUTE

Because the Institute does not advertise its existence, it is quite difficult to locate its facilities. Any world with a population of 9 or greater may have a branch established on it (throw 11+ for a branch to exist; DM +1 per level of population above 9).

Although a branch may exist, it still must be located. Any character may indicate that he is searching for the local branch of the institute (throw 9+ to find it, or information as to its location; DM +1 per level of streetwise expertise and +1 per level of admin expertise). Such search takes one week. If the search is unsuccessful, the character becomes convinced that no branch exists on this world, and gives up the search there.

If the local branch is located, a character may inform his comrades of his success; There is some chance (throw 7+ to avoid) that the branch is some distance away, and will require a long trip to reach it.

Branches of the Institute perform two functions: they administer the examination for psionic potential, and they provide training in the use of psionic talents. Both services entail a fee.

PSIONIC STRENGTH

The Institute's comprehensive examination provides a measure of personal psionic strength. The process takes two weeks time, and costs CR 5000. Some charity is available for truly indigent applicants (referee's discretion as to suitability, then throw 10+ to be given a free examination).

The Examination: Each character has a basic potential defined by a two die throw. Age constantly lessens this potential, however, unless training is undertaken to use it. A DM of -1 is applied for each block of 4 years age above 18. These blocks correspond to the aging cycles. For example, a character who takes the examination at age 23 is in his second 4-year block, and has a DM of -2. Throw 2 dice and apply the DM. The result is the character's Psionic Strength Rating. The examination may only be taken once per character.

Psionic Strength Ratings: The personal Psionic Strength Rating may range from zero to 11. Ratings of 12 or more cannot be attained naturally; they may be achieved temporarily through the use of psi-drugs. The maximum possible rating is 15.

Psionic Strength Ratings indicate two things: the maximum level of activity which may be performed, and the number of strength points at the character's command for the performance of specific tasks.

Maximum Activity Level: Each type of activity within a psionic field is assigned a level. A character may not perform that activity unless his personal psionic strength (unenhanced by psionic drugs) is equal to, or greater than, the level of the activity.

Available Strength Points: Each type of activity requires the expenditure of psionic strength points for the activity and for the range at which the activity is performed. A character's Psionic Strength Rating is an index of the points which he may expend. Expended points are regenerated, over time, by rest and recuperation. Psi-drugs may increase the points which are available to the character.

Aging and Deterioration: An untrained character is subject to a gradual, relentless deterioration of his Psionic Strength Rating. When the aging point occurs (every 4 years), his rating is reduced by 1. Additionally, if the sum of his strength, endurance, dexterity, and intelligence characteristics is exceeded by his Psionic Strength Rating, the rating is reduced to equal that sum.

Trained individuals are not subject to reductions in power through normal aging. If the sum of their first four characteristics is less than their psionic strength, psionic strength is reduced to equal that sum. Psi-drug abuse may also reduce Psionic Strength Ratings.

TRAINING

The Institute will train individuals in the use of their latent talents. Training requires 4 months time, and costs CR 100,000. Extremely talented individuals (Psionic Strength Ratings of 9 or greater) may apply for a scholarship if they can not otherwise afford training. In such cases, the Institute will take 95% of the character's assets, and waive the remainder of the Cost. (Referee: the Institute can, of course, read minds, and will not look favorably at fraudulent or devious applications.)

The Six Possible Talents: Although there are a total of six possible areas of psionic activity, no one person will usually be capable of activity in all areas. In training, a character will learn those areas in which he has ability or potential, and those areas in which he has no talent at all.

Roll two dice successively for each of the six talents listed in the talent table. A throw is indicated which must be achieved in order to have ability in that area. A DM must be applied to each throw: the throws may be made in any order, but a DM of -1 on the first throw, -2 on the second throw and -3 on the third throw, and -5 on all subsequent throws must be made. Thus, a character extremely anxious to acquire teleportation would throw for that talent first.

Effects of Training: The training sessions merely acquaint the character with the possibilities of his talents, and impart to him a rudimentary control over them. As a result, the character can perform any task of level 1. Experience and hard work will allow the character to learn, as he lives his life, how to use greater levels of power. The effects of time and experience are given in the descriptions of the specific talents.

Training also instructs the characters in the methods of concealing their powers, and in the dangers of allowing common citizens to know of their power. When training is completed, the Institute is incapable of further assisting characters in their psionic development. From that point, all depends on experience and fortune.

TALENTS

Telepathy	5+
Clairvoyance.....	6+
Telekinesis.....	6+
Awareness.....	7+
Teleportation	9+
Special	9+

It is possible for a character to have a very high psionic strength rating and nonetheless turn out very badly in training, discovering that he has few or no specific abilities. It is also possible to discover that a character has a rudimentary talent in a field, but insufficient level to enable him to perform any activity. For example, teleportation requires a Psionic Strength Rating of 7. A character with a psionic strength of 5 who achieves teleportation as a

talent is still unable to teleport because he has an insufficient rating. Psi-drugs will increase his strength, but not his rating.

Psionic training is not available in the services, nor is it available from any source except the Institute.

RANGE

Psionic activity is restricted by the range or distance at which it is performed. A greater number of Psionic Strength Points are required to do psionic tasks at greater ranges.

The range definitions given here apply to psionic activity. It is important to note that the ranges close to very long are identical to the tactical ranges used in personal combat. Psionics have so far proven incapable of interplanetary ranges.

Range refers to simple straight line distance. Psionic activity, at the ranges given, is effectively instantaneous, and is not affected by intervening matter in most cases (for example, electromechanical psionic shields do interfere with psionics, but planetary masses or walls do not).

PSIONIC RANGES

Close— In physical contact; touching.

Short— 1 to 5 meters.

Medium— 6 to 50 meters.

Long— 51 to 250 meters.

Very Long— 251 to 500 meters.

Distant— 500 to 5000 meters.

Very Distant— 5 to 50 kilometers.

Regional— 50 to 500 kilometers.

Continental— 500 to 5000 kilometers.

Planetary— 5000 to 50000 kilometers.

TELEPATHY

Telepathy is the ability to contact other minds directly. In rudimentary forms, it allows the communication of feelings and emotions; in advanced forms it allows the transfer of information. There are several levels of telepathy, which depend on the psionic strength and experience of the user.

Life Detection: The most elementary form of telepathy is the ability to detect the presence of other minds. Life detection enables a character to sense the presence of other minds, the number of minds present, the general type of minds (animal, human, etc) and their approximate location.

Life detection is a level 1 ability, and requires 1 psionic strength point to perform (plus any additional cost due to range, if applicable). Activity may last up to .60 seconds. Life detection is reasonably sophisticated, and can 'ignore' bacteria or unimportant animals in the area. It functions best in intelligent minds. Shielded minds

are undetectable (see Shields). If an individual whom the telepath knows is 'life detected,' he will be recognized.

Telempathy: The communication of emotions and basic feelings is accomplished by telempathy. This ability serves well in the handling of animals and beasts of burden, but may also be applied as a psychological weapon against humans. Sending of emotions such as love, hate, fear, and others may influence other beings (although not necessarily in the manner desired). Telempathy also allows the emotions and feelings of others to be read by a character.

Telempathy is a level 2 ability, and requires 1 psionic strength point to perform (plus range costs as applicable). Activity may last up to 60 seconds.

Read Surface Thoughts: The most commonly known feature of telepathy is the ability to read the thought of other individuals. Only active, current thoughts are read by this ability, with the subject (if himself not a telepath) unaware of the activity. Individuals with telepathic ability cannot be read due to the presence of their natural shields.

This ability is of level 4 and requires 2 psionic strength points to perform. Activity may take up to 60 seconds. Range costs must be added if applicable.

Send Thoughts: Complementary to the ability to read surface thoughts is the ability to send thoughts to others. Such individuals need not themselves be telepathic to receive such thoughts.

Telepathic individuals are normally open to such transmissions, but may close their shields against them if they become bothersome or threatening.

A thought transmission may last up to 120 seconds. Sending thoughts is a level 5 ability, and requires 2 psionic strength points to perform, plus normal costs due to range.

Probe: The application of great psionic strength will enable a telepath to delve deep into the mind of a subject and to then read his innermost thoughts. Questioning can be used in the procedure to force the subject to divulge specific information. The prober can easily determine deliberate untruths told (thought) by the subject.

Probe cannot be used against a shielded mind.

Probe is a level 9 ability, and requires 8 strength points to perform. Probing may last up to 10 minutes, which time is usually sufficient to determine the information sought.

Assault: Violence may be dealt by a telepath. Against an unshielded mind, the result is automatic unconsciousness, and possibly death. Against a shielded mind, an instant duel ensues.

An unshielded mind, when assaulted telepathically, is rendered unconscious immediately, and the character receives wounds equal to 2D+6.

When a shielded mind is assaulted, the attacking telepath compares his Psionic Strength Rating to the Psionic Strength Rating of the defender: the difference (attacker minus defender) is the required DM. For the assault to succeed, the attacker must throw 7+. For example, an attacker of Psionic Strength Rating of 12 assaults a

character with a Psionic Strength rating of 5 ($12 - 5 = 7$); a DM of +7 is allowed in the assault.

Assault is a level 10 ability, and requires 13 strength points to perform. The assault takes less than 2 seconds to occur.

Shield: All telepathically able characters learn how to create a mental shield which protects the mind against unwanted telepathic interference. Such a shield is automatically in force at all times and requires no strength point expenditure to maintain.

Artificial psionic shields are clumsy helmet-like devices which function in much the same manner while worn. They weigh 1000 grams, offer little physical protection, and have a base price of CR 4000.

Experience: When the talent of telepathy is initially learned, a telepath is capable only of life detection and shield. As time passes, and the character works at improving his ability (time passing is sufficient for this), he will gradually improve to the full range of his potential.

Each month, the character may roll two dice to determine his progress in his telepathic talent. For a throw of 8+, he has increased his capability one level. Such increase may never result in an ability higher than his Psionic Strength Rating. For example, a character with a Psionic Strength Rating of 11 is potentially capable of all abilities, including assault. But, upon completion of training, he is actually capable of level 1 activity (life detection and shield). After successfully rolling 8+ 10 times (in 10 or more months, at one roll per month), he will have realized his full potential. A character of Psionic Strength Rating 4 could never exceed level 4 (after 4 or more months, at one roll per month).

In situations where a non-character is read or influenced by telepathy, it is the responsibility of the referee to determine the person's reactions and thoughts.

CLAIRVOYANCE

Clairvoyance is the term applied to the general talent which allows a person to sense events at some location displaced from the viewer.

There are several levels of clairvoyant ability.

Sense: The basic ability to sense things at some point in the distance. A character will become aware of the most rudimentary characteristics of a location when applying this ability. For example, the referee will give a basic description, without detail: "a room, containing 4 dogs," or "an open plain, with a tree, and no animals or men present."

The clairvoyant character must state the range at which he is applying his talent, and will generally sense the most interesting or important feature at that range.

Sense is a level 2 ability, and requires 1 psionic strength point to perform (plus any range cost).

Clairvoyance: This specific ability allows actual viewing of a situation at some displaced point. It may be performed outright, or to allow elaboration of some situation sensed. The clairvoyant character must state the range at which he is

applying his talent. Clairvoyance is a level 5 ability, and requires 2 psionic strength points to perform, in addition to any range costs.

Clairaudience: This ability is identical to clairvoyance, with the exception that it allows hearing instead of seeing.

Combined Clairvoyance and Clairaudience: A character is capable of both seeing and hearing a specific situation by using this ability. It is of level 9, and requires 2 psionic strength points to perform, in addition to any range costs.

Direction: A character may specify the exact location at which he is applying his ability, if it is out of physical sight, by direction, provided he has some knowledge of the location by experience or description. This guidance assists him in performing his activity in the most efficient manner.

Direction is a level 3 ability, and requires no basic points to perform (although range costs must be paid).

Clairvoyance abilities allow eavesdropping activities as well as spying and detection-free exploration of situations. While telepathic life detection will determine the presence of living minds in a closed room, for example, sense will determine if a room is occupied or empty. Clairvoyant activity cannot be sensed by others, including by other psionic talented individuals.

Experience: A beginning (newly trained) clairvoyant is considered to be of level 1 regardless of his actual Psionic Strength Rating. Each month, he must throw two dice, and if he achieves 8+, he increases his actual ability one level, until he has reached his actual psionic strength level.

TELEKINESIS

Telekinesis is the talent which allows objects to be manipulated without physically touching them. Telekinetic power is classified by the number of grams weight which the person can manipulate. Any manipulation is treated as if the person were physically handling the item, but physical danger, pain or stimuli are not present. Telekinesis includes a limited amount of sensory awareness, sufficient to allow actual intelligent manipulation.

TELEKINETIC LEVELS	
Level 1.....	1 gram
Level 2.....	10 grams
Level 3.....	100 grams
Level 5.....	1000 grams
Level 8.....	10 kilograms
Level 10.....	100 kilograms

The telekinetic levels table indicates the weight manipulation allowed by level of ability.

In addition, the level of ability indicates the cost in psionic strength points to perform such manipulation. Costs due to range must also be paid. The costs envision normal lifting or manipulating; throwing with a strength generally equivalent to physical throwing may be performed at a double psionic strength point cost. Any one telekinetic feat may last for up to 60 seconds. Note that personal weight in most cases will not exceed 100 kilograms; a character of level 10 telekinetic ability can levitate. Gravity differences will not alter the mass which can be manipulated.

Telekinetic power may not be applied at greater than very long range, and then only (as may be seen from the range table), at relatively great cost in psionic strength points.

Experience: Regardless of ultimate potential ability, a character leaves training capable only of level 1 activity. Each month, upon successful achievement of a roll of 8+, ability level increases one level. A character's level of ability may never exceed his psionic strength rating. This experience throw is independent of other experience throws which may be made at the same time.

AWARENESS

Awareness is the psionic talent which allows control of one's own body. Awareness covers a range of four possible abilities, described below.

Suspended Animation: Personal body activity may be suspended for varying periods of time. A character with awareness may enter a suspended animation state (similar to cold sleep, but without the intrinsic danger of death) by willing himself into it. Such a state continues for 7 days, without need for food, water, and with minimal air needs. Such a person could effectively travel in a cold sleep berth, without actually undergoing cold sleep and its dangers.

Suspended animation may be stopped at any time, provided external stimulus is given to awaken the sleeper (such as a friend or a mechanical alarm). This is a level 2 ability, and costs 3 points to perform.

Psionically Enhanced Strength: Psionic strength points may be converted to physical strength points on a temporary basis. The character makes the commitment, reduces his available psionic strength by a specific number of points, and increases his physical strength characteristic by that number. In no case may the number of strength points gained exceed the character's current level of awareness, and physical strength may not be increased beyond 15. Psionically enhanced strength reaches its new level immediately, remains at that peak for 60 minutes, and then declines at the rate of 1 strength point per minute until normal strength level is reached. Psionically enhanced strength is a level 4 ability.

Psionically Enhanced Endurance: Psionic strength points may be converted to physical endurance points on a temporary basis. The character makes the commitment, reduces his available psionic strength points, and increases his endurance characteristic by the same number. In no case may the number of endurance points gained exceed the character's current level of ability, nor may endurance ever be increased to beyond 15. Psionically enhanced endurance reaches its new level immediately, remains at that level for 60 minutes, and then declines at a rate of one point per minute until normal endurance level is reached. Psionically enhanced endurance is a level 5 ability.

Regeneration: Wounds and injuries may be healed rapidly. Wound points may be healed by the application of this ability, exchanging one psionic strength point to regenerate one wound point. This healing occurs immediately (less than one minute). Should one session of healing be insufficient, further healing and regeneration may be applied after expended psionic strength is recovered. Regeneration may

also be applied to the growing of new limbs or organs to replace lost ones, or to heal unrecovered old wounds suffered prior to psionic training. Regeneration may not be used to counteract aging. Regeneration is a level 9 ability.

Awareness is not capable of affecting others and may not be used for healing or enhancing other characters. For the purposes of combat, each combat round is assumed to be 15 seconds long.

Experience: A character with awareness leaves training with level 1 ability, and may possibly increase it as time passes. Each month throw two dice, and increase the character's level by one if the throw is 10+. This throw must be made independently of all other experience throws.

TELEPORTATION

Teleportation is a talent which allows effectively instantaneous movement from one point to another point, especially without regard to intervening matter. Psionic teleportation is limited to the movement of the teleporting character's body and (for highly skilled teleports) his or her clothing and weapons.

Personal teleportation, without clothing or weapons, is a level 5 skill, requiring only the range cost (for teleportation) to be performed.

Personal teleportation, clothed, but without any personal load or weapons, is a level 7 skill, requiring only the range cost (for teleportation) to be performed. A weapon of up to 1000 grams weight, if worn so as to be a part of clothing holstered, or sheathed) may be carried.

Personal teleportation, clothed, and carrying a physical load of weapons and accessories or items, not to exceed the character's strength in kilograms, is a level 9 ability. Such activity requires the expenditure of the range cost in psionic strength points.

Teleportation always involves the movement of one's body to another location. Independent items or other individuals may not be so moved. A small animal could be carried as part of personal load under the terms of the level 9 ability.

Preknowledge of Destination— A character must always have a mental image of his destination before he may teleport to it. This mental image may be acquired by personally visiting the location at some time prior to the teleportation (including simply viewing it from a distance), by having the mental image implanted in one's mind (by telepathy) by an individual who has visited the location, or by viewing the location using clairvoyance (level 5 clairvoyance, not simply the less sensitive sense).

Teleportation involves serious restrictions on movement in order to assure the conservation of energy and momentum. These may be stated as follows:

On planetary surfaces, teleportation is restricted to jumps of less than regional distance. Jumps at very distant range involve certain disorientation for a period of up to 2 minutes. Jumps at distant range involve a chance (throw 8+) that the character will stumble or fall upon arrival. It is up to the character to demonstrate the spe-

cific effects he will encounter, and how he will avoid them, before attempting jumps at ranges greater than distant.

Changes in altitude (actually, all movement to locations of differing gravitational potential) will result in changes in temperature. A jump of 1 mile straight down will result in a temperature increase of 7 degrees Fahrenheit; sufficient to cause extreme fever, brain damage, and possibly death. Generally, any jump may not involve an elevation change of more than 400 meters, and multiple jumps should not involve a cumulative elevation change of greater than 600 meters in one hour.

A Note of Explanation: A teleport down, into a lower elevation will result in a change in energy, manifesting itself as heat; hence the temperature increase. Similarly, a teleport up will result in a loss of energy, and a corresponding cooling effect. These problems may be gotten around through the use of devices, compensators, heat suits, and other means. The referee and the players must manage such items and insure that they function correctly.

Experience: Teleports leave training with an ability level of 5 (except for characters with a psionic strength rating of less than 5, who may not increase their ability, and so cannot teleport). Each month, throw 12 to increase level by one. Teleport level may not exceed psionic strength rating.

SPECIAL

Although psionic activity generally lends itself to classification, some individuals defy this very classification. Individuals with special talent are capable of some activity which is not described above, and generally dispensed by the referee, in a manner of his choice. He may include talents or abilities not covered by this section, or randomly assign otherwise unreceived abilities to characters who are not normally eligible for them.

It is suggested that Special Psionic Talents be made psychologically dependent on a focus, in the form of some artifact or charm, which must remain in the possession of the character.

RECOVERY

When psionic strength points are expended, the available points for a character are reduced. Such points are naturally recovered by a process of rest and recuperation.

Beginning at a time three hours after the last psionic activity, a character regains one psionic strength point per hour until the total equals normal psionic strength rating. Such recovery is independent of physical activity.

Psionic activity is defined as any psionic related acts, including the taking of psi-drugs for any purpose.

PSI-DRUGS

Chemical means are available to enhance psionic strength points on a temporary basis. These psi-drugs are:

Booster: The basic psi-drug, derived from thongamonganite, and available in small, one dose pills. Booster increases a character's available psionic strength points by 3 if taken when psionic strength is at full power, by 2 if taken while psionic

strength is at a reduced level. Additional doses of booster have no effect if taken within an hour, and the drug will never boost psionic strength points to a level greater than normal level plus 3. The drug induced additional psionic strength will wane and disappear at the end of one hour.

Double: A more potent derivative of thongamonganite, also available in small, one dose pills. Otherwise identical to booster, double increases psionic power by 6 if taken when psionic strength is at full power, by 4 if taken when psionic strength is at a reduced level.

Special: The rarest of psi-drugs, (pure thongamonganol) special is only available in liquid form, and must be taken by injection. Special gradually increases psionic strength points to 15 at the rate of 1 point per hour. Psionic strength remains at this level (if unused) for 4 hours, and then wanes at the rate of 1 point per hour, until psionic strength reaches zero. Normal recovery then occurs.

Special has a chance (throw 11+ when used) that it will permanently reduce psionic strength rating by 1.

Availability: Because the general public attitude towards psionics is negative, psi-drugs are expensive and difficult to obtain. Psi—drugs must be located and bargained for; in many cases possession is illegal.

Dealers may exist on any world (throw 8+ to locate a dealer after 2 days search; DM +1 per level of streetwise expertise). Most dealers will only have booster (throw one die to indicate the number of doses he has available); double will be available on a throw of 10+, special on a throw of 2. If double or special is available, throw one die and halve the result to determine the number of doses he has available.

Base prices for psi-drugs are: booster, CR 1000, double, CR 4000, and special, CR 10,000. Prices may be higher, but will generally not be lower.

Pitfalls: The abuse of psi-drugs can lead to loss of psionic powers and to physical debilitation. In any situation in which a character takes three doses in three days or four doses in one week, there is a chance (throw 9+ for it to occur) that drug overdose will occur within 6 hours of the last dose.

If overdose occurs, the character becomes seriously ill, lapsing into unconsciousness and taking wounds equal to 3D. Upon recovery from the illness, psionic strength rating is reduced (saving throw to avoid is 10+) by one point, permanently.

PUBLIC PREJUDICE

The climate of public opinion is extremely negative, to the point that individuals find it unhealthy to admit of possession of, or sympathy for, psionic powers.

Persons with psionic ability will not admit that they possess them unless completely assured that they are in no danger (such procedure usually involves self-revelation by a psionic talent).

There is small chance that hirelings or citizens have psionic training or ability (throw 12 to have any ability; then determine actual ability). There is equal chance (throw 12) that a non-character is an informant (or potential informant) who will immediately report to the authorities.

Psionic individuals who are detected by the public or the authorities are subject to a variety of responses, based on a two die throw: 12+ lobotomy, 10+ lynching, 8+ for tarring and feathering, 6+ for imprisonment, 4+ for immediate deportation.

PSIONIC RANGE TABLE

Range	----- <i>Talent</i> -----				
	Telepathy	Clairvoyance	Telekinesis	Teleportation	Awareness
Close	0	0	0	1	—
Short	1	1	1	2	—
Medium	2	1	2	3	—
Long	3	2	4	3	—
Very Long	3	2	9	3	—
Distant	4	3	—	4	—
Very Distant	4	3	—	4	—
Regional	5	4	—	5	—
Continental	5	4	—	5	—
Planetary	6	4	—	5	—

Because Awareness is an inward directed talent, it has no range cost.

