

# SPACE QUEST

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2nd Edition

## 0100. SCOPE AND SCALE OF SPACE QUEST

This is a large and confusing game. Hopefully, the confusion will lessen as the rules become familiar, but the size will still be huge! We have here a game operating on scales ranging from two men shooting it out, or even duelling with swords, to the clash of whole fleets or armies. We have developed a scale for interstellar transport, and one dealing with the taboos of a single planet's culture. We have tried, in 110 pages, to create a set of rules allowing campaigning on any level desired for science fiction-fantasy wargaming.

Naturally, we have failed in many areas. We have no rules for detailed onplanet adventure, and nothing to deal with the personal scale of "where in this building am I?" There are holes galore (Black and otherwise) in the structure of this book. Much of this is purposeful, for to give a fuller picture would have required us to make the background of our own campaign the basis of the game.

And we won't do that. This game is designed for the growing number of gamers who get off on the creative challenge of building their own campaign, with no premises beyond the mechanics of play for players to get fat and lazy with.

The scope of the campaign is the imagination of its Game Master, hereinafter respectfully known as the GM. It is his wit and imagination, the books he has read and the movies he has seen, the sum total of his vision of the space-opera universe, that will be the foundation of each individual campaign of Space Quest.

And it is for him that this book is meant, and to him, more than anyone else, to whom it is dedicated.

## 0110. EQUIPMENT NEEDED TO PLAY SPACE QUEST

To establish a campaign you will need:

Loose-leaf binder and lots of note paper to record system maps, special scenarios, etc.

Graph paper for a star map.

Various pens and pencils, colored so that you can color-code your material for convenience.

At least one pair of 20-sided dice, called percentile dice.

At least 3 pair of standard, 6-sided dice.

A calculator or table of squares and square roots, or a slide rule.

These rules. Patience. Players. And imagination.

Before beginning a campaign the GM should have read the rules carefully, several times. Do not try and absorb all of this stuff in one sitting. It took two years to design and it cannot be memorized in an hour. He should have established his campaign scenario. We are flattered if you take the 20 Suns Combine as your model, but these rules can be switched to fit your favorite Science Fiction novel or film with a minimum of strain.

The GM should have designed at least one map sheet full of stars, about a hundred in all, of which a third will turn out to have planets using the random method we give in the rules. He should then scatter his own, special scenarios and gimmicks around the sky.

## 0120. A NOTE ON RANDOM NUMBER GENERATION

We have designed this game to require only normal 6-sided dice, and the now-fairly common 20-sided dice. You do not need the other polyhedra dice used in gaming circles, though they do make life easier.

But in the text you will see calls for rolls on such strange things as 3-sided dice, 2-sided dice, 30-sided dice, etc. Don't get into a dither, for these are our way of noting the probability range of a given random number determination. All the ranges called for in this book (n-sided dice) can be generated on the two types you have. For example:

To roll 1-12 on two 6-sided dice, consider the first die as the "control" and the second as the "range." If the control rolls 1-3, the range is 1-6. If the control rolls 4-6, the range is 7-12. Easy, no?

Another case. To roll a "30-sided die," roll a 6-sided control and a 20-sided range. If the control is 1-2, the range is 1-10. If the control is 3-4, the range is 11-20. If the control is 5-6, the range is 21-30.

A final example, and one of the commoner ranges we use, is the "3-sided die" or the "10-sided die." A 3-sided die is simply a 6-sided die roll, where 1-2 is 1, 3-4 is 2, and 5-6 is 3. A "10-sided" die is a 20-sided die. The die will always give a reading of 1-10 (or 0-9), and it can function as a 20-sided or 10-sided die, depending on the control factor you use.

Finally, if any probability defies your effort to transform it into a straight number range, then you can figure the percentage chance involved. If you need a "17-sided die", you roll the two 20-sided dice, which gives you two figures from 0-9. The first die is the "tens" number, the second is the "unit." Thus, you get a number from 01-00. 00=100%. For your 17-sided die, you would divide the number rolled by 17, rounding UP, and this gives you a number more or less between 1 and 17. There is an error margin, but you get the idea. If you really want to be precise, roll three 10-sided dice, for a number from 1-1000.

So don't worry about the strange numbers we throw at you. They can all be resolved into fairly simple die rolls.

## 0200. GLOSSARY OF PHYSICAL MEASURES AND STANDARDS USED IN TEXT

Astronomical Unit: Abbr. AU. A measure of distance used in interplanetary scale action. 1 AU is equal to 150 million kilometers.

c: Symbol for the speed of light, the absolute top velocity possible in the realspace continuum.  $c = 100,000 \text{ km/sec.}$

det: A distance measurement used in determining ship movement in combat or in similar small scale actions. 1 det is equal to 1/3000th of an AU.

ERG: The standard measure of energy used in the campaign. 1 ERG is equal to the energy release of .001 grams of matter totally converted to energy at  $E=mc^2$ . This figure is about 10 million joules.

g: A g is a measure of gravity or acceleration.  $1 \text{ g} = .33 \text{ meters/sec}^2$ .

GAL-: A prefix denoting that a unit of measure is "Galactic Standard." All values given in this rulebook are assumed to be in GAL-units unless otherwise stated. The term "old" unit is used to refer to terrestrial units of measurement not used as GAL-Standard.

Hypermeter: A measure of spatial relationship (distance) in N-space, or hyperspace. A vessel under normal N-drive values travels at 1000 hm/hr.

1000 hm = 1 hyperclick (hk). Travelling one hk in N-space is equal to travelling a distance of 1 light-year in realspace. A starship normally travels 10 hk/day.

lite: One light-year. The distance light travels in 1 GAL-year.  $10^{13} \text{ km.}$

Metric System: A decimal system of measurement used as GAL-Standard.

Linear Distance: 1 meter (m) = 100 centimeters (cm) = 1000 millimeters (mm).

1 meter is approximately equal to 39 old inches, or 1 old yard.

1000 m = 1 kilometer (km). 1 km = .6 old miles.

Volume: 1 liter (lr) = 1000 cubic centimeters (cc).  $1 \text{ lr} = .9 \text{ old quarts.}$

Mass: 1 gram (gr) = mass of 1 cc of water.

1000 gr = 1 kilogram (kg).  $1 \text{ kg} = 2.2 \text{ old pounds.}$

1000 kg = 1 metric ton (tonne).

Time: 1 second (sec) = time required for light to travel 100,000 km.

100 sec = 1 minute (min). 100 min = 1 hour (hr).  $10 \text{ hr} = 1 \text{ day.}$

10 days = 1 week (wk). 10 weeks = 1 month (mo).  $10 \text{ mo} = 1000 \text{ days} = 1 \text{ year (yr.)}$

Dates in this time system are written as decimal values of the year. Thus, the 437th day of the year 2001 would be written as 2001.437. Hours are recorded similarly. The 8th hour of the date above is written as 2001.4378. The same applies for minute and second, should such a precise figure be necessary.

Temperature: Two scales are employed. In general use for purposes of space exploration is the Kelvin scale. The Celsius, or Centigrade scale, is used for less esoteric areas.

Kelvin:  $1^\circ \text{ K} = 1^\circ \text{ C} = 1.8^\circ \text{ Farenheit. } 0^\circ \text{ K} = \text{Absolute } 0 = -273^\circ \text{ C.}$

Centigrade:  $1^\circ \text{ C} = 1^\circ \text{ K} = 1.8^\circ \text{ F. } 0^\circ \text{ C} = \text{Freezing Point of water} = 32^\circ \text{ F. } 100^\circ \text{ C} = \text{Boiling Point of water} = 212^\circ \text{ F.}$

SCL: A unit of commercial measurement equal to the volume of cargo of 1 standard Hold Unit of a starship.

## 0210. IMPORTANT TERMS AND SYMBOLS USED IN THE TEXT

All Terrain Vehicle: Abbr. ATV. A series of vehicles of various sizes and capabilities, using anti-gravity propulsion to travel over various types of planetary terrain at high speed. Most ATVs are capable of travel through dense gas or fluid media as well as aerial movement.

Cartel: One of the immensely powerful commercial houses which currently form the top class-stratum of the 20 Suns Combine.

Combine: Usual term applied to the 20 Suns Combine, the home civilization for the characters in Space Quest.

CR: Symbol for "credit." The credit is the basic monetary unit of the Combine. 1 CR = 1 ERG and money and energy may always be exchanged at par on worlds using Empire type technology.

CT: Anti-matter. "Contra-terrene" matter is a negative form of normal, or "Terrene" matter. When CT contacts Terrene matter, both combine explosively, each converting the other into a quantum of hard radiation. While valuable in the Combine as a power source, it is both rare and dangerous to mine and ship.

Empire: The Galactic Empire. The now-destroyed, parent culture of the Combine. A device is described as being of Empire type, that is, of the technological type used by the characters of the Combine, or of Alien type, a product of some other technology. For a full description of the Empire as it was, and of the Combine, see section 300 ff.

Gravity Shock: Also called Grav-shock, or G-shock. A severe form of physical collapse caused by exposure to very high accelerations.

Kingdom: The term "kingdom" is used to refer to a hostile, competing culture in the campaign, waging a cold-to-warm war with the Combine for the resources of unexplored star systems. GMs may substitute their favorite "bad guys" for the Kingdom, if they are designing a variant scenario. Examples would be the Klingons from Star Trek, the Kzinti, from Larry Niven's "Known Space" stories, or Doc Smith's Boskone, from the "Lensman" books.

Life-form: Any living creature in the campaign, intelligent or not.

Life Form Classification Code: A five letter code, based on a table given later in the rules, providing basic data about the physical form and environmental needs of life-forms.

Monster: Any life-form of a hostile nature, specifically, those life-forms encountered in space by starships in the course of a voyage.

N-shock: A severe, psycho-physical collapse caused by exposure to N-space conditions. The condition requires immediate medical treatment if it is not to prove fatal.

N-space: A hyperspace continuum of  $n$  dimensions, used by star-faring cultures for non-relativistic, interstellar flight at trans-light speeds.

Q-drive: The "Quasi-acceleration Drive," used for interplanetary voyages, or short hops in real-space. The Q-drive is capable of travel at up to .99 c.

Radiation Intensity Factor: A measure of the intensity of radiation impinging on a character. The RIF differs from the roentgen or rad, in that it does direct damage to life-forms instantly, as well as having a probability of inducing Radiation Sickness at a later time.

Radiation Sickness: A condition caused by exposure to a high RIF count. There are several degrees of intensity of Radiation Sickness. Survivors of the disease sometimes develop mutant abilities.

Realspace: The "normal" 4-dimensional continuum in which our universe exists.

Sent: A term applied to any intelligent being as a polite mode of address.

Ship Unit: Abbr. SU. 1) A measure of the size of space ships or large objects or beings in space. 2) A term referring to one of the modular units used to build starships, such as a Command Unit, Drive Unit, etc.

Slugs: Standard power cells used for energy by devices in Empire technologies. There are three sizes: Power Slug, a 1000 ERG fuel cell, used for starships and heavy machinery; centiSlug, a 10 ERG fuel cell, used for vehicles and some medium devices; milliSlug, a 1 ERG battery, used to power handweapons, spacesuit systems, etc.

Vacuum Shock: Vacuum shock, or Vac-shock, is caused by exposure to vacuum. While not always fatal, it requires medical attention to prevent serious damage from resulting.

0220. IMPORTANT GAMING TERMS USED IN TEXT

Ability: A score in one of seven "Abilities." These are the physical and mental potentials of the characters in the campaign. The term "Abilities" will ALWAYS be used in this sense when it is capitalized, as here.

Character: Any being taking an active part in the campaign, whether under the control of the GM or of a player.

Class: Professional class of the adventurers in Space Quest. There are five Classes, each with special skills or powers, dealing with one major area of space exploration.

Damage: A score in points, indicating the number of points of damage from weapons or other mishap a being will sustain in the event of being hit with the weapon, triggering the trap, etc.

GM: The designer and referee of a campaign. The Prime Mover of his game-universe. The GM may modify any or all rules in this book to fit his desired campaign. His decisions are final, and he is best thought of as the Supreme Deity of the campaign.

Handgun: Any portable weapon striking at a distance with a bullet, grenade, ray, or missile. This classification includes small arms, rifles, grenade launchers, missile projectors, etc.

Hand Weapon: Any weapon held in the hand for use in close combat on a hand-to-hand scale. This includes swords, axes, maces, clubs, rocks, powered weapons, etc.

Hand-to-hand Combat: Combat occurring at close quarters, using hand weapons or unarmed combat skills.

Hit Points: All characters have Hit Points. This is a score indicating how many points of damage the character can take without dying, becoming unconscious, etc. When the Hit Point score of a character reaches 0, the being is in a coma, requiring medical attention to revive. If the score falls below 0, the character is dead.

Hit Score: The score necessary to hit a target with some form of attack. A roll on the type of dice indicated in the text for a given type of combat must equal or exceed the required Hit Score to make a hit.

Melee Turn: Abbr. mt. A period of time used in all combat simulations. 1 mt = 5 GAL-sec. A mt is about 1.5 old seconds.

Penetration: Attacks of some types must penetrate armor or screen worn by the defender, or generated by the defending vessel or monster. Various rules exist for different combat scales, governing penetration and its effects.

All combat in Space Quest is based on two factors: hitting the target, and penetration of its defenses.

Personal Combat: Combat between characters, as opposed to ships, or ship-sized creatures. The term usually refers to combat with handguns or missile weapons.

Player: A person playing the game, Space Quest. A campaign requires at least 1 Player and 1 GM.

Player-character: A character under the direct control of a Player. These are the only beings in the game with "free will," as regards the will of the GM. A Player-character may be a character generated by the Player, or a character who has permanently joined forces with a Player.

Saving Throw: Abbr. ST. A roll of the dice to determine if a character survives a given danger, or succeeds in some extraordinary attempt. A ST is usually based on the Ability of the character in the relevant area.

Ship Weapon: One of the powerful, long-range weapons used in ship combat, or space-to-ground combat.

Unarmed Combat: Hand-to-hand combat using no weapons.

### 0300. HISTORY OF THE GALACTIC EMPIRE

The discovery of the N-space Drive in the year 1023 of the Atomic Era (Terran reckoning), finally opened the stars to Man. No longer did voyagers face the trauma of relativistic travel in Slower-Than-Light vessels, returning from a trip to find their homes lost in the passing of years, or even centuries. Travel in N-space took ships from star to star in days or weeks, and a ship would emerge from a month of hyperspace travel to find that a month had elapsed in real-space as well.

Man learned, as he had often suspected, that he was not alone in the universe. Under strange skies, the Terrans met beings of flesh like their own, and life-forms made of stone; they found, or were found by, intelligent plants, or creatures of pure energy. Sometimes, the races could not understand the needs and drives of their new-found neighbors, and war haunted the skies. But more often, the initial revulsion for the "stranger" was overcome, and each race found the other the be less monstrous than it had seemed at first.

It was, in the main, a time of thoughtfulness and peace, as life seemed to draw closer to life when faced with the immensity of Space.

The centuries passed, one into the other. Interstellar communication and transport became ever swifter and surer. Worlds were colonized, centers of learning established, industry and trade increased under a hundred stars.

In the 895th year of the Interstellar Era (Terran reckoning), the governments of the sentient cultures of known space met in a great council. After two years of debate and planning, they announced the coalition of their spheres of influence into the Empire.

Picture if you can, the possibilities open to the co-operating thinkers and builders of many score of cultures. Imagine if you can, the advances in culture and technology possible to such an alliance. This was the Empire in its days of greatness.

Two centuries pass, measured from the foundation of the Empire. The Empire rules a sphere 1000 light-years across. The final steps were being taken to complete the linkage of all the members of the Empire into a single community, via a great net of teleportation stations. A being could walk from star system to star system as easily as we walk around the block. In this achievement, the Empire reached a stage of development that might have made it eternal, and yet was to prove its downfall.

No one ever knew where the ships originally came from. One day, they were simply there, dropping out of N-space to ravage the worlds of the Empire. First one, then a dozen, then scores of systems were laid waste by the invaders. They would not parley, they would not stop. They would only destroy until they were destroyed in turn. The Empire fought back, culling what information they could from the rare, intercepted communications between the killer fleets. They learned little of the invader except their name: Sniz.

The fleets of the Imperial Legions rose to battle, and the voids of N-space and realspace scintillated with the ravening energies of thousands of warships. Losses were hideously high on both sides, but still the foes clashed and clashed again.

In the year 317 of the Empire, as supplies were being marshalled on the shipyard worlds of the Legion for an all-out offensive, disaster, final and almost utter, struck the worlds of the Empire. Every teleport nexus in the transport system suddenly blew up, flaring violently with the energies of an exploding star. Concussion and radiation seared the faces of hundreds of planets. Electromagnetic hell blasted the memory cores of the great computer centers clean, and wiped out the machinery that fed and ran an Empire. Communication disappeared, and transport, such as survived, was chaos.

The Sniz had developed a means of introducing a quantity of core material from a quasar into the teleportation system, and now the stations were erupting with the energies of an exploding galaxy in their guts. Only a few frontier worlds, not yet hooked into the system, survived the disaster.

But without the Empire to defend them, these survivors were helpless before the renewed attacks of the Sniz. All but a score of worlds were battered back into pre-technological barbarism by the ruthless aliens, if their people survived at all.

The remains of the Legions whittled at the enemy, fighting now for revenge. For every Empire ship to die, a hundred of the foe were destroyed. Finally, the two fleets vanished into N-space, to fight their final battle. No one saw a ship from either of them again. The final survivor worlds, cut off from interstellar trade, wrecked by the fall of the Empire, sank into primitive darkness, no longer able to maintain their technologies. And the cold stars glittered on the corpse of a dream.

### 0310. THE RISE OF THE 20 SUNS COMBINE

Of the planets which retained partial command of the Empire's technology, there was one, Newson III, which had emerged from the Sniz Wars almost unscathed. The inhabitants of this world had managed to preserve knowledge in ship-building, and related fields, though much of their other knowledge died in a space raid that destroyed the planetary computer center. But the Newson system lacked sufficient resources to exploit this good fortune effectively. They had no ships, no shipyards, and only a handful of citizens had the exotic skills necessary to travel in space.

It took 80 years to build the first starship, laboriously travelling to nearby systems in Slower-Than-Light ships for resources. It took that long to develop academies to train the crew personnel needed, to retool industries not meant for ship-building. It was over a century before the three systems now under the Newson banner could build a vessel the equal of an Empire starship. By the time another century passed, though, the flag of Newson III flew under twenty stars, and two more colony worlds were part of the culture, though it took several bloody wars to make it so.

In year 342 of the Combine, a bloodless coup was successfully pulled off by the families who had, by various means, come to control about 90% of the industrial-mercantile complex of the Newson Confederation. These new feudal lords formed themselves into the Great Cartels, and under their iron control, the Unity, the senate of the Confederation, reformed the culture into the 20 Suns Combine. It took two civil wars and 72 years for the infant culture to adjust to its new state as an Industrial Feudalism.

As the campaign begins, it is year 500 of the Combine, dated from the end of the Sníz Wars. The Combine is strong, and entering another period of expansion. The influence of the Cartels is modified by that of the Unity, and for the first time in its history, the Combine is allowing private ownership of starships. The adventurous youth of the Combine is flocking to the new Academy of Space, training to go forth to the stars in search of glory and wealth.

13 years before the campaign time begins, explorer elements of the Combine met the ships of the kingdom, another survivor culture from the Empire with starflight capability, and the two nations are in a never-ending race to claim new star systems for their governments. Combat is the deciding factor in the final ownership of a system as often as is diplomacy.

It is the year 817 of the Empire, the year 500 of the Combine, and your ship is ready to lift for the stars.

#### 0400. PLAYERS AND CHARACTERS

All beings encountered in the campaign are characters. There are two major types:

*Player-characters:* These are characters constructed or controlled by the Players themselves. *Non-player-characters:* These are ALL the other characters in the campaign. They are played by the GM, who will speak for them, and determine their actions based on dice rolls and the logic of a given situation. A non-player character can be a bum in a spaceport alley with rumors for the player to hear, or a planetary government, or any role in between.

In most circumstances, and especially in first contacts between player- and non-player-character, the GM will want to determine the actions and attitudes of the non-player-character. Unless attacked first, most beings will be amenable to at least talking, and their reactions are determined by the following table.

TABLE 0400.1: NON-PLAYER-CHARACTER REACTION DICE. Roll percentile dice.

Die Roll	Effect
01-05	Immediate attack! Will not parley trade, etc.
06-10	Extremely hostile. Will attack at once if not placated.
11-20	Hostile. Non-co-operative in the extreme. Possibility of ambush or treachery.
21-60	Neutral. Uncommitted one way or the other.
61-80	Mildly co-operative. Will go along with a good offer.
81-90	Will co-operate, trade, sell information.
91-95	Friendly. Will co-operate freely. Will aid, trade, etc.
96-00	Will co-operate freely and enthusiastically to fullest ability.

Circumstances will operate to modify this dice roll. A character in home port seeking to buy information at a science center will hardly be attacked for a simple question, though a low score in a bar might start a brawl, or even a shoot-out. An offer of aid or a bribe-gift-reward will modify a low roll up, depending on the richness of the offer. A cheap offer, or a hostile attitude, will lower the score rolled. The GM may use discretion to alter a die roll according to the realities of a scenario.

#### 0410. BUILDING A CHARACTER

Before he can commence play, a Player must construct at least one character. The general process is as follows:

1. The Player decides what species his character belongs to.
2. The Player rolls a number of 6-sided dice, the number varying by species, to determine the character's base Ability scores. There are up to 7 Abilities to be so determined.
3. The Player rolls percentile dice to determine the Caste and Rank of the character. This will also determine the character's initial credit.
4. The Player rolls to determine the number of initial skills the character has, and selects them from the table given.
5. If he has not already done so, the Player selects the Class his character is to belong to. There are five such Classes to choose from, some of which will require further rolls or calculation to determine abilities or powers gained at the start of play.

6. The Player rolls to determine the character's planet of origin, or at least his native gravity.

7. The Player finally adds such miscellaneous details as age, sex, politics, etc., to add color to the character. The Players and GM should decide what aspects of these areas are compatible with the overall design of the scenario devised by the GM.

#### 0420. THE CHARACTER RECORD SHEET

All scores, skills, bonuses, etc., are to be recorded and maintained up-to-date on the Character Record Sheet. This record is to be kept up by the player, so that he can supply information on his characters to the GM upon request. The GM may wish to maintain duplicate records for his own use, possibly in a 3 x 5 card format for convenient storage. Details of book-keeping should be worked out by the GM and Players beforehand, to avoid lost information and tacky recrimination.

We enclose a sample on the opposite page of the Record Sheet used in our test campaign. You are welcome to copy it for use in your own.

#### 0430. SPECIES OF THE 20 SUNS COMBINE

There are three species available to players for their characters. Two are warm-blooded, oxygen breathers, inhabiting worlds much like Terra. The third is a non-breathing, mineral-based life-form, that converts energy for its fuel. The species are:

**HUMANS-** Originally from Sol III, Humans are erect, bimanous, bipedal mammals. Their metabolism is based on Carbon, and they require a planet in the "free water" zone of a star system to survive without extensive life-support devices.

Curious, manipulative, combative, this race composes the majority of the population of the Combine, and an extraordinarily large percentage of the crews of its explorer teams.

**TRILAX-** Trilax are metabolically similar to Humans in most ways. They are a race of tri-manous, tripodal, axially symmetric beings, with three eyes mounted on flexible stalks protruding from the top of their heads. They are oviparous and warm-blooded, being evolved from flightless avians, and have a complex reproductive cycle due to their race's three sexes.

Trilax have extremely fast reflexes, and superior dexterity. They are favored as infantry beings due to these attributes. They are inferior in Psionic ability and Empathic sensitivity to Humans.

The Trilax were forced into the Combine by military strength two centuries ago, and while much of the bitterness of those days is gone, bad feeling between the two species still flares up from time to time, especially in the Combine's military forces, where the two races are about equally represented.

**SILICOIDS**-Silicoids differ drastically from the Humans and Trilax. They are a race of crystalline beings, with a Silicon metabolism. They neither breathe nor eat, but convert radiant energy to electricity to live. They require an airless planet in close proximity to a giant O or B class star to live on. Silicoids are sexually neuter, and reproduce by combining seed-crystals, their DNA analogue, in saturate solutions of metals and Silicon compounds. Their lifespans are many times longer than those of the Carbon races.

Silicoids are one of the toughest life-forms known, with immense physical strength and vitality. But they are not a speedy race, and lack the dexterity of their neighbors in the Combine. Due to the structure of their nervous systems, they have no capacity for Psychic energy at all, and have a lower intelligence than the other two species. They have a lower empathy than Humans, mostly due to their own mode of communication, self-generated radio waves. Not a conducive factor in developing extra-racial sensitivity.

Silicoids are particularly resistant to attack by energy weapons or radiation. The latter harms them not at all, and they only take half the usual damage from the former. Thus, a Blaster beam striking a Silicoid, which might normally do 30 points of damage, will only do 15.

Silicoids are resistant to vacuum, or to most noxious planetary atmospheres, but cannot remain active for more than one hour if cut off from their source of high-energy UV light. If so deprived, the character will go dormant, eventually dying.



SPACE QUEST CHARACTER  
RECORD SHEET

Name of Player: Name of GM:

Character Data

Name: Species:

Sex: Caste: Rank:

Native-g: Current Credit: Class:  
Current Experience: Level:

ABILITIES

Physical Power ST: Notes on Abilities

Co-ordination ST:

Speed ST:

IQ ST:

PSI ST:

Empathy ST:

Vitality ST:

Hit Points: Power: Rigger Modifications:  
GO-rigger bonus:

FIRE-rigger bonus:

POWER-rigger bonus:

SKILLS

CLASS POWERS

SPECIAL DATA OR POSSESSIONS

### 0431. ABILITY DICE BY SPECIES

Every character begins play with certain Ability scores, determined randomly by rolling various numbers of 6-sided dice. The number of dice rolled for these abilities varies according to the species of the character. Players should consult the following table, and roll the indicated number of dice, recording the scores rolled in each Ability on the Character Record Sheet.

TABLE 0431.1: ABILITY DICE DETERMINATION

Ability	Human	Trilax	Silicoid
Physical Power	3	3	4
Co-ordination	3	4	2
Speed	3	3+3*	2
IQ	3	3	2
PSI	3	2	0**
Empathy	3	2	2
Vitality	3	3	5

A Player choosing to play a Human, for example, would roll three 6-sided dice for each Ability, a total of seven rolls of three dice each. A Trilax character would roll three dice for Physical Power, IQ, and Vitality, two dice for PSI and Empathy, four dice for Co-ordination, and would roll three dice and add three points to the score rolled for Speed.

\* Trilax roll three dice and add 3 to the score rolled.

\*\* Silicoids have NO PSI Ability at all.

### 0432. THE RACIAL MAXIMUM

The Highest possible score for a species in a given ability is called the Racial Maximum. The base Ability score for a character may NEVER exceed the Racial Maximum in that Ability for his species. Only the most potent drugs will boost the score temporarily above this maximum, and only expensive Bionic modifications or rare Alien devices will ever do so permanently.

### 0440. CHARACTER ABILITIES

The Ability scores represent the range of a character's inherent potential in such areas of physical and mental activity as Physical Power, IQ, etc. Initial base scores may be improved by trading points from other Abilities at the start of play, or by spending time and money in training after entering the campaign.

Note that the curve of the Ability scores is NOT even. While a very high score does indeed indicate an almost praeternatural prowess in that Ability, the low scores do NOT indicate a pathological weakness. An IQ of 2 or 3 does not denote a moron. Idiots and weaklings do not get far in training for star flight.

### 0441. PHYSICAL POWER

This is the physical strength of the character. It is modified by the effects of gravity, to determine the Effective Power of the character in g-fields other than his native g.

Effective Power = Physical Power x native-g/current g.

Eg. Smaol, a Human, is from a 2 g planet. His native-g is 2 g. He is on a 1 g planet. The current g is 1 g. His Physical Power is 10. Therefore, his Effective Power is  $10 \times [2/1] = 10 \times 2 = 20$ . On a 3 g world, his Effective Power would be  $10 \times [2/3] = 10 \times .66 = 6.6$ .

A character can carry a total weight of equipment, loot, etc., equal to 10 kg per point of Effective Power he has. Remember that WEIGHT = MASS x current g! Thus, a 1 kg Blaster will WEIGH 3 kg on a 3 g planet.

Note that this figure is the TOTAL weight the character may carry. If he overloads himself, a character will start to suffer penalties in Speed and dexterity, as well as a general loss in movement factors.

At 50% of the total load, characters lose 4 points each of Speed and Co-ordination and reduces movement to 50% of allowed value.

At 75% of the total load, characters lose 6 points each in Speed and Co-ordination, and reduce movement to 25% of allowed value.

Above 100%, no movement is allowed, and Speed and Co-ordination drop to 1 point each.

### 0442. CO-ORDINATION

Co-ordination measures the dexterity of a character. It is primarily used to determine the aim of a character with handguns or similar distance weapons, and to determine the odds of a character landing a blow in hand-to-hand combat.

### 0443. SPEED

The Speed score has two major functions. First, it determines the number of actions a character may perform at one time, and second, it is used by the Spacer Class ONLY, to augment their abilities in piloting the Starship. The Speed score also gives the Warrior Class ONLY, a bonus on dodging attacks aimed at them.

The effects of the first application of Speed are set forth in the following table. The table uses the Effective Speed score, determined in exactly the same manner as Effective Power, so be sure that the score used is the correct one for the current g. If the Current g is 0. however, note that the BASE Speed score is the one used, and the effect is noted in the second column of

the table.

TABLE 0443.1: SPEED SCORE EFFECT

Effective Speed	Result	0 g Result
1	Character is incapable of movement.	Immobilized.
2-4	Character may perform 1 action every other mt.	Helpless.
5-8	Character may perform 1 action per mt.	1 action/ 2 mt.
9-16	Character may perform 2 actions per mt.	1 action/ mt.
17-22	Character may perform 3 actions per mt.	2 action/ mt.
23 or more	Character may perform 4 actions per mt.	3 action/ mt.

The GM must understand and enforce what is meant here by "action." Simple actions, moving, firing a weapon, striking a blow at an opponent, etc. More complex actions, running a control board, engaging in repairs, etc., are not included under the term "action" for purposes of this table.

In general, if an action requires more hands than the character has free, or more than one mt to complete, then it is not under the jurisdiction of this table. The GM has the final say on applications of this rule.

Members of the Spacer Class, by virtue of their unremitting striving towards excellence in piloting, are able to use a superior reaction time to enhance their skills in this area. Note that a low Speed score is a hindrance to the would-be Spacer, and those so afflicted should think twice before entering the fraternity of rocket-jockeys that is the Spacer Class.

TABLE 0443.2: SPACER SPEED BONUS

Speed	Bonus (add to GO-rigger Bonus)	This bonus is added to the total modifier the Spacer receives for his piloting skills. The total of such bonuses is the character's GO-rigger bonus, a term which will be explained in detail later on in the rules. To repeat, ONLY Spacers will receive this bonus, as an amateur pilot, no matter how skilled, will not be able to act by reflex as will a professional.
2-4	-3	
5-6	-1	
7-12	0	
13-15	+1	
16-19	+2	
20-21	+3	

Similarly, Warrior Class characters will receive a defensive bonus based on their Effective Speed. This bonus is subtracted from the chances to hit them of any attacker, using a handgun, handgun, or any form of aimed attack, on any scale of personal combat.

TABLE 0443.3: WARRIOR SPEED BONUS

Effective Speed	Bonus
Less Than 2	Treat as Immobilized.
2-5	-2
6-7	-1
8-12	0
13-15	+1
16-19	+2
20-24	+3
25 or more	+4

It will be seen that Gravity has a decisive effect on the movement and defense capabilities of a character. Unless from a high-g world, a Warrior should be wary of being caught in a tight spot on a world that drops his Effective Speed into a negative value bonus.

#### 0444. IQ

IQ is not a general measure of intellect, as used in this game. It is rather an index of a character's affinity for technological devices and activities. Clinical brain damage or retardation are unknown in the Combine due to advanced medical and eugenic techniques, so a low score does not denote an imbecile. After all, a character is only as smart as the player who controls him.

The function of IQ is the determination of a character's ability to use or deal with technological devices, and to determine what, if any, bonuses he will receive as a POWER-rigger, or ship's engineer.

As indicated on the table below, any character with an IQ of 12 or better may enter the Technic Class, the semi-religious Class of engineers and scientists of the Empire and Combine.



**TABLE 044.1: ABILITY TO USE DEVICES**

<u>IQ</u>	<u>Result</u>
2-5	Character may use devices only on a "pushbutton" basis. Helpless in the face of any repair work. Unable to use Alien or unfamiliar devices at all.
6-11	Capable of using all familiar devices, and of using Alien devices once he has been taught how. May perform repairs on simple breakdowns or damage if he has studied the requisite skill, and has a manual at hand.
12-18	Capable of studying to determine the use of Alien Artifacts. The character may become a Technic if so desired.

All characters who have mastered the requisite skill to act as Ship's Engineer may receive a bonus in the amount of energy the power plants under their control produce for use in ship actions. Only Technics will increase this bonus by simply advancing in levels.

**TABLE 044.2: POWER-RIGGER IQ BONUS**

<u>IQ SCORE</u>	<u>Bonus</u>	<u>The meaning of this bonus, recorded under "POWER-rigger Modification" on the Record Sheet, will be explained fully in the section on ship crews. For now, suffice it to say that energy provided for ship weapons or defense screen, or emergency maneuvering power, will be increased by the bonus amount when the character is in control of the ship's power plants.</u>
2-8	No bonus.	
9-11	+1-6 ERG	
12-14	+1-10 ERG	
15-16	+2-12 ERG	
17-18	+2-20 ERG	

Technics will add +2 to their bonus for every level they attain.

#### 0445. PSI

PSI is the Ability of the character's mind and nervous system to generate and control psionic energy, what we are today just beginning to study under the name of ESP. The PSI score is the basis for a character's defense against Psionic attacks of various kinds.

In the Mutate Class, PSI is the basis for the Psionic Power points used by the Mutate to exercise the various powers of his Class. As IQ for Technics, so it is with PSI for Mutates: a character must have a PSI of 12 or more to become a Mutate. PSI in Mutates is described as "active" PSI, and in all other characters as "latent" PSI.

All characters capable of acting as ship's Gunners will gain a bonus based on their PSI score whether it is active or latent. The bonus is added to their chance of hitting a target when they are acting a FIRE-rigger for one of the starship's weapon systems. The bonus is based on their use of a limited precognition, allowing them to direct the weapon's aim to the location of the target at the time of the beam or missile's arrival.

<u>TABLE 0445.1: FIRE-RIGGER BONUS FROM PSI</u>		
<u>character's FIRE-rigger modification, on the Character Record Sheet. Warriors ONLY will receive an additional +1 at the start of play, and a further +1 for every three levels they attain. For details on how these bonuses are applied, see section 1000, on Ship Combat.</u>	<u>PSI score</u>	<u>Bonus</u>
	1 or less	-4
	2-4	-2
	5-8	-1
	9-12	0
	13-14	+1
	15-16	+2
	17-18	+3

#### 0446. EMPATHY

This Ability is the measure of the character's level of interaction with other life-forms. It allows the Biotech Class to exercise an almost mystical level of identification and control with biological and psychological systems.

**TABLE 0446.1: EFFECTS OF EMPATHY SCORE**

<u>Empathy</u>	<u>Result</u>
1 or less	-20 on Reaction Dice rolls.
2-5	-10 on Reaction Dice.
6-11	No modification to Reaction Dice.
12-14	+5 to Reaction Dice. Character may become a Biotech.
15-17	+10 to Reaction Dice. Character may become a Biotech.
18	+15 to Reaction Dice. Character may become a Biotech.

#### 0447. VITALITY

The Vitality score measures the general resistance to physical hardships or damage of the character.

Every character has a certain number of Hit Points. These represent the number of points of damage the character may sustain before dying. When a weapon or other nasty effect does damage to the character, subtract the damage done from the Hit Points. When the Hit Points = 0, the character is in a coma, and will not emerge from it until he receives medical treatment. When the Hit Point score falls below 0, the character is dead.

To determine the initial Hit Points of a character, multiply the Vitality score by 2, and add the roll of a 6-sided die to the result.  
Eg. Vertax, a Trilax, has a Vitality of 13. His Hit Points are  $26 + (1-6)$ . Rolling a 6-sided die, he scores a 4. His initial Hit Point score is  $26 + 4 = 30$ .

For every level attained, characters will increase their Hit Point scores. The range of the increase depends on the Class of the character.

*WARRIORS* will add the score rolled on two 6-sided dice to their Hit Points each level.

*SPACERS* and *TECHNICS* will add the score rolled on a 10-sided die each level.

*MUTATES* and *BIOTECHS* will add the score rolled on a 6-sided die each level.

The total Hit Point score may NEVER exceed TEN times the Vitality score. Thus, our friend Vertax will not be allowed to gain any Hit Points after the score reaches 130.

If a character loses any Hit Points permanently, he will begin to gain points as he goes up n levels again, until he is once more at the maximum. Should a character raise his Vitality score, he will also gain points normally until the new maximum is reached.

#### 0448. NATIVE GRAVITY

Gravity's role in *Space Quest* is weighty indeed (sorry). Not only does the ratio of native-g to current gravity affect various Abilities, but the effects of ultra-high gravity on the characters can be serious, if not lethal.

To determine the native-g of a character, roll a 10-sided die and consult the table below.

TABLE 0448.1: NATIVE GRAVITY

Die	Native Gravity
1	.5 g
2-5	1 g
6-9	2 g
0	3 g

If the GM has advanced his campaign to the point of designing the home worlds from which player's characters may come, then he will, of course, assign native-g on that basis. In a campaign modelled after the Solar System, for example, a Terran would have a native-g of 1, a Martian about .3, a Jovian, about 3.

Whenever a character is exposed to a significantly high gravity or acceleration for any length of time, he will suffer penalties, if not serious danger.

If the current gravity is less than twice as powerful as his native-g, No risk exists.

If the current-g is two to three times the native-g, the character reduces all movement by 50%, and will faint if he exerts himself by combat or hard labor.

If the current-g is three to five times the native-g, the character is incapable of moving without some mechanical or other aid, and must save every 10 minutes with a Vitality ST (see section 0450) or run the risk of dangerous reactions to the strain. If the character does not save, he must consult the Gravity Abreaction Table below for results.

If the current-g is five to ten times the native g, the character must save as above, but he must do so every 10 mt of exposure to the force.

If the current g is ten to fifteen times the native-g, the character must save each mt, or consult the Abreaction Table.

If the current-g exceeds fifteen times the native-g, The Abreaction Table is consulted every mt the force persists.

If at any time a force of 100 g or more is experienced, it will have an immediately fatal effect.

TABLE 0448.2: GRAVITY ABREACTION TABLE

Die	Result
1	No effect.
2	Character passes out for 1-10 min.
3	Character succumbs to Gravity shock, as described in section 1200 ff.
4	Character loses 50% of current Hit Points.
5	Character loses all Hit Points, goes into coma.
6	Character dies.

Various devices and drugs exist to reduce the effects of gravity. Some will negate only the physiological dangers of high g, while others will augment the ability of the character to move or function in high gravity.

Note that *SPACERS* and *SILICOIDS* are more resistant to the effects of high g than other Classes and species. They will add +4 to their ST rolls when applicable in this area, and when they roll on the Abreaction Table, they will subtract 1 from the die roll.

#### 0449. ABILITY TRADE-OFFS

Players may, if they wish, swap points from one Ability for an increase in the score in another Ability. The necessary number of points is deducted from the score to be sacrificed, and

for each deduction of the necessary amount, as shown on the table following, 1 point is added to the desired Ability. At no time may an Ability be raised over the Racial Maximum in this way, nor may an Ability be reduced below one-half of the Racial Maximum due to trade-offs.

TABLE 0449.1: ABILITY TRADE-OFF VALUES

For 1 point of Ability Below:	Trade indicated number of points of selected Ability:						
	Physical Power	Co-ord- ination	Speed	IQ	PSI	Empathy	Vitality
Physical Power	-	2	2	3	-	-	1
Co-ordination	2	-	2	3	-	-	1
Speed	3	2	-	-	-	-	2
IQ	4	4	4	-	5	5	3
PSI	-	-	-	5	-	5	4
Empathy	5	5	5	4	4	-	3
Vitality	2	2	2	4	4	5	-

Eg. If a character wishes to raise his IQ by 1 point, he may deduct 4 points of Physical Power, or 4 of Co-ordination, or 4 of Speed, or 5 of PSI, or 5 of Empathy, or 3 of Vitality. The combinations are indeed many, and Players are advised to consider well the benefits attached to the increase as opposed to the possible of penalties involved in the decrease.

Once a character has entered the campaign, no further trade-offs are permitted. Once a trade-off has been made and recorded on the Record Sheet, it is final.

#### 0450. SAVING THROWS

Saving Throws, or ST, are indicators of the probability of a character succeeding in some extraordinary feat, or staving off the effect of some terrible hazard. All ST are based on the Ability score in the relevant Ability, and in some cases, members of a given species or Class will receive a bonus in the ST attempt.

To determine the base ST for a character, use this formula:

$$20 - (\text{Ability Score}/3) = ST. \text{ Round fractional values to nearest whole number.}$$

The ST score so derived must be equalled or exceeded on the roll of a 20-sided die for the character to "save."

Certain characters automatically receive a bonus for a given ST no matter what application of the ST is being used.

MUTATES reduce the required score by 1 point per two levels attained for PSI ST.

TECHNICS reduce the required score by 1 point per two levels attained for IQ ST.

BIOTECHS reduce the required score by 1 point per two levels attained for Empathy ST.

In no case does ANY bonus, drug, or device, reduce the score below 2 or increase it above 20. There is always that 5% chance of complete success or total failure involved.

The following table lists the commoner applications of various ST, and the bonus group involved, if any. Unless otherwise specified, the bonus works as do the Class bonuses above.

TABLE 0450.1: SAVING THROW APPLICATIONS AND BONUSES.

Application	Use ST in	Bonus
vs. N-shock	PSI	Mutates as normal.
Gravity Shock	Vitality	Spacers and Silicoids add +4 to die roll.
Vacuum Shock	Vitality	Spacers
Radiation Sickness	Vitality	Spacers
Insanity	IQ	Technics as normal.
Dodge explosion	Speed	Warrior
Feat of strength	Physical Power	
Burst of speed	Speed	Trilax add +3 to die roll.
vs. Psionic attack	PSI	Mutates as normal. Technics
Resist Death*	Vitality	
Negate surprise	Speed	Warrior

\* If a character takes more damage than he has Hit Points, he may attempt this roll. If he saves, he will lose all Hit Points, going into a coma. Any further damage while in this condition will kill him with no chance of a repeat ST.

Several things to clarify in this list:

As you can see, ST may be applied positively, to do something (Feat of strength, Burst of speed), or negatively, to avoid some danger (N-shock, Psionic attack, etc). It is neither necessary nor desirable that a ST be possible for every dilemma. Only conditions of great and imminent peril allow the superhuman exercise of Abilities to resist fate. The GM is the final arbiter of the allowability of a ST in some special case, and he and the Players involved should work out beforehand the desired effect, and the consequences of failure.

#### 0460. CASTE, RANK, AND CREDIT

Leaving the development of Abilities in a character, we move on to the areas of social position and finances.

The 20 Suns Combine operates under a fairly rigid caste system, with a merit based system. A character's rank is based on the rank of his family-group, but individuals of proven ability will go far, no matter what their rank may be. The birth rank does serve the important function of determining how much money a character will start the campaign with.

There are three Castes in the Combine: the Political, Commercial, and Administrative. Each is concerned with a particular aspect of running society, though there is a good deal of overlap. For the purposes of the game, Player-characters retain their Caste standing and affiliation, but are assumed to have renounced their full heritage in the family business to go adventuring.

The Political Caste is composed of the descendants of the petty nobility of the Empire who were among the survivors in the colonies which became the 20 Suns. The Caste's members are to be found in every level of the executive, from local Aldermen to senators to the Unity. The Political Caste retains the use of titles, and has recently re-introduced heraldry, a fad eagerly taken up by every other branch of society. Many explorers' ships have registered arms as a means of identification, and an aid to morale.

The Commercial Caste is the current top dog in Combine society. At the top of the Caste we find the Great Cartels who are the true rulers of the Combine, and who edged the Political Caste out of power two centuries ago. Needless to say, a struggle for power exists that is no less bitter for being subtle.

The Administrative Caste is the bureaucracy. They are the prime operators in the day-to-day running of the Combine's affairs, and are found in positions ranging from County Clerks to Secretary of a Government Agency. The Administrative is determined to maintain a balance of power in the Combine, and thus exercise themselves to prevent either of the other two Castes from gaining a dangerous degree of pre-eminence in the government.

To determine the Caste to which a character belongs, and his birth rank within it, roll percentile dice and consult the table below.

Table 0460.1: CASTE AND RANK

Die Roll	Caste Rank	Notes
	(Political Caste)	
01-02	Sector rank.	The character has the title of "Duke."
03-09	System rank.	The character has the title of "Count."
10-15	Planet rank.	The character has the title of "Baron."
16-22	Continental rank.	The character has the title of "Lord."
23-33	City rank.	The character has the title of "Knight/Dame."
	(Commercial Caste)	
34-35	Sector rank.	The character's family owns a Great Cartel.
36-42	System rank.	The character's family is Factor for a Cartel.
43-48	Planet rank.	The character's family owns a planetary corporation.
49-55	Continental rank.	The character's family owns a large industry.
56-66	City rank.	The character's family owns a small factory or firm.
	(Administrative)	
67-68	Sector rank.	The family runs a Government Agency.
69-75	System rank.	The family runs a System Bureau.
76-81	Planet rank.	The family is powerful in the planetary government.
82-88	Continental rank.	The family is a power in local politics.
89-90	City rank.	" " " " "

For characters of high rank who make themselves known, a modification in Reaction Dice may be in order when dealing with Combine offices and services. A high rank is excellent collateral for a loan, as long as the character has a clean credit rating. The usual advantages of high rank apply in the Combine as elsewhere.

Rank is the basis for the initial credit rating of the character. The GM will roll according to this table to determine how much money the character has at the start of the campaign.

Table 0460.2: INITIAL CREDIT

Caste Rank	Credit
Sector	(1-10) x 2000 CR
System	(1-10) x 500 CR
Planetary	(1-10) x 150 CR
Continental	(1-6) x 100 CR
City	(1-6) x 50 CR

Once the rank has been determined, it is only necessary to roll the appropriate die on the table, and multiply the score rolled by the given amount of credits.

#### 0461: ESTATES AND INHERITANCE

Due to the complex nature of marriage contracts in the Combine, the law provides for a swift and equitable payment of estates upon a progenitor dying. An heir will come into his inheritance 1-20 years after the campaign starts. As a character is assumed to have left behind him the business of his family, all inheritances are cash settlements. The family business or office will NOT pass into the hands of a Player-character.

A player will know what portion of the estate is due to his character, but he will not know at what time it is to come due, nor will he know the final amount of the legacy. These facts are to be determined by a secret roll on the part of the GM, and filed away until the time to use the data come around.

TABLE 0461.1: CHARACTER'S SHARE OF ESTATE

Die Roll	Character's Share
1	100%
2	50%
3	30%
4	25%
5	20%
6	15%

TABLE 0461.2: TOTAL VALUE OF ESTATES

Rank	Value after Taxes
Sector	(1-10) x 20,000 CR
System	(1-10) x 5000 CR
Planet	(1-10) x 1500 CR
Continental	(1-6) x 1000 CR
City	(1-6) x 500 CR

Eg. Narra, daughter of a System rank Administrator, receives a letter from home informing her that her daddy has cashed in his chips. Hard on the heels of the postman comes a cable from her lawyers, reminding her that she is in line for 30% of the old man's loot. The GM rolls, and discovers that the old boy was worth 35,000 beans on his demise. Narra inherits 10,500 CR.

Naturally, if it took daddy 20 years to shuffle off this mortal coil, it will do the Player controlling Narra little good for quite awhile. But being an heir is excellent collateral, and the section on Loans will explain fully how a legacy expectation can be used before the sad event.

#### 0470. MISCELLANEOUS CHARACTER TRAITS

Items we are not covering in detail, but which add color to a campaign and reality to a character, are such the selection of age, birthdate, gender, etc., and such traits as religion, politics, etc.

Gender- Humans still operate the same way in this manner as they do today.

Trilax are trisexual. They have a male and female, as do humans, and a third, androgynous gender, which is the gestating member of their reproductive cycle. The two former genders will join with the third to deposit their respective zygotes in the uterus of the androgyne, where conception and gestation of the egg occur. The androgyne bears the egg internally for 4 months, then lays it, and broods it for another 3 months. Any two Trilax may engage in sex for recreation, but it takes a properly constituted quorum of three to procreate the race.

Silicoids are neuter, and reproduce as described in section 0430.

Age- Humans and Trilax enjoy a lifespan of about 100-150 years. They achieve physical and legal maturity at the age of 16 years. To determine the age of a character at the beginning of the campaign, roll a 6-sided die and add the result to 15.

Silicoids tend to live until they erode away. But after 500 years or so, they become dormant, bearing a close resemblance to boulders. A Silicoid achieves maturity somewhere in his second century. For initial age, roll percentile dice and add 100 to the result.

Birthdays are determined by the roll of three 10-sided dice, generating a number from 001-1000. Remember that the GAL-year has 1000 days.

Politics- Any number of parties exist in the Combine, where freedom of speech is fairly strong, as long as doctrines harmful to the Cartels are not implemented. A Player wishing to portray an Alternating Left-Handed Marxist-Anabaptist may do so in the serene knowledge that he is probably not alone in his political beliefs.

The major Parties in the Unity are the Caste Parties, each of which has a left, moderate, and right wing. A coalition of moderate Political and Left Commercial elements currently is in power in the Unity.

Religion- Anything a player can think of probably exists in the Combine. Human religions will be variants of the forms known today. Trilax religions tend towards triune deities (many Trilax have embraced Catholicism). Silicoids tend to be sun-worshippers, though many of them have a deep reverence for the 21 cm radio band. The GM may wish to introduce such science fiction faiths into his camaoaign as Larry Niven's Church of Finagle, or Doc Smith's deity, Klono.

## 0500. SKILLS AND TRAINING

Besides the various capabilities conferred by membership in a Class, a number of skills of a useful nature to the explorer are offered in the Universities of the Combine. A character will have studied several such skills in his training for star adventuring, possibly even some that lie in the bailiwick of another Class or Caste.

To determine how many skills a character has studied prior to beginning play, roll a 6-sided die and compare the score to the following table.

TABLE 0500.1: INITIAL SKILLS

Die	IQ:	2-5	6-8	9-14	15-18
1		1	1	2	2
2		1	2	2	3
3		1	2	3	3
4		2	3	3	4
5		2	3	4	4
6		3	4	4	5

In any culture, the offspring of the wealthy and powerful are better trained than their fellow citizens. The Combine is no exception. Characters of Planet or System rank will add 1 extra skill to the number shown on the table. Characters of Sector rank will add 2 extra skills.

All initial skills must be chosen at the beginning of play, and characters may not select the same skill twice in order to raise their score in it. Further training must be taken during the course of the campaign, at the costs in time and credit set forth in later sections.

## 0510. APPLICATION OF SKILLS IN THE CAMPAIGN

A character's expertise in a skill is reflected by a score in that skill. The basis for computing this score is given in the next section. Generally, the initial score is the sum of several of the character's Abilities. Higher scores are obtained by training, as are new skills. When a character attempts to use a skill in play, the GM will roll percentile dice. A die roll less than or equal to the character's score in that skill indicates that he has successfully applied the skill to the situation, and he will derive whatever benefits the skill gives him.

Unless otherwise stated, ONLY ONE ATTEMPT TO APPLY A SKILL IN A GIVEN SITUATION IS ALLOWED! If your study of Xenobiology does not give you an insight into the workings of a particular life-form, then you may not try again on that life-form with that skill until you have raised your score in the skill by at least one point.

Characters choosing their initial skills should carefully study the following section, determining the fields of study they wish to pursue. Once a skill is chosen, they will total up their initial score in it, entering the relevant data on the record sheet. Rules regarding further training will be given in section 0530.

## 0520. DESCRIPTIONS OF AVAILABLE SKILLS

Skill	Initial Score	Description
Dietician	IQ+Empathy	Can determine if a substance is edible, if it is toxic, etc. Bonus: Biotech.
Cosmetologist	Empathy x 2	Can perform cosmetic surgery, create disguises, conceal scars, etc. May make one attempt per day until success is achieved.
Agronomist	IQ x 2	Can determine if a foodstuff from an alien planet has commercial value to another race. This is possible ONLY for worlds with an Oxygen-Nitrogen atmosphere. Bonus: Commercial Caste.
Cartographer	IQ+PSI	If the roll succeeds, the Cartographer can deduce his location on a planetary surface relative to a known location with complete accuracy.
Xenobiologist	IQ+Empathy	Can determine the Life-Form Classification Code of a being on sight. Bonus: Biotech.
Survival Expert	IQ+PSI	Capable of living off of hostile worlds with little or no special equipment. On a planet with correct conditions to support the character's species, a roll for using the skill is required every week. On a livable but hostile world, every 5 days. On a hostile world, every 2 days. On a planet that would normally require extensive life-support gear, the Survival Expert requires a Survival Kit to exercise his skill, and must make his score roll once per day. A missed roll means the character dies, unless he can make his IQ ST. Bonus: Warrior.

<i>Geologist</i>	$IQ \times 2$	Can determine from visual data if a planet has exploitable resources, or if a meteor is composed of valuable material. Bonus: Commercial Caste.
<i>Cryptographer</i>	$IQ+PSI+Empathy$	Can break any code based on or in a language known to the Cryptographer, or known to a computer available for his use. Bonus: Administrative Caste.
<i>Critic</i>	$IQ+Empathy$	Can locate 1-6 objets d'art in a culture, of commercial value to collectors in the Combine. Bonus: Political Caste.
<i>Counter-insurgent</i>	$Speed+IQ+PSI$	Capable of infiltration, sabotage, and espionage. Can, with the right materials, devise booby traps ranging from the pongee stick to a "home-made" nuclear device. The use of this skill is subtle, and the GM should exercise judgement in modifying the die roll. If the insurgent is trying to infiltrate an installation guarded by telepaths and technology, it will be harder than sneaking into a primitive encampment. The consequences of failure are also variable. Bonus: Warrior.
<i>Astronomer</i>	$IQ$	Can determine the co-ordinates of a star with visual data only. Also determines the stellar spectral class of the star. The skill has a maximum range of 20 lites from the ship, and may be repeated once per week until it succeeds. Bonus: Spacer.
<i>Sociodynamicist</i>	$IQ+Empathy$	Determines the Cultural Organization, Social organization, Society Strength, and Community Size of a culture after one week of study by visual sensor. Cut time to 5 days if the subject culture has detectable communications by radio. Bonus: Political Caste.
<i>Sexologist</i>	$[IQ+Empathy] \times 2$	Can deduce the sexual cycle and mores of a culture after one week of study on the same order as the Sociodynamicist's, determining the existence of any taboos or discrimination.
<i>Extra-verbal Communication</i>	$PSI+Empathy$	Can communicate by means of a "universal" sign language with life-forms having no common speech with the user. Communication is limited to simple concepts (eg. "we-peaceful-wish-you-friend-trade-happiness") and detailed negotiation must wait until one side learns to talk to the other. A failed attempt gives a -20 on the reaction dice for the response of the putative recipient of the unsuccessful communication. Bonus: Mutate.
<i>Linguist</i>	$IQ$	Can learn new languages at an accelerated pace. Subtract score from 100 to determine days necessary to learn a pidgin version of new language. Double that for fluency. Bonus: Administrative Caste.
<i>Legal Semanticist</i>	$IQ+Empathy$	Can increase the odds of a contract or treaty being honored by an alien culture. Add one point to the culture's Ethical Rating for that agreement. Bonus: Administrative Caste.
<i>Armorer</i>	$IQ$	Users of this skill require an IQ of 6 or more. They add 10 to repair rolls on ship and personal weaponry, screen units, armed vehicles, etc. If an Armory Lab is installed on their ship, they can manufacture weapons of any Empire type, repeating attempts once per day until success is achieved. Bonus: Warrior.
<i>Ship Maintenance</i>	$IQ$	Adds 10 to repair rolls for any damage to ship structure or systems. Bonus: Spacer.

<i>Sensor/Computer Maintenance</i>	IQ	Adds 10 to repair rolls on all data-processing equipment. Bonus: Technic.
<i>Contact Xenology</i>	Empathy	Adds 10 to Reaction Dice of Aliens on First Contact. Bonus: Mutate or Political Caste.
<i>Economist</i>	Empathy	Increases value of all financial transactions by 10%. Bonus: Commercial Caste.
<i>Medical Science</i>	---	Taking this as an initial skill gives a score of 100. A character using this skill is referred to as a Medic. The skill MAY be repeated, as each "degree" in Medical Science is effective in treating only ONE species. Thus, one may be a Human Medic, a Trilax Medic, etc. Allows a non-Biotech to operate the automated equipment for the species without a computer. It allows a Biotech to use manual techniques. Determines the medicinal value of a substance. If a Pharmaceutical lab is available, the user can make 1 dose of a drug with rolls repeated once per day until success is achieved. Bonus: Biotech.
<i>Pharmacy</i>	IQ+Empathy	
<i>Historian</i>	IQ x 2	Can identify known artifacts of Empire type, or SnIz manufacture. Confers general knowledge of Empire history, subject to GM's determination of what constitutes known History.
<i>Lockpicking</i>	Co-ordination	Allows locks of all types to be picked, whether mechanical or powered. Bonus: Technic.
<i>Thivery/Illusion</i>	Co-ordination+Empathy	Allows pocket-picking, shoplifting, etc. Also permits user to perform sleight-of-hand.
<i>Astrogation*</i>	---	Allows user to pilot a starship. Initial study of the skill gives full ability to user. The Spacer Class receives this skill AUTOMATICALLY, in addition to other initial skills.
<i>Gunnery*</i>	---	As above, but it allows the user to fire a ship's weapons. The Warrior Class receives this skill AUTOMATICALLY, in addition to other initial skills.
<i>Ship Engineer*</i>	---	As above, but it allows user to control ship's drives and power plants. The Technic Class receives this skill AUTOMATICALLY, in addition to other initial skills.

\* The users of these skills must have the *rigger operation* to apply them.

Bonus Classes or Castes listed will receive higher scores in their skills, and will learn faster in advanced training. A member of a bonus group for a skill will double his initial score, and when in advanced training, will gain two points per study period where other characters gain only one. Thus a Technic with a Co-ordination of 12 who selects Lockpicking as a skill, will have an initial score of 24.

#### 0530. ADVANCED TRAINING AND FURTHER STUDY

As the campaign progresses, Players may wish to increase their character's scores in old skills, or to pick up new ones. By spending time and credit, they may do this, or they may choose to train to increase their skills in combat, or to have their Abilities raised.

Such training courses are massively concentrated affairs, with mnemonic flashers, hypno-paedic programs, memory-RNA treatments, etc. Only characters with an exceptional IQ may study in more than one area at a time. Characters with an IQ of 15 or more may study two areas at a time, and characters with an IQ of 17 or more may study in three. Naturally, the separate costs of each course of training must be paid.

No more than one year of consecutive training is permitted under any circumstances. A character having finished a period of training of 1 yr or less, must abstain from further study for a period of months equal to the study time he has just completed, and spend his time in something easier to take than education, like risking his life in nice, peaceful, dangerous exploration of the galaxy..

#### 0531. SKILLS TRAINING

Study of a skill gains points at varying rates. The cost for Skill study is 100 CR per mo. Until the character reaches his initial score level in the skill, he will gain 1 point per week of study (10 points/mo.). Thereafter, he will gain 5 points per month, until he has achieved

the maximum score of 100 points.

To achieve any use from such skills as Medical Science, Astrogation, etc., it is necessary to achieve a score of 100. A lower score will render the skill unusable.

#### 0532. ABILITY IMPROVEMENT BY TRAINING

A character may undertake a training program to increase his score in an Ability. Such training costs 200 CR per month, and may never raise a skill above the Racial Maximum.

TABLE 0532.1: TIMETABLE FOR ABILITY TRAINING

Ability	Rate of advance
Physical Power	+1 per month.
Co-ordination	+1 per 2 months.
Speed	+1 per 3 months.
IQ	+1 per 7 months.
PSI	+1 per year.
Vitality	+1 per 5 months.
Native-g	+25 g per 5 months. May increase by 50% of original score.

Ability training is so exhausting that after a character has raised a score by one point, he must rest for the usual period of time, even if he has not used up his year. This would require abstinence from other fields of training as well.

#### 0533. OTHER TRAINING PROGRAMS

Players may elect to drill other areas of expertise as well. The usual fields studied are combat techniques. The cost of combat training is 75 CR per mo.

TABLE 0533.1: COMBAT SKILLS TRAINING

Weapon Type	Rate of improvement
Energy Handguns	+1 per 3 months.
Projectile Handguns	+1 per 3 months.
Hand Weapons	+1 per 5 months.
Mechanical Weapons	+1 per 4 months.
Thrown Weapons	+1 per 4 months.
Unarmed Combat	+1 per 4 months.

These bonuses are added to the character's odds to hit a target with the weapon type studied. The maximum bonus in each weapon type that can be earned by training is +3.

The only other forms of advanced training we have is in the ship handling skills of Astrogation, Gunnery, and Ship Engineering. These require 1 yr of study to gain a +1 bonus, costing 2500 CR per year.

With these as models, the GM will be able to design such other training programs as he wishes to introduce into his campaign.

#### 0540. CEREBROTAPES

The Cerebrotape is evolved from the EEG of our modern technology. It is a means of adding a limited amount to a skill score without study. Such tapes exist for all skills listed in section 0520. They may be imprinted in the character's memory at any time that the necessary equipment is at hand, and may be erased on the same basis. A character may retain 1 tape for every three points of IQ he has at one time. Thus, a character with an IQ of 14 may retain 5 tapes (round fractions to nearest whole number). Only one tape of the same subject may ever be active in the character's memory at one time.

A cerebrotape gives 10 points of score in the skill it contains. Bonus groups for that skill will receive 20 points from the use of the tape. If a character wishes to have a tape memory erased, he loses its bonus until and if it is once more retained by him.

If a character retains a tape for a full year, never having it erased in that time, then the data on it is permanently a part of his memory. He still is not permitted to take that tape again for a further bonus, but he no longer counts it against his allowed maximum of tapes.

TABLE 0540.1: CEREBROTAPE PRICE LIST

Tape Subject	Cost CR	Tape Subject	Cost CR
Dietician	50	Extra-verbal Communication	150
Cosmetology	65	Linguistics	100
Agronomy	75	Legal Semantics	200
Cartography	85	Armory	100
Xenobiology	100	Ship Maintenance	250
Survival Expert	100	Sensor/Computer Maintenance	150
Geology	80	Contact Xenology	150
Cryptography	80	Economist	75
Critic	100	Medical Science*	300
Counter-insurgent	200	Pharmacy	150
Astronomy	100	History	60
Sociodynamics	100	Lockpicking	100
Sexology	75	Thieving	200

Tape Subject	Cost CR
Astroga <sup>tion</sup> *	500
Gunnery*	500
Ship Engineering*	500

\* The cerebrotapes marked with an asterisk give a score of 100 in the skill, acting as does the skill as listed in section 0520.

Special tapes may be made on the spot in language or the medical data of some new life-form. The characters requires the necessary cerebrotape equipment and the computers to feed it the data to make these Berlitz-of-Space productions.

The use of such tapes is subject to the same restrictions as with other cerebrotapes. But both language and medical tapes give an effective score of 100 to the user in the skill.



#### 0600. PROFESSIONAL CLASSES

Players may choose to make a characters a member of one of five Classes. This decision is based on the optimum Abilities of the character, and/or the Player's personal preference. Once a character has commenced play in a Class, IT MAY NOT BE CHANGED!

The Classes may be divided into two overall types:

*Spacers and Warriors* are "physically" oriented. They draw their special skills from the physical Abilities, though requiring decent scores in the others for full benefits. They gain no new powers as they advance in the campaign, but improve their existing scores in their special fields of expertise.

*Mutates, Technics, and Biotechs* may be said to be the "intellectuals." They derive their powers from one of the three mental Abilities, PSI, IQ, or Empathy, respectively. While less apt in some areas at the beginning of the campaign, these Classes gain special powers and the necessary energy to use them, as they progress in levels.

#### 0610. SPACER

The Spacer Class members are the pilots of the great starships in which the characters travel to meet their space adventures. The Spacers are the archetypical rocket-jockeys of space opera. Their natural habitat is the console of their ship, or the nearest bar when they hit dirtside, and heaven help anyone who gets in their way in either case. Tough quick, arrogant with the "passengers" (any non-Spacer), and lethal with anything that endangers their ship, the Spacer Class is modelled upon the legions of soft-spoken, cat-quick men who blazed their way across the sky, and swaggered through the dens of sin, of a hundred space operas.

Spacers AUTOMATICALLY receive the Astrogation skill, in addition to their initial skill allowance at the beginning of play. They will, moreover, add +1 to their GO-rigger bonus at the start of play, and will add a further +1 for every three levels they attain.

The most important Abilities for the Spacer are IQ, PSI, and Speed. The sum of the first two is the basis for the GO-rigger bonus, and the third will modify the Spacer's bonus in that area.

See section 0941 for a full description of the GO-rigger and his bonuses.

#### 0611. SPACERS AND WEAPONS

Spacers are permitted the use of any and all weapons, and will not receive penalties in combat based on Class, though they will not receive the bonuses accruing to Warriors.

#### 0620. WARRIOR

The Warrior is a professional soldier, with all that the term implies. He is not a grunt, a dogface, nor yet a glorified policeman or security officer, though he can do their jobs. The Warrior is a master of weaponry and combat in all forms. He is not trigger-happy, but knows when to shoot and when to talk. However, if it comes to shooting, he only intends to do so once.

The most important Abilities for a Warrior are Co-ordination and PSI. The latter determines how well he uses the ship's weapons, and the former determines how well he uses everything else, from rocks to rocket launchers.

Warriors AUTOMATICALLY receive the Gunnery skill as a bonus to their other initial skills. They receive a +1 at the beginning of play, and will further increase their FIRE-rigger bonus by +1 for every three levels they have attained. See Table 0445.1 for the basic bonus in Gunnery, and see section 0942 for a full description of the FIRE-rigger position. Section 1000 is the full set of rules for ship combat.

#### 0621. WARRIORS AND WEAPONS

Warriors can use any weapon system available in the campaign. While a Technic might have explain the use of some Alien technological device of defense or offense, ANY Warrior may then use such a weapon, no matter WHAT his IQ.

When using weapons in personal combat, or in an unarmed combat situation for that matter, Co-ordination is the basis of the Warrior's success, as it is for all character's. But Warriors will receive a +1 bonus to hit their target at the start of play as well, and will further increase their die rolls for a hit by +1 per three levels they have attained.

If one works on the basis that the Warrior Class has trained with everything from bare hands to Blasters to bricks, you cannot go far wrong in determining their combat abilities.

### 0630. MUTATES

Mutates are physically normal beings who have developed psychic powers needed to exercise a range of abilities barely foreshadowed by modern terrestrial researches into ESP. Our civilization's understanding of such matters is the merest threshold of the unique competencies of the Mutate.

A character must have a minimum PSI of 12 to become a Mutate. He will gain new powers and the Psionic Power to use his special skills, as he advances in levels.

### 0631. MUTATES AND WEAPONS

Mutates are not skilled in combat. Not only will they suffer minusses in their Hit Scores, as delineated in section 1050 ff., but they are limited in the weapons they may use.

Mutates may not use Energy Weapons of any type without running great risks. Their delicate a-tuned nervous systems are extremely sensitive to the vibrations of the violent discharge of energy by these devices, and every time a Mutate fires an Energy Handgun, or uses an Energy Handweapon, he will take 2-12 points of damage!

The only exception to the above rule is in the case of ship weapons, which are heavily enough shielded that the Mutate is protected from the damaging emanations of the weapon's discharge.

Mutates may use any form of non-Energy weapon they wish. See section 1050 for details on their normal penalties in combat.

### 0632. PSIONIC POWER POINTS

Every Mutate has a number of Psionic Power points (noted on the Character Record Sheet as "Power"). To use one of his Mutate Powers, the Mutate announces the fact to the GM, and subtracts the necessary number of points from his Power score. When all his Psionic Power is exhausted, a Mutate should refrain from further use of his special abilities, unless using a Power which has a cost of 0. A Mutate may attempt to "overexpend" Power, by using Powers for which he has no Psionic Power points left, but he runs grave risks in so doing.

The initial PSI score is the amount of Psionic Power points the Mutate will have at the start of play. For every three levels the Mutate attains, he will gain more points, the amount varying by species.

Human Mutates will add 1 + 3 6-sided dice of Power. (4-9 points)

Trilax Mutates will add one 6-sided die of Power. (1-6 points)

Eg. Nonar is a Human Mutate with a PSI of 14. He will begin the campaign with 14 Psionic Power points. At 3rd level, he will roll a 6-sided die, add 3 to the score rolled, and add the total to his Power. Rolling a 4, he adds 7 to his Psionic points, for a new total of 21. He will repeat the process at 6th, 9th, 12th, etc. levels.

### 0633. OVEREXPENDING POWER POINTS

A Mutate who uses his Powers when he has no Points to expend for them runs severe risks. First, once he has overexpended himself by even 1 point, he will be in a state of extreme fatigue. His movement will drop to 50%, he will suffer a -2 on all ST, and he will lose ALL bonuses he has in any field of physical activity, including Gunnery, Astrogation, etc.

Second, he runs a risk of physical collapse, coma, or even death. For every point the Mutate overexpends, there is a 5% chance that he will suffer Power Overload. Thus, a Mutate who overexpends by 5 Psionic Power points has a 25% chance of suffering an Overload. After 20 or more points are overexpended, the Mutate will always have to check the Overload table below when using a Power, until he has regained his Power points.

TABLE 0633.1: POWER OVERLOAD RESULTS

Die	Result
1	No effect.
2	Mutate loses consciousness for 1-10 hours.
3	Mutate takes one 6-sided die if damage per point overexpended.
4	Mutate goes insane.
5	Mutate goes into Coma until revived, with Hit Points at 0.
6	Mutate dies, with NO ST!

As long as the Mutate is alive, sane, and conscious, he can overexpend indefinitely, as long as he keeps rolling 1 in 6 every time he does so. But the laws of chance make this an uncertain venture at best. A Mutate who risks Power Overload to save others should receive a Heroism Bonus in experience points from the GM.

### 0634. RECOVERING EXPENDED POWER POINTS

Mutates recover expended Power points at the following rates:

<i>Mutate sleeps/takes total rest</i>	5 points per hour.
<i>Mutate engages in normal non-hazardous, non-stress duty</i>	1 point per hour.
<i>Mutate engages in non-hazardous stress duty (Survey, exploration)</i>	1 point per day.
<i>Mutates who are in combat, in danger of death, recovering from a Power Overload, in coma, insane, or dead, will not recover Psionic Power points while in that state.</i>	

Certain drugs exist to generate extra Power points, but they can have unpleasant side effects. There are also rare Alien devices that act as batteries for Psionic power, which are to be found scattered around the galaxy, in the wake of their mysterious makers, the Forerunner races.

#### 0640. TECHNIC

The Technic Class is more than a science and Engineering group. This Class enjoys a preternatural relationship with machinery of all kinds. This relationship is so profound that a Technic can, by touch alone, cause a machine to be repaired or to malfunction, or generate energy by the sheer force of his intellect.

A character must have a minimum IQ of 12 to become a Technic. He will gain new Powers and the Technical Power points to use them as he gains levels.

All Technics automatically receive the Ship Engineering skill, in addition to their other initial skills. They will increase their initial POWER-rigger bonus, as given in Table 0444.2, by +2 ERG, and add another +2 per level thereafter.

Eq. A 3rd level Technic with an initial POWER-rigger bonus of 1-10 ERG would have a total bonus of 7-16 ERG.

#### 0641. TECHNICS AND WEAPONS

Technics are restricted ethically in their use of weapons. The third clause of the Guild Charter states: "Energetics shall never destroy in the hand of a Technical Brother." The oath had its origins in a destructive war early in the history of the Empire. The wording is exact: Technics may not use destructive Energy weapons in any form, not Blasters, not Ion Chatters, no weapon doing permanent damage to life-forms or property. The Technic has unrestricted use of non-destructive Energy weapons (Neuro-distorters or disruptors, Tangle Guns, etc.) and may use any form of non-Energy weapon. Technics suffer some penalties in combat, as do Mutates, but the penalties are not as severe in their case.

#### 0642. TECHNICAL POWER POINTS

Technics use Technical Power points to exercise their Powers as Mutates use Psionic Power points for theirs. The initial Power score is equal to the Technic's IQ score, and increases every time a Technic has attained three levels, as follows:

*Human and Trilax Technics add 1 + 3 6-sided dice of Power. (4-9 points)*

*Silicoid Technics add one 6-sided die of Power. (1-6 points)*

Technics who overexpend Power are subject to exactly the same penalties as Mutates are, as delineated in section 0633.

Technics recover expended points as do Mutates, at the same rates.

#### 0650. BIOTECH

Biotechs are the medical and psychological experts of the campaign. Not only are they expert in the use of the advanced medical adjuncts of Empire technology, but they have developed an almost mystical degree of empathic identification with a wide range of biological and psychological systems.

A character must have a minimum Empathy score of 12 to become a Biotech. He will gain new Powers and the Biopower points necessary to use them as he advances in level.

Biotechs receive NO bonus skills, but it is earnestly suggested that they take the Medical Science skills or Cerebrotapes at the beginning of play, in order to fully exercise their special benefits.

#### 0651. BIOTECHS AND WEAPONS

Biotechs are ethically forbidden to take the life of any intelligent life-form. They may use any weapon if they must, but Blasters and Slug Guns are not too discrete about the amount of damage they will do to a target. Biotechs who kill except as the final extreme of self-defense are subject to trial and penalties by their Guild. Penalties range from fines to penitential quests for dangerous or rare materials.

#### 0652. BIOPOWER POINTS

Biotechs use Biopower points as do the former two Classes. The initial Biopower score is the Biotech's Empathy score. For every three levels he has attained, a Biotech will increase his

Power as follows:

Human Biotechs will add 1 + 3 6-sided dice of Power.

Trilax and Silicoid Biotechs will add one 6-sided die of Power.

Biotechs who overexpend their Power face the same dangers as Mutates or Technics who do so. Biotechs recover expended Power at the same rates as do the other two Classes using Power points.

#### 0660. CLASS POWERS OF MUTATES, TECHNICS, AND BIOTECHS

Each of the three Classes receiving powers has two kinds of Power: Class Powers and Bonus Powers.

Class Powers are accrued each time the character advances in level, and characters will receive several Class Powers at the beginning of play.

Bonus Powers are accrued according to a random die roll, made each time the character advances in level. Characters may receive no Bonus Powers, or one to several such Powers, according to the die roll.

#### 0661. ACQUISITION OF CLASS POWERS

When a character has been built who is a Mutate, Technic, or Biotech, the Player must roll percentile dice to determine how many Class Powers the character will begin the campaign with.

TABLE 0661.1: INITIAL CLASS POWERS

Die Roll	Result
01-50	Character receives first 2 Class Powers listed.
51-85	Character receives first 3 Class Powers listed.
86-95	Character receives first 4 Class Powers listed.
96-99	Character receives first 5 Class Powers listed.
00	Character receives first 6 Class Powers listed.

The Player will consult the table, determine how many Powers he gets, and will list the Powers acquired on the Record Sheet. The Powers are acquired in the order printed on

the table below!

TABLE 0661.2: CLASS POWERS TABLE

Mutate Powers	Technic Powers	Biotech Powers
Telepathy	Enhance Drive Output	Heal Light Damage
Detect Psi	Repair Light Damage	Selfmaster
Blip	Analysis	Diagnose Disease
Shield	Jury-rig	Heal Serious Damage
Selfmaster	Repair Heavy Damage	Cure Disease
Psychokinesis	Detect Malfunction	Calm
Nega-grav	Regenerate System	Psycho-surgery
Jaunt	Energon	Revivify
N-space Sense		
Lifelock		

Eq. Nyral is a Trilax androgyne, a member of the Biotech Class. For herms initial Powers, heesh rolls a 52, receiving the first three Powers in the Biotech list, in the order they are printed. Heesh will therefore have the Powers Heal Light Damage, Selfmaster, and Diagnose Disease at the beginning of the campaign.

Additional Class Powers are gained automatically, each time the character goes up a level. For each level advanced, one additional Class Power is gained, in the order printed on the table, until all the Class Powers are accrued.

Thus, at second level, Nyral will gain the Power to Heal Serious Damage. At third, Cure Disease is gained, etc.

The applications of this rule are the same for the Mutates and Technics.

#### 0662. BONUS POWERS AND THEIR ACQUISITION

Each time a character advances in level, there is a chance he will gain one or more Bonus Powers. Upon attaining a new level, the Player will roll a 20-sided die, and consult the following table to see what, if any, Powers have been attained.

TABLE 0662.1: BONUS POWER ACQUISITION

Level of Character	Select one Power of Force:					
	I	II	III	I & II	I & III	I, II, & III
2	18	19	20+	-	-	-
3	16-17	18-19	20+	-	-	-
4	15-16	17-18	19-20	21+	-	-
5	14-15	16-17	18-19	20	21+	-
6	13-14	15-16	17-18	19	20	21+
7	12-13	14-15	16-17	18-19	20	21+
8	11-12	13-14	15-16	17-18	19-20	21+
9	10-12	13-14	15-16	17-18	19-20	21+
10	8-10	11-13	14-16	17-18	19-20	21+

The table is used as follows. The character rolls the die, and compares the score rolled to the table. If the score is in the range of figures on the table for his level, then he will gain one Bonus Power of the Force indicated.

High scores in the Prime Abilities for the character's Class will augment the die roll. The Prime Ability is PSI for Mutates, IQ for Technics, and Empathy for Biotechs. A Prime Ability score of 12-13 receives no bonus. A score of 14-16 adds +1 to the die roll. A score of 17 adds +2, and a score of 18 or more adds +3.

With these modifications, it is possible to roll higher than 20 on the die, thus the figures written 20+ or 21+ mean "20 or higher," or "21 or higher."

Eg. Upon reaching 2nd level, Thotem, a Silicoid Technic, rolls for Bonus Power acquisition. As a Silicoid, his IQ will be 12, the highest score possible for him in IQ, and the minimum he needed to become a Technic in the first place. Thus he receives no bonus on the die roll. He scores a 7. Consulting the table, it shows that he gains no Bonus Power at 2nd level. Upon achieving 3rd level, he rolls again, scoring an 18. The table shows that a score of 18 at 3rd level gains Thotem one Bonus Power of Force II. This process will be repeated every time a character gains a new level, and the die roll results are the same as for 10th level for all levels higher than 10th.

A character gaining a Bonus Power may choose any Power listed for his Class in the following three sections. But the use of a Bonus Power can only be mastered in the home-port of the character, under the tutelage of his Guild. As a campaign grows, and new civilizations are developed by the GM, he may decree that equivalent training may be had in similarly advanced cultures, if the character can find them.

Once a selected Bonus Power has been chosen by the Player, and the character has learned it at the Guild Hall, the Power may NOT be changed.

#### 0663. MUTATE BONUS POWERS

In this section, and the following two sections, the format will be like this. First, a simple list of the Powers according to their Force. Then a detailed description of the Powers, separated into Class Powers, and Bonus Powers of Force I, II, and III. At the beginning of each description will be the Cost in Power points to use the Power (C); the Range at which the Power operates (R); and the Duration of the Power's effect (D).

Force I	Force II	Force III
Psi Scan	Sense Cue	Mindmaster III
Mindstun	Mindmaster II	Fearcast
Mindmaster I	Pain Control	Catapsi
Blackout	Psi Wall	Reddopsi
Nexus	Psi Screen	Brainbomb
Psi Pulse	Blindsight	Regenerate
Counter Psi	Tanglefield	Sideslip
Cellular Psi	Nerveblast	Teleport
Repair Engram	Feedback	Particle Psi
Power Drain	Wipe	Timeblip
Psi Sense	Psionic Projection	Reality Curve
Thermopulse	Reflector Shield	Energon

#### Class Powers

*Telepathy C: 0. R: 1 km per level of the Mutate. D: -*

The Mutate may engage in telepathic communication with any desired being within a radius of 1' km for every level the Mutate has attained. Thus, at 1st level, the Mutate may communicate with beings at a range of up to 1 km, at 2nd level, 2 km, etc.

*Detect Psi C: 1. R: 100 m. D: 1 minute.*

The Mutate can detect the emanations of active PSI from the minds of Mutates, or the emanations of Psionic Devices or fields.

*Blip C: 1. R: 1 m. D: -*

The Mutate uses this Power to activate the relays of Psionic Devices. The Duration and effect of these devices are listed in the section dealing with their use.

*Shield C: 2. R: - D: 5 mt (melee turns)*

The Mutate generates a 1 die energy screen, acting to shield him from energy weapon attacks as does a regular Monolevel Screen Unit. This effect is cumulative with other sources of screen protection.

*Selfmaster C: 2. R: - D: 10 min.*

The Mutate generates a Thoughtscreen effect to protect himself. The Power acts in all ways as a regular thoughtscreen, and is NOT cumulative in its effect with other sources of mental protection.

*Psychokinesis* C: Varies. R: Varies. D: Varies

This Power may be applied in two ways.

In format I, the Mutate moves non-living matter by force of mind. He may move 10 kg of mass for every Psionic Power point he expends, at a rate of 10 m per mt, and a maximum range of 100 m for every three levels the Mutate has attained.

In format II, the Mutate delivers a "psychokineticlout." This is a burst of psychokinetic energy used as a weapon. It costs a flat 10 points to use, is aimed as a Handgun, and will do one die of Armor penetration for every three levels the Mutate has. See the rules in section 1050 on Personal Combat for an explanation of these terms.

*Nega-grav* C: Varies. R: - D: 1 hour.

The Mutate reduces the effect of the current gravity on his person. The gravity is reduced 1 g for every 5 Psionic Power points the Mutate expends. If the gravity is reduced to 0, then the Mutate may fly at a speed of 50 km/hr.

*Jaunt* C: 10. R: 500 m per level of the Mutate. D: -

The Mutate may teleport a limited distance. The Mutate must know where he wants to go, and where he is in relation to the desired destination. If he attempts to jaunt to or from an unknown locale, or attempts to use this Power anywhere but on a planetary surface, he will be killed, and his body dispersed throughout the universe.

*N-space Sense* C: 10. R: - D: 1 day.

N-space Sense allows the Mutate to function in direct exposure to N-space without risking N-shock. It permits a Mutate to pilot a starship without using a computer to decode the co-ordinates of the destination, though the Mutate must know the location of the destination.

*Lifelock* C: 20. R: - D: Varies.

Lifelock is a state of total suspended animation. When in Lifelock, the Mutate is invulnerable to all harm, whether weapon fire, the vacuum of space, or the heart of a star. The condition will last for the length of time stated by the Mutate upon entering the suspended state, and the environment he is in upon reviving will determine his fate.

#### BONUS POWERS

*FORCE I:*

*Psi Scan* C: 2. R: 100 m radius. D: 2 mt.

This Power is a radar-like scan of the Mutates immediate surroundings which locates the emanations of living minds in range, a radius of 100 m. The Mutate may differentiate between the brain patterns of characters known to him, and others.

*Mindstun* C: 10. R: 60 m. D: 1 mt.

Mindstun will affect 1-10 beings in the Mutates line of sight, the nearest being those affected. Characters who do not save against PSI will fall unconscious, remaining so until 1 hour has passed, or they are physically shaken awake.

*Mindmaster I* C: 5. R: 60 m. D: Varies.

The Mutate may exert a mental domination over a being of the same species as himself. If the victim does not make his PSI ST, he will become the zombie-like slave of the Mutate. The Mutate may give his victim orders verbally or by telepathy. The effect lasts until the victim makes his PSI ST, rolling every 10 hours to determine if the effect has been thrown off.

The victim of a Mindmaster Power may not originate any action, and will be the total slave of his master. Complex orders are likely to be bungled, as are orders to suicide or face ultra-high risks.

*Nexus* C: 0. R: As Telepathy. D: Till dropped by Mutate.

Nexus is a trance state which the Mutate enters to permit telepathic communication by selected beings in the radius of the Mutate's telepathic range. The Mutate is essentially acting as a communications exchange and translator device with this Power.

*Psi Pulse* C: 10. R: 120 m. D: -

A burst of psionic energy, aimed as a Handgun, but penetrating all armor or screen if a hit is scored. The Pulse does one 6-sided die of damage for every level the Mutate has attained, but a victim making his PSI ST will take only 50% of the damage indicated.

The Psi Pulse can penetrate a thoughtscreen or similar effect only on a roll of 1 on a 6-sided die.

*Counter-psi* C: 7. R: 10 m. D: -

The Counter-psi Power will negate the effect of the Psionic Power against which it is directed. It will not harm Psionic Devices, and cannot counter Powers having no appreciable Duration.

*Blackout* C: 8. R: Up to 50 m radius. D: 10 min.

Blackout is an effect absorbing the light in an area around the Mutate up to the stated radius. It is effective only in cutting off vision for senses requiring visible light.

*Cellular Psi* C: 2. R: - D: -

The Mutate may heal damage he himself has sustained at a rate of 1 point per level of the Mutate. He may not apply this healing Power to any other character.

*Repair Engram* C: 12. R: 1 m. D: -

Allows the Mutate to cure insanity in any form. Also effective in negating mental domination, hypnosis, amnesia, etc.

*Power Drain* C: 5. R: 500 m. D: -

The Mutate projects an effect which the drains the Power of another Mutate in range. If the victim does not save, then he will lose all his Power points, which the Mutate using the Power will add to his own Power score, as an extra, temporary bonus. If the putative victim makes his PSI ST, however, then the attacking Mutate will LOSE 50% of his current Power score, which will be gained by the victim.

*Psionic Sense* C: 10. R: As Telepathy. D: 1 hour.

The Mutate, in a trance, may clairsentiently observe any known location in range, or "follow" any known character. He will have full data from the clairvoyant senses of sight, sound, and telepathy when using this Power.

*Thermopulse* C: Varies. R: 100 m. D: 1 mt.

The Mutate can alter the temperature in any area in range, the target area having a radius of 10 m. For every Psionic Power point expended, the Mutate may raise or lower the ambient temperature of the target area by 20° C. The GM will determine the effects on beings of such a temperature change. As a model, figure that Humans and Trilax will take one 6-sided die of damage for every 100° C. of heat over 50° of ambient temperature. Silicoids will resist heat very well, not suffering damage until exposed to temperature in excess of 1000° C, and taking only one 6-sided die of damage per 200° thereafter. But for every 50° of temperature below -20° C, the Silicoids will take one die of damage.

The GM will base his figures on the armor worn by targets in the exposed area, and their normal temperature range. Note that a Thermopulse reducing the ambient temperature to -273° C will destroy any form of material life. Absolute 0 has that effect.

#### FORCE II:

*Sense Cue* C: 6. R: 120 m. D: 10 min.

A fully veridical illusion is created by the Mutate, perceptible to all characters in range by the senses of sight, sound, smell. It cannot do any actual damage, though it may give the appearance of so doing. It will be disrupted by a physical touch of hand or weapon, though bullets or beams will leave it intact. A Mutate may create a perfect illusion, one which will fool observers not equipped to detect its falsity, but there is a limited probability of doing this. Multiply the Mutate's IQ by 4 to derive the percentage chance of the illusion being perfect. If an illusion is imperfect, the GM will determine the chances of its being detected as an illusion from the relative complexity of the illusion and the sophistication of the observers. Mutates, or characters having illusion detecting Powers or devices, will always be able to determine the illusory quality of a Sense Cue effect.

*Mindmaster II* C: 10. R: 60 m. D: Varies.

*Mindmaster II* is exactly similar to *Mindmaster I*, except that it affects human-scale life-forms of species other than the Mutate.

*Pain Control* C: 5. R: Touch. D: Varies.

The Mutate may, by the touch of his hand, cause or relieve Pain. In causing Pain, the victim must save against Psionic Attack or be convulsed by crippling, non-damaging nerve pain until he does save, rolling to check each mt. Characters in this state are immobilized, and cannot fight, use Powers, etc.

To negate Pain, the Mutate simply touches his subject, who will react as if anesthetized. This condition will last until the Mutate relieves it, or some other means of de-activating a Psionic effect is used.

*Psi Wall* C: 20. R: 2 m radius. D: 10 mt.

The Mutate radiates an effect acting as a 1 die screen for a radius of 2 m. The effect is cumulative with other screen generators in defending against energy discharge from outside the screen.

*Psi Screen* C: 20. R: 50 m radius. D: 10 mt.

The Mutate generates a Thought Screen effect with a 50 m radius. This would cover 1 SU, for example. The effect acts as a normal Thought Screen in all respects, and is NOT cumulative with other forms of mental protection. In fact, the presence of another form of Thought Screen effect in the range of the Power will eliminate the Psi Screen.

*Blindsight* C: 10. R: - D: 10 min.

The Mutate becomes effectively invisible, radiating a field causing beings to look where he is not. The Power only affects beings using sight, and is ineffective against cameras, radar, etc.

**Tanglefield** C: 15 R: 30 m radius. D: 1-10 mt.

The Mutate generates a field affecting ALL characters in a 30 m radius. If the victims do not make their PSI ST, they will fall down, all voluntary muscle action paralyzed.

**Nerveblast** C: 10. R: 80 m. D: As Neuro-distorter.

The Mutate projects a blast of mental force at a single target, aiming it as a Handgun. The blast will do one 6-sided die of damage for every two levels the Mutate has attained. This damage is checked against the victim's Co-ordination score, as damage from a Neuro-distorter. If the victim makes his PSI ST, he takes only 50% of the damage indicated.

**Feedback** C: 15. R: 60 m. D: -

This Power causes Psi energies to oscillate out of control.

Against Mutates, this Power will cause the victim to suffer a Power Overload if he does not save. It will not reduce the Power score of its victim, however.

Against Psionic Devices, the Feedback Power will cause a shutdown for 1-100 min. There is a 5% chance for every level the Mutate has attained that Psionic Devices will be destroyed by his use of this Power.

**Wipe** C: 15. R: 100m. D: Varies.

The Mutate temporarily reduces the IQ score of his victim. If the victim does not save, he will lose 3-18 IQ points. The victim will fall into a coma until the lost points are recovered, at a rate of 1 per minute. If a victim loses more IQ points than he has, he will go insane until cured.

**Psionic Projection** C: 30. R: 100 km per level of Mutate. D: 1 hour.

Psionic Projection allows the Mutate to send his "Psychic Essence" to any known location or to follow any known character. The Essence is invisible to all senses and technological sensors, but is perceptible to Psionic Sense, Psi Scan, Detect Psi, etc. The Mutate may exercise all his Powers while in Essence form, with a 1% chance for every Power point he expends that he will be forced to return to his body. The Essence is vulnerable only to attacks from Psionic Powers, or similar effects wielded by the Technic or Biotech Classes.

The Mutate's body is in a trance while he is projecting, and if it is killed in this state, the Mutate's Essence is annihilated, with no chance of revivification for the body. The same result occurs if the Mutate's Essence is destroyed by attack.

**Reflector Shield** C: 20. R: - D: 10 mt.

The Mutate generates a two die screen, which has a special bonus. Every point of penetration deflected by the screen will strike back at the firer of the weapon. Thus, if the screen deflected 8 points of a Blaster beam's screen penetration roll, the firer of the Blaster would be subject to a hit of 8 points screen penetration. No other form of screen generation may be used in conjunction with this Power.

#### FORCE III:

**Mindmaster III** C: 30. R: 2 dets. D: Varies.

As other Mindmaster Powers, but this one is effective against ship-scale creatures.

**Fearcast** C: 25. R: 250 m radius. D: 20 min.

Broadcasts impulses of fear to all characters in range. No ST is permitted, but a Thought Screen will negate the Power. Affected characters will flee in any open direction away from the Mutate until they are out of range. There is a 2 in 6 chance that beings will continue to flee until they have covered .5 km of distance from the Mutate.

**Catapsi** C: 25. R: 100 m radius. D: 10 minutes.

Catapsi is a broad-band interference field of psionic static, which will prevent the use of, or projection of, any Mutate Power in or into the covered area.

**Reddopsi** C: 30. R: - D: 1 hour.

Reddopsi is a special form of Thought Screen which, if the Mutate using it saves against a Psionic attack, will cause the attack to be deflected back on the attacker. Mutates using this Power may not employ any other form of Psionic activity, or they will suffer the effects of their own Power, as the screen will reflect Psi energy going out as well as coming in.

**Brainbomb** C: 20. R: 250 m. D: 1 mt.

A blast of Psionic energy affecting one target. The victim must save against Psionic Attack or take 100% damage, going into coma. A victim who saves will lose 50% of his current Hit Points and lose consciousness for 1-10 mt.

**Regenerate** C: 15. R: Touch. D: -

The Mutate may heal damage done to himself or others according to the following probabilities. The Mutate will roll percentile dice. A roll less than or equal to 3 times his level indicates that the subject is totally healed of all damage. A roll greater than the indicated figure indicates that the subject recovers 50% of his total Hit Point score. In any case, a character may be the subject of this Power only once per day.

**Sideslip** C: 20. R: - D: 10 minutes.

Sideslip allows the Mutate to become an intangible phantom, able to penetrate any form of matter. If a Mutate wishes to dematerialize any equipment (spacesuit, weapons, etc.) he must expend twice the normal Power required for this effect. Mutates in this state are im-

mune to all weapon attacks of any kind, though they are vulnerable to Psionic and similar Powers.

Teleport C: 30. R: 10 lites per level of the Mutate. D: -

Teleportation allows the Mutate to travel instantaneously to any known location in range. There is a chance of error caused by possible flaws in the Mutate's memory of his target area. Mutates with an IQ less than 9 have a 20% chance of missing their target. Mutates with an IQ of 10-13 have a 10% chance of missing. Mutates with an IQ of 14-16 have a 5% chance, and a higher IQ has only a 1% chance of error. If the destination is missed, roll a 6-sided die to determine the result.

Die

Roll	Result
1	Arrive within a few meters of target.
2	Arrive on the right planet, wrong place.
3	Arrive on wrong planet.
4	Arrive back at starting point.
5	As 4 and take 4-40 points damage.
6	Vanish forever, Out of campaign.

a missed target by rolling a second 6-sided die. A roll of 1 represents a perfectly safe location, a roll of 6 a nearly lethal one.

Particle Psi C: 25. R: 1 km per level of the Mutate. D: -

The Mutate may cause atomic explosions by liberating the subatomic energies of matter. A Mutate may cause an explosion of .1 ERG force, increasing the force by .1 ERG for every two levels he has attained. The effect of this Power is based on the explosion effects rules given in section 1050 ff. The Mutate is advised to judge the force of explosion he wishes to cause carefully against the range he will be from ground-zero.

The Particle Psi Power will only work on inanimate matter. Any attempt to use it on living or mechanized matter will cause the explosion to occur with the Mutate at ground-zero.

Timeblip C: 20. R: - D: -1 mt.

The Mutate may move back in time from some event, a matter of a few seconds only, to attempt to alter the outcome of some situation. In practical terms, a Mutate using this Power gets a second chance to roll the dice to determine some result, or other.

Reality Curve C: Varies. R: - D: 1 mt.

For every Psionic Power point expended, the Mutate alters the probability of some occurrence by 1%. This may be applied to any probability determination in the game. Determine the probability percentages for a +1 or more on a non-percentile die roll (5 for a 20-sided die, 10 for a 10-sided die, 16 for a 6-sided die, etc.). Expending 100 points on this Power gives the Mutate a free wish, of limited range and force. Wishes must be stated clearly and succinctly by the Player using his character's Reality Curve Power, and any loopholes should be exploited to the full by the GM.

Energon C: 30. R: Varies. D: 1 mt.

The Mutate may create 1-100 ERG of power, applying it in one of several ways. He may use it to provide fuel for a device or devices (up to 100 milliSlugs may be so produced). It may be used to get currency on an Empire technology world. The energy may be used as a weapon, under the rules for use of ship weapons on Personal Combat scale.

The main application of this Power in a non-violent or non-technological manner, is the diversion of the energy towards the revivification of a dead character, under the rules laid forth in section 0730 regarding the resurrection of the deceased as regards time since death, state of the corpse, etc.

It will be seen that a high IQ is of value to Mutates wishing to use this Power in safety. The use of temporary IQ increases from drugs is permitted for Mutates wishing to up their odds of safe transit. The GM may determine the relative safety of



## 0664. TECHNIC BONUS POWERS

<u>Force I</u>	<u>Force II</u>	<u>Force III</u>
Convert Powersource	Negapsi	Reprogram
Selfmaster	Neutralize Radiation	Distorter
Locate Access	Detect Energy	Reality Curve
Break Illusion	Deduce Environment	Steady State
N-space Sense	Negate Malfunction	Control Energy Level
Stress Factor	Situation Logic	Improve Design
Inject Logic	Jaunt	Sideslip
Induce Malfunction	Compute	Anti-energy Field
Circuit Control	Personal Energy	Schematic Sense
Validity Determination	Malfunction Field	Physio-logic

### Class Powers

Enhance Drive Output C: 1. R: - D: 1 mt.

The Technic, acting as POWER-rigger, adds 1-6 ERG to power output that mt. This is in addition to all other bonuses due him. A 1st level Technic may expend 1 point of Technical Power per mt on this Power. A 2nd level, 2 points; a 3rd level Technic, 3 points, etc. One 6-sided die of energy is added for each point expended.

Repair Light Damage C: 0. R: - D: -

The Technic adds 2 points per level to all repair rolls he may make. The Power is automatically used each time he makes a repair roll, at no cost in Technical Power points.

The Power is only usable on repairs to equipment that has taken less than 30 points of "overkill."

Analysis C: 1. R: Visual range. D: 1 mt.

Allows the Technic to determine the general function of a device upon visual inspection. Eg. "It's a (computer, weapon, toilet, etc.)." The Power will not determine the specific effect, means of using, or power requirements of the device.

Jury-rig C: 2. R: Touch. D: 1 mt.

The Technic may cause any repairable, shut-down device to function for 1-100 minutes. The device will have 1 Hit Point, and any damage sustained by it while in this state will destroy it beyond all hope of repair by any means.

Repair Heavy Damage C: 5. R: - D: -

The Technic will add the score of one 6-sided die to all repair rolls for every level the Technic has attained. Thus, a 1st level Technic will add 1-6, a 2nd level Technic adds 2-12, etc. This is usable on all repair rolls the Technic makes.

Detect Malfunction C: 10. R: Visual range. D: 1 mt.

The Technic determines if a device is functional by visual inspection. The Power does not determine if the device is currently operating or not, just if it is in working order.

Regenerate System C: 15. R: Touch. D: 1 mt.

This causes any malfunctioning system to be fully repaired. It is applicable only to systems that are repairable by normal means, or to equipment temporarily shut down by non-permanent damage or other Powers. It has no effect on equipment that is not functioning for lack of power.

Energon C: 20. R: Varies. D: 1 mt.

As the Mutate Power.

### BONUS POWERS

#### FORCE I:

Convert Powersource C: 1. R: 10 m. D: 1 hr.

The Technic may divert power generated in range, converting it into Empire fuel cells (Power Slugs, centiSlugs, milliSlugs) at a rate determined by the GM. A late 20th-Terran-Century fusion reactor will produce up to 100 ERG per hour. An example of this is the French "Superphenix" breeder reactor. Remember, an ERG is 10 megawatts. The GM must determine the output of the power source being converted to determine the efficiency with which it will provide the Technic with ERG. This Power is only applicable to energy sources using gradual and non-destructive forms of energy discharge. It cannot function on Energy weapon discharge, explosions, etc. At the GM's option, it may be applied to solar power, with rules for this application worked out by the GM.

Selfmaster C: 5. R: - D: 10 mt.

As the Mutate Power.

Locate Access C: 5. R: Visual range. D: 1 mt.

Locates all doors, portals, access panels, etc., no matter how hidden or camouflaged.

Break Illusion C: 5. R: 100 m radius. D: 1 hour.

Dispels any illusions generated in range of Technic using the power.

N-space Sense C: 10. R: - D: 1 day.

As Mutate Power.

**Stress Factor C:** 5. *R:* Weapon range. *D:* 1 mt.

The Technic determines the "stress points" on a target. All successful attacks by the Technic that mt will do double the indicated damage, due to the increased stress on the target from a hit in a stress point. This bonus is applied to any form of combat.

**Inject Logic C:** 3. *R:* 100 m. *D:* 1 mt.

The Power is designed to disrupt the independent action circuits of Roboids and similar robotic monsters. The Power is effective 100% of the time against Roboid Mark I and II, 75% of the time against Mark III and IV, and 50% of the time against Mark V. If the Power is shown to be successful, roll a 6-sided die to determine the effect:

Die

Roll      Effect

1      No effect.

2-5      Roboid destroyed.

6      Roboid becomes slave of Technic.

Roboids enslaved by this Power will not be capable of independent action, and will carry out all orders from the Technic absolutely literally.

**Induce Malfunction C:** 5. *R:* 50 m. *D:* -

The Technic causes a target device to malfunction for 1-100 mt. The Technic has a 5% per level chance that the breakdown will be permanent, requiring repair at an overkill of 1-100 points of damage.

**Circuit Control C:** 1. *R:* - *D:* 1 hr.

Technic, rigged-in to a ship's computer system, may act as a CFB would, controlling a ship system that requires a CFB under normal circumstances. While doing this, the Technic may perform NO other actions of any kind.

**Validity Determination C:** 5. *R:* Touch. *D:* -

The Technic acts as a living lie detector, determining if a life-form is telling the truth as he believes it to be.

**FORCE II:**

**Negapsi C:** 10. *R:* - *D:* 10 mt.

The Technic negates all Psionic Powers or energies directed against him.

**Neutralize Radiation C:** 10. *R:* - *D:* 1 minute.

The Technic is immune to the effects of any energy discharge directed against him, including Energy weapon fire, hard radiation, heat, etc.

**Detect Energy C:** 5. *R:* 1 km. *D:* 1 hour.

Detects the presence, amount, and location of artificially generated or stored energy, including Energy weapons, vehicles, ships, etc. To illustrate: The Power would detect any type of battery, electrical or other, and any form of atomic or Empire power source at all times. It would detect a modern, internal-combustion engine only if it were operating, and would not detect a horse and buggy at all. Bullets would not trigger it, but Blasters would.

**Deduce Environment C:** 10. *R:* - *D:* 10 min.

The Technic may observe, as if by clairvoyance, any known location. He may also "see" his surroundings even if blinded, or in total darkness, smokescreen, blinding light, etc.

**Negate Malfunction C:** 2. *R:* - *D:* 1 hour.

By touch or rigger input, the Technic may cause any single shut-down system to operate in its normal manner. He must remain in physical or rigger contact with the machine while it is so operating, or it will cease to do so. He may perform no other actions of any kind while thus engaged. Any SYSTEM damage sustained by a device being maintained in this condition will be suffered by the Technic as physical damage, and subtracted from his Hit Points.

**Situation Logic C:** 20. *R:* - *D:* -

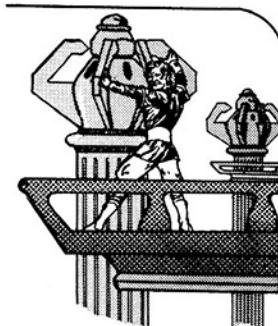
The Player controlling the Technic may ask three "yes-or-no" questions of the GM regarding a given situation. The GM may elaborate on his answers with any hints for which the Player has found clues, but has not yet made the proper deductions. The GM and Players will evolve their campaign's limits for this Power, over the course of play.

**Jaunt C:** 15. *R:* 1 km per IQ point of Technic. *D:* -

As Mutate Power, but with limited range potential.

**Compute C:** 15. *R:* - *D:* 1 day.

The Technic, rigged into ship's systems, may act as a computer of any desired type. He requires the correct sensor input to perform the functions of that computer, and may not perform any other actions while using this Power.



*Personal Energy* C: 5. R: Touch. D: -

The Technic may, by touch, impart a 1 ERG charge to any Empire type device requiring power. (Handweapons, screen generators, vehicles, etc.)

*Malfunction Field* C: 25. R: 500 m radius. D: 10 minutes.

ALL devices within range of a Technic broadcasting this effect will cease function for as long as they are in range. It will not affect purely mechanical devices such as swords, bows, horse-drawn wagons, sailing ships, etc., but will cause Energy weapons, ship's drives, bullets, bombs, etc. to malfunction. Any type of energy or chemical reaction is suppressed by this Power.

#### *FORCE III:*

*Reprogram* C: 15. R: - D: -

By touch or rigger input, the Technic may cause any computer or sensor to change its function for that of any other computer or sensor. Note that a computer cannot be reprogrammed into a sensor, or vice-versa. The effect is permanent unless reversed by a second reprogramming.

*Distorter* C: 20. R: 2 dets. D: 1 mt.

The Technic disrupts the structure of any ship-scale energy being (Stelloids, Echinasters, Hellclouds, etc.) Results are determined by the roll of a 6-sided die. On a roll of 1, no effect on the monster occurs. On a 2-3, the monster is stunned, and will make no attack for 1-3 mt, and will further maintain its screens at 50% of normal strength for the stunned period. On a roll of 4-5, the monster will attempt to flee the engagement. On a 6, the monster is destroyed.

*Reality Curve* C: Varies. R: Varies. D: Varies.

As the Mutate Power.

*Steady State* C: 20. R: Touch. D: 1 day.

By touch, the Technic places an object into a stasis field, suspending all functions totally.

*Control Energy Level* C: 15. R: - D: 1 mt.

The Technic increases energy output of devices under his control by a factor equal to his level (2nd level, double output; 3rd level, triple output, etc.). This may be done by touch or rigger input.

*Improve Design* C: - R: - D: -

With access to a full shop, or a ship's engineering lab, the Technic may seek to improve a single device at a time. Only one attempt to apply this power may be made for a single device. To determine the effect of the Power, roll a 6-sided die.

#### *Die*

<u>Roll</u>	<u>Effect</u>
1	Device totally ruined. Destroyed beyond repair.
2	No effect on device.
3-5	Device efficiency boosted by 50%.
6	Device efficiency boosted by 100%.

All such effects are "customized" designs, and mass production of a device in improved form is not allowed. The work requires 1-100 days, and requires 100-1000 ERG.

The GM and Player should determine beforehand what effect an efficiency boost will have on a given device, and in what functions it will be improved if the GM wishes to limit the areas of improvement allowed. Such research requires the full time attention of the Technic.

*Sideslip* C: 25. R: - D: 10 min.

As Mutate Power.

*Anti-energy Field* C: 30. R: 20 m per level of Technic radius. D: 1 hour.

Generates a field totally negating all forms of energy generated in or impinging on it. Only devices and materials being used by the Technic personally will function in this field.

*Schematic Sense* C: 35. R: Visual range. D: 10 minutes.

Technic deduces the design factors of a device by visual inspection. The device must be in functional shape for this Power to work on it, and the Technic has a 10% chance of making an error in his design, thus producing defective copies of the model device.

Schematics obtained in this way may be filed, and used to construct duplicates of the model at any time that facilities are available.

*Physio-logic* C: 30. R: - D: 1 hour.

The Technic may alter his physical structure in one respect. This may be a change in the body's resistance to weapons (1 die of armor or screen), immunity to radiation, a change in outward appearance, gravity resistance, etc. The GM will define the limits of this Power within his campaign.

Only one modification at a time is permitted with this Power, and changes in the modification require a new use of the Power altogether, not a simple change from one to the other.

## 0665. BIOTECH BONUS POWERS

<u>Force I</u>	<u>Force II</u>	<u>Force III</u>
Empathic Link	Drug Beam	Lifelock
Negate Radiation I	Negate Radiation II	Biostasis
Detect Toxin	Regenerate Damage	Negate Radiation III
Empathic Control I	Empathic Control II	Neutralize Toxin
Pain Control	Narcolepsis	Control Environment
Aseptic Field	Pathogenetic Field	Empathic Control III
Physiogravitic Resistance	Anti-allergenic Effect	Ability Boost
Empathic Communication	Activate Revenant	Life Transfusion
Energy Transparency	Psychodisruption	Clone Surgery
Epileptigenetic Field	Matter Transparency	Geo-empathy
Nerve Block	Psionic Transparency	Nutrition Enhancement
Empathic Sense	Antitoxin Projection	Dermal Shift

### Class Powers

Heal Light Damage C: 1. R: Touch. D: -

The Biotech heals 1-6 points of damage sustained by the subject. This Power is effective only if the subject has not suffered more than 50% of his total Hit Points in damage. Thus, a character with 36 Hit Points will be curable with the Power only if his current Hit Point score is 18 or more.

Selfmaster C: 0. R: - D: 10 mt.

The same as the Mutate Power.

Diagnose Disease C: 2. R: Observation distance. D: -

The Biotech has a probability of diagnosing a disease correctly equal to his IQ x his level. The Power may be repeated every hour until success is achieved.

Heal Serious Damage C: 3. R: Touch. D: -

Heal Serious Damage cures one 6-sided die of damage for every three levels the Biotech has attained, and is effective as long as a subject is still alive. A subject may only be cured by this means once per day.

Cure Disease C: 5. R: Touch. D: -

Cure Disease will heal any bacterial, viral, rickettsial, etc. infection. It has no effect on Shock conditions, nor will it cure radiation sickness or insanity.

Calm C: 5. R: 20 m. D: 1 day.

The Biotech projects an influence having a sedating effect on insane or berserk characters. There is a 4 in 6 chance that the Power will work, but on a roll of 5 on a 6-sided die the subject will be unaffected, and on a roll of 6, he will attack the Biotech with insane fury.

Calmed beings are in a semi-catatonic state, amenable to simple orders by the Biotech, but incapable of prolonged or involved activity. The Power has no effect on same beings.

Psycho-surgery C: 5. R: 10 m. D: -

The Biotech may cure mental disorders, Shock conditions affecting the mind, negate mental domination effects, etc. Similar to the Repair Engram Power of the Mutate Class.

Revivify C: 25. R: Touch. D: -

Revivification is the resurrection of dead characters. The Biotech has a 100% chance of success if the revivification occurs on the same day as death, with a loss of 5% per day thereafter. The body must be revivable according to the rules governing the amount of damage sustained (100 points of overkill means no revivification) and such other factors as may enter the situation.

### BONUS POWERS

#### FORCE I:

Empathic Link C: 1. R: .5 km per level of Biotech. D: 50 minutes.

The Biotech may engage in a telepathy-like communication with a known character who is willing to engage in this communication. Unwilling beings are simply not contactable.

Negate Radiation I C: 5. R: Touch. D: -

Cures the effects of Radiation Sickness of the 1st or 2nd degree.

Detect Toxin C: 5 R: 30 m. D: 1 mt.

Detects the presence of any substance lethal to the life-form concentrated on by the Biotech. If he knows the life-form's Base Element Type, he may determine toxicity for its species.

Empathic Control I C: 10. R: 30 m. D: 1 hour.

Similar to the Mutate Power Mindmaster I, but effective for only one hour. The victim of

**Empathic Control** makes his ST on the basis of IQ.

**Pain Control** C: 5. R: 10 m. D: Varies.

Pain Control is identical to the Mutate Power, with the exception that the Biotech may exert this effect at greater range than the Mutate.

**Aseptic Field** C: 3. R: 20 m radius. D: -

The Field will destroy all harmful pathogens in range, if they are not already invading the Biotech's system, or those of his companions. A preventive, not a curative measure, this Power is used for decontamination.

**Physiogravitic Resistance** C: Varies. R: - D: 50 min.

Physiogravitic Resistance increases the Biotech's ability to withstand the physiological effects of high acceleration. For every point expended, the Biotech reduces the effect of gravity on his system by 10%. This will not overcome the penalties to movement and physical Abilities engendered by extremes of gravity, but it will reduce the effect of gravity as regards the odds on a Gravity Abreaction. Thus, a Biotech expending 10 Biopower points will be immune to Gravity Shock, or a gravity Abreaction of any kind, for the duration of the Power's effect.

**Empathic Communication** C: 8. R: Communication range. D: 1 hour.

The Biotech will add a bonus to the Reaction Dice of characters with whom he is communicating. This bonus is equal to the Biotech's Empathy score + his level. The Biotech must have a means of communicating understandably with a being for him to apply this Power.

**Energy Transparency** C: 15. R: - D: 1 minute.

The Biotech renders his person transparent to all forms of energy. This will make him literally invisible, as well as immune to all attacks with Energy weapons, including ship weapons.

**Epileptigenetic Field** C: 15. R: 50 m. D: 1-10 minutes.

Similar to the Tanglefield Power of the Mutate Class.

**Nerve Block** C: 5. R: Touch. D: 1-10 min.

Nerve Block requires the Biotech to touch his target. If the victim does not make a Vitality ST, he will be rendered unconscious for 1-10 minutes. It is not necessary to pinch the shoulder of the victim when using this Power.

**Empathic Sense** C: 20. R: As Empathic Link. D: 50 minutes.

Empathic Sense is similar to Psionic Sense, but will only give the Biotech visual data of the location scanned.

#### FORCE II:

**Drug Beam** C: 15. R: 30 m. D: Varies by drug type.

The Biotech may induce the activity of any drug with which he is familiar, in the system of a given victim. There is a chance of error in this operation. Subtract the Biotech's IQ from 20, and roll a 20-sided die. The score rolled must be greater than or equal to the difference between the IQ and 20. If it is, the Beam will have the exact effect of the desired drug, including post-injection period of activity. But if the score is less than the required figure, then the Beam will act as a lethal poison, and if it kills the subject, the Biotech will face charges by his Guild. All rules regarding the administration and effect of Drugs are in effect when using this Power, but the Biotech may apply it to any life-form, regardless of Base Element Type.

**Negate Radiation II** C: 10. R: Touch. D: -

Negates the effects of 2nd degree Radiation Sickness.

**Regenerate Damage** C: 10. R: Touch. D: -

Regenerates damage completely, as does the Mutate Power, but will always restore 100% of the subject's Hit Points. A character may be healed by this Power only once per week.

**Empathic Control II** C: 30. R: 30 m. D: 1 hour.

As Mindmaster II, but with a limited time of action. The victim will use his IQ ST, not a PSI ST, to attempt to save.

**Narcolepsis** C: 5. R: 80 m. D: 1 mt.

The Biotech directs this Power against a single subject, and if he does not make his Empathy ST, the victim will fall into a slumber for 1-6 hours, and may not be awakened before the stipulated time has elapsed.

**Pathogenetic Field** C: 30. R: 20 m radius. D: 1 mt.

Pathogenetic radiations are emitted by the Biotech. All characters in range are affected, and if they do not make a Vitality ST, then the Power will cause a mutation of their system's symbiotic bacteria, or equivalent, which will cause them to become rapidly ill. The disease requires 1-10 mt to incubate, and will then begin to drain the Physical Power of the victim. When the Physical Power score reaches 0, the victims will go into coma, and remain in this state for 10 hours. They will recover weakened, but in full possession of their faculties. On a roll of 1 on a 20-sided die, a victim will die of this disease. The Biotech will detect this trend, if he is observing the patient, and may apply a cure. If the victim dies, the Biotech will face charges by his Guild.

**Anti-allergenic Effect** C: 10. R: Touch. D: -

The Biotech may cure the effects of a drug abreaction.

**Activate Revenant** C: 20. R: 50 m. D: 1 mt.

Activates the corpses of one dead life-form per level of the Biotech. These will serve the Biotech as slaves until destroyed. Each will have -2 on all die rolls and abilities, and will have only 1-10 Hit Points. When they are once again killed, they cannot be activated again, nor are their bodies capable of revivification. The revenants will cease to operate in any case, in a period equal to 1-10 hours plus 1 hour per level of Biotech, after they are activated.

**Psychodisruption** C: 15. R: 100 m. D: -

Psychodisruption is directed at one victim at a time. If the victim does not make an IQ ST, he will go insane until cured.

**Matter Transparency** C: 20. R: - D: 1 minute.

The Biotech renders himself immaterial. In this state he has the same capabilities as a Mutate using Sideslip, but he is vulnerable to Energy weapon attacks as well.

**Psionic Transparency** C: 10. R: - D: 10 minutes.

The Biotech becomes indeetectable by and invulnerable to, any form of Psionic energy or Power.

**Antitoxin Projection** C: 10. R: 30 m. D: -

The Biotech may negate the effects of any Poison, including reviving dead characters if the Power is exercised within 3 mt of death by poison. The Power will restore all damage done by poison if it is applied within 5 mt of the event.

#### **FORCE III:**

**Lifelock** C: 20. R: - D: Varies.

Identical to the Mutate Power.

**Biostasis** C: 25. R: Touch. D: 1 day.

The Biotech may place a character in Biostasis, renewing the effect daily if desired. No ST is permitted should the Biotech use the Power as a defensive move, putting his opponent into complete suspended animation with a touch. He must of course, hit his target first.

**Negate Radiation III** C: 15. R: Touch. D: -

Cures Radiation Sickness of the 4th degree.

**Neutralize Toxin** C: 20. R: 10 m. D: 10 mt.

Neutralizes any poisonous substance in the presence of the Biotech. This, of course will depend on the toxicity of the toxin for the Base Element Type chosen by the Biotech. He may render harmless a poison lethal for Silicon life, which remains toxic for Carbon life. It requires several applications of this Power to neutralize a Toxin affecting more than one Base Element metabolism.

**Control Environment** C: 10. R: 50 m radius. D: 10 minutes.

Controls the environment for a 50 m radius around the Biotech. He may set the Power to provide air in space, coolness on a hot world, etc. The GM will determine the limits of this Power. It may not be used to provide food or liquid, only variations in atmosphere and temperature, and possibly, such elements as gravity, ambient radiation, etc.

**Empathic Control III** C: 50. R: 2 dets D: 1 hour.

Exactly like Mindmaster III, but with limited duration.

**Ability Boost** C: 20. R: Touch. D: 1 hour.

Ability scores for the subject may be increased by 1-6 points. The Power will NOT take a score over the Racial Maximum, and only one Ability at a time may be boosted.

**Life Transfusion** C: 0 R: Touch. D: Varies.

The Biotech may transfuse Hit Points into a wounded character. He may transfer his own, or Hit Points from a volunteer of the same species as the wounded character. Hit Points transfused are recovered at normal rates for healing damage. Hit Points are transfused at a rate of 2 per mt.

**Clone Surgery** C: 0 R: - D: -

The Biotech, given the facilities of a major hospital or a biological lab on a ship, may prepare and grow Clones from character's cell samples. He will require an up to date memory tape (a stored cerebrotape taken from the character will do) to program its mind. The process requires 100-1000 ERG, and 1-100 days.

**Geo-empathy** C: 30. R: 250 m per level of Biotech. D: -

The Biotech may teleport to a pre-selected target area within range. It requires 10 minutes of uninterrupted study of an area to program it as the target, and only one target area may be maintained at a time. The Biotech cannot miss his target area, nor can he jump if he has not prepared such a target area that lies in range.

**Nutrition Enhancement** C: 25. R: Touch. D: -

Any material whatsoever is converted into suitable nutrition to keep body and soul together. It may not be palatable, but its food. One use of the Power will provide 10 days rations, ie. food for one character for 10 days. The Biotech may only produce food for Carbon races, unless the GM wishes to expand this option.

*Dermal Shift C: 10 R: - D: 10 minutes.*

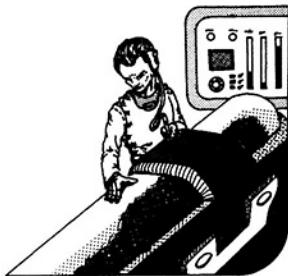
The Biotech may alter the structure of his skin, in one of three applications:

Armor format will cause the skin to have a protective quality equal to one die of armor.

Screen format will cause the skin to resist energy like a one die screen.

Alter format will cause the Biotech to assume the shape of any desired being of the same size and shape as his species. He may even cause limbs to grow or shrink in this application, but any extra limbs will be for decoration only, and will not be able to grasp or manipulate things.

The Armor and Screen functions are cumulative with other protections worn.



#### 0666. FINAL CONSIDERATION REGARDING THE USE OF POWERS

The use of this kind of immense personal power always requires the firm control of the GM if a campaign is not to become a flat and boring series of scenarios in which the Power using individuals cast their magic spells at the nasty villain until he falls down. We have tried to set a sane limit to the uses of Powers by designing the Power point system. We also require the characters in our own campaign to have at least some concentration when using their Powers, if only a second to gather their wits. The rule of thumb is, if a Power is being used, the character using it must do nothing else that mt, except concentrate on bringing off his effect. The subsequent demands of a Power for supervision by the character will be determined by the nature of the Power's effect, and the circumstances of the user.

#### 0700. PERSONAL EQUIPMENT AVAILABLE IN THE CAMPAIGN

In the following sections, you will find all the various items of personal gear which is available in the Combine for general purchase by explorers: weapons, medical gear and drugs, space suits, armor, screen, tools, etc.

The list is far from complete. It includes all the equipment we designed at the start of our designing for this game, and all the things we forgot, that the playtesters suggested, but their are undoubtedly many items available and useful in a starfaring culture that you or your Players will want to add. In this case, the GM should weigh carefully the advantages of a new toll or weapon. Does it make the character's too powerful? Does it reap rewards at no risk or expense? Does it preserve, in two words, campaign balance? If it does not violate the principles of gaming, then it will make a good addition to your camapaign. If a piece of equipment turns out to be too powerful in actual play, do not hesitate to issue a "factory recall" on it.

#### 0710. PERSONAL WEAPONS

There are two major classes of weapon: those that use Energy to do damage, and those that do not. All Energy weapons for sale in the Combine, or of Empire Type, use the 1 ERG milliSlug as a power source. Guns firing bullets, missiles, grenades, etc., have a variety of loads available.

## 0711. ENERGY

Remember that these weapons are forbidden to Mutates, on pain of suffering damage, and that Technics are limited to the non-destructive varieties of Energy weapon.

Blasters- Blasters and Blast Rifles are the archetypical "ray guns" of space opera. They fire a highly destructive beam of energy, either in single shots or bursts of shots in autofire, or in widely angled fans of lethal force. The Blaster proper is a pistol, the Blast Rifle, a shoulder weapon of greater range and power.

Ion Chatter- An autofire weapon, sort of a space-age submachine gun, firing bursts of 10 pulses of destructive energy. It is designed for closer ranges than the Blaster, and is murderously effective within its limitations.

Tangle Gun- The Tangle Gun is a shoulder weapon firing spherical fields of immobilizing force. Any character hit with this weapon will be caught, unmoving, in a web of energy. The duration of the field is limited, and it does no permanent damage.

Gamma Mace- A short, heavy, baton-like weapon, designed for use as a Handgun or Handweapon, that fires short-range beams of intense radiation at its targets.

EMP Gun- A pistol firing a beam that has no effect on living beings, but is designed for use in combat with Roboids, or similar robotic life-forms or constructs. It is also of use in combat with characters using vehicles and/or powered armors.

Neuro-distorter- A paralyzing ray weapon, usable against only one Base Element Type at a time. The weapon has a small selector dial for changing this setting, an operation requiring 1 mt.

Damage done by this weapon is not subtracted from the Hit Points of the target, but instead, damage is ratioed over the target's Co-ordination score. The resulting fraction represents the percentage chance that the target character will be paralyzed for 1-100 minutes. If this does not occur, then no further damage is done, and no permanent damage is done in any case.

The Neuro-rifle is a shoulder weapon, larger and more powerful than the Neuro-distorter Pistol. It is capable of firing bursts or wide fans of the paralyzing energy, something that the Pistol cannot do.

## 0712. ENERGY HANDWEAPONS

These are Energy weapons used in hand-to-hand combat. The same Class restrictions apply to them regarding Mutates and Technics.

Luxblade- A weapon generating a beam of force about 1 meter long. The beam assumes a stable, blade-like form when the weapon is activated, and can slice through steel like a hot poker slices butter. Minimal force is required to use it.

Nerve Rod- A meter-long staff, generating a charge of paralyzing energy when it hits its target. This energy acts in all ways as a hit by a Neuro-distorter.

Force Gloves- A pair of gauntlets radiating a field of intense energy, and doing damage in much the same manner as a Luxblade. A being using Force Gloves can take on a character in Power Armor hand to hand with a vague chance of winning.

Gamma Mace- Used in hand-to-hand combat, this weapon exposes those it hits to intense radiation, as well as doing crushing damage to unarmored beings.

Stasblades- A stasblade is a monofilament wire coated in a stasis field generated in the hand-grip. It can slice through almost any normal matter that is unprotected by an energy screen.

The Stasknife is 25 cm long, and the Stassword is 75 cm long.

Vibroblades- Vibroblades have "blades" composed of vibratory energy capable of disrupting matter at a touch. The Vibroblade, besides doing severe damage to a character's Hit Points, will have a possibility of stunning a target into unconsciousness. Ratio the damage such a weapon does in a hit over the target's current Hit Point score. This is the percentage chance that the target will be rendered unconscious for 1-10 mt.

A Vibroknife has a blade 30 cm in length. The Vibrosword has a 1 meter blade. The Vibroknife, or "Tickle-shiv," as it is called colloquially, is the favored weapon of the small criminal population of the Combine.

#### 0713. PROJECTILE WEAPONS

This term specifically refers to guns firing bullets, missiles, grenades, or other projectiles propelled by a chemical fuel. They do not use energy as such to do damage. The term does not include bows, slings, etc., which rely on mechanical force to hurl a missile. The Projectile weapons are usable by all Classes, though Biotechs are forbidden to take intelligent life with them, as they are with all forms of weapon.

Slug Guns- Slug Pistols or Slug Rifles are weapons firing a clip of 20 bullets. The bullets may be Armor Piercing or High Explosive projectiles, the former having a higher chance of penetration than the other, but doing less damage when it hits. Both Pistol and Rifle can fire single shot or automatic.

Missile Projector- A bazooka-like weapon firing a variety of missiles. AP and HE missiles are more powerful versions of the Slug Gun loads. Incendiary missiles have a warhead loaded with Thermite DX7, a substance burning at high temperature in any atmosphere, even water, or in vacuum. Crystal Explosive warheads are high-energy, low-yield missiles, having a charge of up to 10 ERG. They are equivalent to tactical nukes, but have no radiation or fallout effects. Neutrex missiles have an enhanced radiation effect, on a par with neutron bombs.

Needle Gun- A small pistol, this is the "Saturday Night Special" of the Combine. The weapon fires a clip of 20 small, needle-shaped projectiles, with various capabilities. Standard loads are small-caliber bullets of limited penetration effect. Electro-charge needles augment their damage with a high voltage charge of electricity, delivered to the target on hitting it. The needles may be charged with tranquilizers or poisons, under the usual restrictions for such compounds. A drug will affect only a selected Base Element Type, and in this case, will not add to the effect of the needle, so that against other Types it will act as a Standard needle. The Player must keep a careful record of what clips he has purchased, and what his Needler is currently loaded with.

Fluid Guns- These do not fire projectiles at all, properly speaking, but discharge sprays of various fluids or fine powders under aerosol pressures. Available Fluid Canisters include Thermosol, a compund of Thermite DX7, sort of a pocket flamethrower. Cryosol, a suspension of liquid Nitrogen (an icethrower?). Hyperacid, a potent corrosive which will attack most metals or protoplasm, though beings from corrosive environments may resist it. Slipdust, a riot-control formula which coats surfaces with a low-friction dust, causing characters caught in it to fall, effectively Immobilized. Clogger, a high-friction dust used to clog the engines and machinery of vehicles, Power Armor, etc. Gas canisters are available, charged with poisonous or tranquilizing formulae, under the same rules as those governing drugged needles. Smoke canisters are useful in disrupting vision on a combat field, and acts as cover against certain Energy weapons, diffracting their rays into uselessness.

Splat Rifle- A sort of space-age shotgun, firing a tightly grouped pattern of 10 HE shells in a single shot. It is designed for close action combat, and is lethal within its range limitations.

Grenade Pistols- Disposable hand-launchers, firing Crystal or Neutrex grenades for long distances. They are similar to the German Panzerfaust of Terra's World War II, but with tactical nuclear equivalence in the power of their loads.

Hand Grenades- Available types include fragmentation, HE, or Gas.

#### 0714. NON-ENERGY HANDWEAPONS

Actually, one form of these weapons does augment its effect by energy discharge, but in this form, it is usable by both Mutates and Technics.

Electroweapons- Conventional appearing handweapons (swords, maces, etc.) which increase the effects of a hit by using a high-voltage electrical discharge upon striking a target.

Titanium Alloy Weapons- Swords, maces, spears, etc., made of a super-strong alloy, lighter than steel, which are often used as trade items with technologically backwards cultures. All the edged weapons in this category have a monomolecular edge, which has superior cutting ability, and is protected from dulling by an ultra-tough polymer coating.

#### 0715. MECHANICAL WEAPONS

This classification includes all bows, slings, catapults, etc. The Combine has several models of such weapons, often used for a barter medium with backward cultures, or by characters who

wish to pass incognito in such cultures. Examples of available Mechanical Weapons are:

Repeater Crossbow- A powerful crossbow capable of firing a clip of 5 quarrels at a rate of 1 shot per mt. Besides regular quarrels, projectiles with explosive heads and electrocharge capability are available.

Powered Pulley Bow- A pulley bow using a small power element to increase its range and penetration force. Arrows are available on the same basis as the quarrels for the Repeater Crossbow.

#### 0720. ARMOR AND SCREEN UNITS

All Classes are permitted the use of any armor or screen. While section 1050 will explain the mechanics of combat in detail, keep in mind that Armor defends its wearer against projectiles, non-Energy weapons, and environmental conditions such as temperature, poison atmospheres, and radiation, while Screen defends against the discharges of Energy weapons. As a rule, Screen will not stop material attacks, and Armor will not stop Energy attacks. Armor that is breached by a hit will repair itself in 1 mt, as long as it has the required power source hooked up to it. Thus, a character in combat in space whose armor is breached will suffer exposure to vacuum for only 1 mt in the event of a hit, which is more than enough for most people.

Protection from these units is not cumulative. A character may not wear two suits of armor or two screen generators to increase his defenses. If doubt exists as to the defense status of a character, then the higher value of protection will apply.

Macoplast Armor- Body armor made from macromolecular plastics, as tough as steel, giving 1 die of armor protection. The suit has no life-support capability apart from this protection.

Space Armor- A macoplast space suit, giving 1 die of armor. The suit requires a milliSlug for power for one day's use, and provides full life-support (atmosphere, temperature, etc.) while it is powered. The suit will preserve internal temperature against an external temperature of up to 200° C or -50° C. as a lower limit. When powered, it will cut the intensity of radiation impinging on the wearer by 10%.

Combat Space Armor- A heavier space suit giving the same environmental protection as Space Armor, but with 2 dice of armor. When powered, the Combat Space Armor reduces the intensity of impinging radiation by 20%.

Monolevel Screen Unit- A small screen generator worn at the user's belt, providing 1 die of screen protection. The unit requires one milliSlug to operate for 1 day.

Duolevel Screen Unit- A larger screen unit, also worn at the belt, generating 2 dice of screen. It requires one milliSlug per hour of operation.

Q-screen Harness- A backpack size device, generating 3 dice of screen and 1 die of armor. The latter effect is cumulative with other armors worn by the user. The unit requires one centiSlug to operate for 1 hour.

Power Armor- A large, exo-skeleton structure, about 2.5 meters tall by 1.5 meters wide, with two legs, two arms, and a clear, armor plastic dome. The Power Armor delivers 3 dice each of screen and armor, and no other protective equipment may be worn by the user. Power Armor is too bulky to move freely in onboard combat, but if bulkheads are cut open for its passage, it may be used in boarding actions. Other capabilities of Power Armor are:

- It multiplies the wearer's Physical Power Ability by 100.
- It provides the wearer with full life-support.
- It is capable of ground movement at 30 km/hr, and of flight at 100 km/hr.
- It has a Blast Rifle built in to its right arm, and a weapon of the wearer's choice may be installed in the left arm. These weapons are not held by the "hands" of the armor, but are located about the "forearm" of the suit. The hands are free to grasp and hold while the weapons are firing.
- It reduces impinging radiation in intensity by 50%.
- It withstands temperatures up to 1000° C.

The Power Armor requires 1 Slug (1000 ERG) to operate for 1 day. The user must have the "Rigger Operation," allowing him to plug the controls for the suit's mechanical musculature into his nervous system.

Space Blob- A disposable "life-raft." The Space Blob is a plastic envelope, expanding to enfold a character in its interior, not unlike a giant Baggie, and providing life-support for 1 day. The Space Blob in uninflated form is about the size of a shoebox, and can be carried at the belt or located at positions on the starship determined and recorded by the Players. A Space Blob is de-

signed to hold only one character, and will provide life-support of a type preselected at the time of purchase. It provides no protection other than the life-support function, and cannot be used more than once.

Jove Suit- A huge exoskeleton, more of a mobile hut, designed to allow the wearer to survive and limitedly function on the surface of a Jovian-type gas-giant planet. The unit provides full life support and internal gravity control for the user, multiplies the Physical Power of the user by 100, but provides only 1 die each of armor and screen. It has a maximum ground-speed of 10 km/hr, and masses 1 tonne. It requires one Power Slug per day to operate.

Exoskeleton- A device used to augment the Physical Abilities of the user. It increases Physical Power by a factor of 100, has a maximum ground speed of 70 km/hr, and provides 1 die of armor. It provides the wearer with life-support, and requires an operator to be fitted with the Rigger Operation. It uses Power Slugs for fuel, requiring 100 ERG per day to operate.

#### 0730. MEDICAL AND PHARMACEUTICAL SUPPLIES

Emergency Medikit- May be used by any character having the Medical Science skill for the species of the character being treated. The device uses a centislug for power, and performs the following operations. Note that Biotechs using this device will reduce power expended in a given operation by 50%.

1. The Kit will heal one 6-sided die per ERG expended.
2. The Kit fires a Sedater Beam for a range of 20 m, which acts to calm insane characters, making them tractable and handleable. The beam uses 4 ERG.
3. The Kit contains room for 10 ampoules of drugs.
4. The Kit has a small diagnostic computer capable of determining the medical condition of a subject at a range of 5 meters, at a power cost of 2 ERG per use.

Personal Medikit- A small, flat unit, carries strapped to the user's body inside his armor or clothing, with limited medical facilities for emergency use.

The Medikit has a small, "idiot" medical computer, which monitors the condition of the user. Should this monitor register a crisis in the character's condition, it will scan its stock of drugs to determine if it has anything which is specific for the character's condition. If it does, and the character may safely receive an injection, it will give him a shot of the appropriate compound. If it does not have a specific remedy, or the character may not safely take another drug, it will do nothing. Should a character wearing a Medikit die, the Medikit will trigger an alarm on the Biomedical Computer on the character's ship, giving its location.

Drugs- A number of pharmaceuticals are available in the Combine, and form the main source of emergency medical treatment outside of the Powers of the Biotech or a ship's sick bay. The use of drugs is subject to several restrictions.

1. Only one drug may be active in a character's system at one time.
2. Only the specified number of doses of a given drug may be taken safely in the time given in the text below.

Violation of either of these rules requires a check on the Drug Abreaction Table below.

Table 0730.1: DRUG ABREACTION TABLE

Die	Effect
1-2	Drug takes effect normally.
3-4	Neither drug has any effect. The benefits of both are lost.
5	Character loses all current Hit Points, going into coma. If he makes a Vitality ST he will lose only 50% of his Hit Points and lose consciousness for 1-10 min.
6	Character dies.

Available drugs are sold in single-dose, disposable injectors, capable of penetrating any form of clothing or armor except Power Armor. They require a full mt of contact with the subject to do this.

Drugs are specific for use by one Base Element Type only. The usual notation for this is the name of the drug followed by the symbol of the Base Element. A Human or Trilax would require Polycellulac C, for example, whereas a Silicoid requires Polycellulac Si. A drug designed for a Base Element other than the user's will acts as a poison.

Psibam- A healing drug. It will restore Hit Points at a rate of 10 per dose. The drug remains active in the system for 1 hour, and the maximum safe dose is 2 per day.

Psibam- Increases PSI ST by +2 for 1 hour. It remains active for 1 day, and the maximum safe dosage is 1 per day.

Hyperdexamylophet- Increases Speed and Co-ordination scores by +2 for 1 hour. Remains active for 1 day. The maximum safe dosage is 1 per 3 days. The use of this drug permits temporary exceeding of the Racial Maximum scores, subject to the GM's option.

Wakee- Allows the user to stay active, on watch, in combat, etc., for an extra 10 hours. The character requires a full 20 hours rest thereafter, or he will suffer an abreaction. No other drugs may safely be used, including Wakee, until he has thus rested. He may, of course, seek to keep going with another shot.

Vivergon- A powerful, life-energy stimulant. Applied within 1 min. of death, it has a chance of restoring a character to life. Roll percentile dice to determine effect. On a roll of 01-30 the character will be revived, with a Hit Point score of 0. On a roll of 31-60, the drug will cause brain damage which, apart from not reviving the subject, will prevent his revivification by other means as well. On a roll above 60, the drug has no effect at all. Up to two doses may be applied after death, any further injections will automatically cause the brain damage.

Gravisol- A drug to reduce the effects of high gravity on the user's system. It will not reduce its effect on the subject's physical Abilities, but makes him more resistant to Gravity Shock. Each dose will reduce the effect of gravity by 50%. Thus, a character in a 20 g field, would only experience system strain equivalent to a 10 g field.

The effect lasts for 1 day, and the drug is active for 2 days. The maximum safe dose is 1 per day.

Anarad- Reduces the intensity of radiation impinging on the user by 50%. The effect lasts 1 hr. The drug is active for 1 day, and the maximum safe dose is one per 2 hr.

Ultrasedative- May be used at full strength, or given in a half-dose for less potent effect. At full strength, the drug knocks the subject out for 1 day.

At half-strength, the drug adds +2 to the character's ST vs. any form of Insanity, by making his nervous system more flexible in the face of shock. The effect lasts 2 hours.

The drug is active for 1 day in either case. The Maximum safe dose is 1 per day at full strength, and as often as desired at half-strength.

Universal Antitoxin- Acts to negate the effects of poison. As a preventive measure, taking the drug will add +6 to the Vitality ST against Poisoning for 3 hours. If administered within 3 mt after a subject has been poisoned, the drug will heal damage done by the poison, or revive a character who dies by poison, with 0 Hit Points, ie. in a coma.

The drug remains active for 1 day, and the maximum safe dose is 1 per day as a preventive. Unlimited use is permitted as a direct antidote, though only one dose per poisoning is allowed.

Universal Antibiotic- Effective against all forms of infection. The drug has a 20% chance of curing a disease outright, a further 20% chance of reducing damage from the disease by 50%, if it does not cure it, and a 60% chance of not working at all. If used as a vaccine, rather than a cure, it will render this immunity for 1 week. The maximum safe dosage is 1 per week, and the drug remains active for 2 days.

Powerboost- Adds 20 points to the Power score of a Mutate, Technic, or Biotech. Remains active for 1 week. Maximum safe dosage is 2 per week. The user must make a Vitality ST after taking the drug, or he will lose consciousness for 1-10 minutes, though still receiving the extra Power.

Shock Restorative- This drug may be safely used at any time, no matter what other drugs are in the subject's system. It will restore a character in a coma to consciousness, and allow them movement at 50% of their normal speed. They are incapable of combat or other exertion while in this state, but they are at least conscious, and somewhat mobile. The Hit Points remain at 0 in this state.

#### 0740. MEDICAL SERVICES

These are major medical services available to character's at any world of the Combine, and any culture decreed by the GM to have the medical technology to perform the service desired.

General Healing- Repair of damage by restoring Hit Points.

Curing Disease/Shock- Cure of infectious disease, physical effects of N-shock, Grav-shock, Vac-Shock, etc!

Psychoanalysis- Cure of any form of mental imbalance, insanity, etc.

Revivification- Resurrection of the dead. The odds of success vary according to how long the character has been dead, without being stored in Biostasis to prevent cellular disintegration, a process which can only be halted by Biostasis. For every day since death that the character has been without proper storage, subtract 5% from 100% to determine the percentage chance of a successful revivification. An extra payment of 1000 CR per Vitality point of the subject will add 20% to the odds, in favor of success. Thus, a character has been dead for 13 days. He has a 35% chance of revival. His Vitality score is 12. For an extra payment of 12,000 CR, his chances are improved to a new score of 55%. A second payment of 12,000 CR will bring the odds to 75%, and so on. As long as a character has even a 5% chance of revival when he is brought in for treatment, the Player may expend credit to improve his odds, clear up to 100% if the money holds out.

Clone Record- A form of "life insurance" popular with many adventurers in the Combine. A sample of the character's cell tissue is left at a major medical center of the Biotech Guild. Besides the fee listed for the initial service in the price list at the end of this chapter, the character must pay 100 CR per month upkeep on the sample. Upon the character being declared legally dead, a requirement the GM must set up according to the structure of his individual campaign, the sample will be cloned into an exact replica of the character *as he was when the sample was taken!* The Clone will possess only the level, skills, Powers, bonuses, etc., of the character as he was when the sample was taken. The character may leave a memory tape of his knowledge, updating it at no extra cost whenever he is in port, but this will not affect the Clone's Abilities or abilities, only the Player's right to use information gained by the character after the sample was taken. The only way to minimize the "lost time" penalty of a Clone is to have a fresh cell sample taken before leaving for each adventure, an expensive proposition.

The Charter of the Biotech Guild forbids the Clone of a living being to be grown, and in Combine law, the Clone has the same identity and rights as the original. The makings of several nasty scenarios can be found in this operation.

Cosmetic Surgery- Various forms are available, cheap and easily reversed. Possible options are sex or age change, disguise, apparent change of species, etc. The alteration is in appearance only, not in abilities.

SexChange- A complete and actual change in gender, SexChange requires much money, and one year of hormonal, surgical, and psychological treatment. But, a Human Male, undergoing SexChange, would, at the end of the year, be a Human Female, capable of conception, gestation, and birth.

Limb/Organ Regeneration- A means of stimulating the body to regrow lost members.

Rigger Operation- An operation fitting the body with bionic sockets, into which the control plugs for almost every type of computer, control, or complex device in the Empire's technology fit, allowing the device to be run by the nervous system of the "rigger," as an extension of his own person. **THIS OPERATION IS A NECESSITY FOR ALL SPACE TRAVELLERS IN THE CAMPAIGN!!!!!!** Without it, they cannot pilot a ship, run its weapons or drives, control its computer or sensor arrays, use Power Armor or large automated equipment, nothing.

Bionic Modifications- Various modifications are available in the Combine. No more than two modifications may be retained by a character at one time, though a full set of arms or legs counts as only one modification. Upon the death of a character, his modifications are destroyed, and must be replaced with a new set, or the limbs or organs that were modified must be regenerated. Bionic modifications may raise Ability scores above the Racial Maximum, though the GM may impose a ceiling on the bonuses thus obtained.

Bionic Arms- Increase the Physical Power score of the arms by 2-12. Increase Co-ordination by 1-6.

Bionic Legs- Increase Speed in terms of running by 2-12. Increase Physical Power of legs by 2-12.

Biocomputer- Increase IQ by 2-12. Reduce PSI by 50%. Holds 5 extra Cerebrotapes, above the maximum number allowed the character by his IQ score.

Autoheart- Increases Vitality score by 1-6. Increases native-g score as regards physiological effects of gravity by 50%.

Skeletal Brace- Increases Physical Power by 1-6. Increases native-g score by 50%.

Neuro-energetic Web- Increases Co-ordination and Speed by 2-7.

Subdermal Armor- Gives 1 die of armor protection, which is cumulative with other armor worn.

Subdermal Screen- Gives 1 die of screen protection, which is cumulative with other screen worn.

Telepathic Inducer- Gives user telepathic ability, with a range of .5 km per point of PSI Ability.

## 0750. MISCELLANEOUS EQUIPMENT

Personal Anti-gravity Field Unit- A skin-tight suit of metallic material, wearable under armor, which is charged with a field reducing the pull of gravity on the wearer by 50%. Requires 1 mililiSlug per hour to operate.

E-M Visigoggles- A set of goggles extending the user's perception of light into the Infra-red and Ultra-violet ranges. Negates the effectiveness of smokescreens, Blackout Powers, etc.

Personal Communicator- A small device, the size of a pack of tobac-stiks, capable of N-radio communication at a maximum range of 1 det.

Breather Mask- A small device which will provide breathable atmosphere for a selected life-form for 1 hr. on a 1 ERG charge. The equivalent device for Silicoids provides 1 day's solar energy at the same cost.

Portable Sensor Pack- A backpack device, providing a number of services. It has an N-radio unit with a range of 10 dets. Within this range, it can tap directly into the ship's computers, acting as a terminal for passive display only. It has a small sensor unit, with a 1 km. range, and a recorder with audio-visual and sensor recording facilities. It requires a centiSlug to operate for 1 day.

Defense Sensor Pack- A set of 4 small sensor units and a central alarm unit. The sensors, set at intervals of 100 m or less, set up a perimeter which nothing can cross undetected, unless it is indeetectable to normal energy scans, like a Mutate or Technic in a Sideslip state, or a Biotech who is Energy Transparent. Anything crossing the beam between two of the sensors will trigger an alarm on the central unit.

A variant form of this equipment is available, that will expose anything crossing the defense perimeter to Blaster fire from the defense sensors. These will hit on a roll of 1 to 5 on a 6-sided die. The Defense Sensor uses 1 ERG per day, and is powered with a centiSlug cell.

Anti-gravity Sledge- The "space mule," as it is colloquially known, is a flat platform, 2 m x 3 m, fitted with a small anti-grav lifter, and air jets to equalize inertia. It can lift up to 500 kg of mass, allowing it to be pushed, pulled, or towed along by a character or vehicle.

The machine requires 1 ERG per hour of operation, and uses centiSlugs to get it.

Technical Repair Kit- A backpack size unit, storing 100 ERG for use by Technics or others in making repairs when cut off from shipboard supply sources. Accepts energy from any power source.

Thought Screen- A belt worn unit, acting as a complete block against Telepathy, Psionic Sense, similar Powers used by other Classes, and N-shock. Against other forms of mental attack or influence, it gives a +4 to the ST attempt of the wearer. It requires 10 ERG per hour of use, and is fueled by centiSlugs.

## 0760. PRICE LIST

These are prices current in the Combine. On less advanced Empire technology worlds, the costs will double, or even triple. On worlds of equivalent advancement that do not use ERG standard currency, the GM will decree the rate of exchange for quantities of valuable resource, such as heavy metals or radioactive ores. These must be found by the characters to provide a means of exchange, or purchased at high cost in the resource-hungry Combine.

### 0761. WEAPON COSTS

<u>Weapon</u>	<u>Cost (CR)</u>	<u>Mass (kg)</u>	<u>Weapon</u>	<u>Cost (CR)</u>	<u>Mass (kg)</u>
Blaster	75	1	Grenade Pistol (cont.)		
Blast Rifle	150	3	Neutrex	25	1
Ion Chatter	100	2			
Tangle Gun	100	2	Fluid Gun	10	3
Gamma Mace	250	5	Splat Rifle	100	5
EMP Gun	100	1			
Neuro-distorter	150	1	Luxblade	100	1
Neuro-rifle	250	3	Nerve Rod	50	1
Slug Pistol	50	2	Force Glove (ea.)	75	.5
Slug Rifle	80	4	Stashknife	75	.1
Missile Projector	25	3	Stassword	125	.5
Needle Gun	30	1	Vibroknife	50	.5
Grenade Pistol:			Vibrosword	100	1
1 ERG	10	1	Electroweapons	10-100	1-5
2 ERG	15	1	Titanium Alloy	5-50	1-3

<u>Ammunition</u>	<u>Cost</u>	<u>Mass</u>	<u>Ammunition</u>	<u>Cost</u>	<u>Mass</u>
milliSlug Battery	1	.1	Fluid Gun Canisters:		
(used for all Empire Energy weapons)					
Slug Clips (20 rounds, fits Pistol or Rifle):			Thermosol	5	1
AP ammo	.5	.1	Cryosol	5	1
HE ammo	1	.1	Hyperacid	10	1
Projector Missiles:			Tranquilizer Gas	20	1
AP Missile	1	.5	Poison Gas	50	1
HE Missile	3	.5	Slip Dust	10	1
Incendiary Missile	5	.5	Clogger	10	1
1 ERG Crystal Warhead	5	1			
5 ERG Crystal Warhead	10	1			
10 ERG Crystal Warhead	20	1			
Neutrex Warhead	50	1			
Needle Gun Clips (20 rounds):			<u>Mechanical Weapons</u>	<u>Cost</u>	<u>Mass</u>
Standard	1	.1	Repeater Crossbow	20	4
Electrocharge	10	.1	Powered Pulley Bow	30	2
Tranquilizer	5	.1	Crossbow quarrels (clip of 5):		
Poisoned	20	.1	Standard	.5	1
			HE tip	1	1
			Electrocharged	5	1
 blaster			Arrows:		
 needle gun			Standard	.1	.1
 EMP gun			HE tip	.5	.1
			Electrocharged	1	.1

#### 0762. ARMOR AND SCREEN COSTS

<u>Armor</u>	<u>Cost</u>	<u>Mass</u>	<u>Screen</u>	<u>Cost</u>	<u>Mass</u>
Macroplast Armor	15	5	Monolevel Screen Unit	100	2
Space Armor	50	10	Duelevel Screen Unit	200	4
Combat Space Armor	100	15	Q-screen Harness	500	6
Power Armor	500	500*			
Space Blob	10	1			
Jove Suit	1000	500*			
Exoskeleton	300	300*			

\* Mass is not a major factor as long as armor has power. All armor units marked with (\*) require .1 SCL of ship's hold space.

#### 0763. MEDICAL AND PHARMACEUTICAL EQUIPMENT

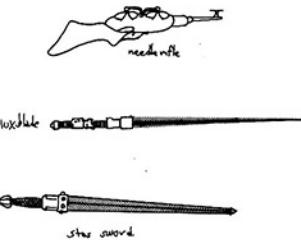
<u>Item</u>	<u>Cost</u>	<u>Mass</u>	<u>Item</u>	<u>Cost</u>	<u>Mass</u>
Emergency Medikit	100	.3	Vivergon	200	
Personal Medikit	50	.5	Gravisol	100	
Drug ampoules:		.1	Anarad	200	
Polycellulac	100		Ultrasedative	75	
Psiban	250		Universal Antitoxin	150	
Hyperdexamylophet	150		Universal Antibiotic	250	
Wakee	50		Powerboost	300	
			Shock Restorative	100	

#### 0764. MEDICAL SERVICES

<u>Service</u>	<u>Cost</u>	<u>Service</u>	<u>Cost</u>
Heal 1 point of damage	1	Bionic Modification:	
Cure Disease/Shock	100-1000	Bionic Arms	100,000
Psychoanalysis	100-600	Bionic Legs	100,000
Revivification	10,000+	Biocomputer	150,000
Clone Record	1000 +	Autoheart	250,000
Cosmetic Surgery	100	Skeletal Brace	150,000
SexChange	10,000	Neuro-energetic Web	250,000
Limb/Organ Regeneration	100-600	Subdermal Armor	25,000
Rigger Operation	100	Subdermal Screen	25,000
		Telepathic Inducer	150,000

## 0765. MISCELLANEOUS EQUIPMENT

Item	Cost	Mass
Personal Antigravity Unit	1000	10
E-M Visigoggles	25	.5
Personal Communicator	10	.2
Breather Mask	5	.5
Portable Sensor Pack	200	2
Defense Sensor Pack:		
Standard (4 sensors)	100	5
with Blasters (4 sensors)	300	10
Anti-gravity Sledge	200	---
Technical Repair Kit	50	2
Thought Screen	150	1



## 0800. SPACE TRAVEL AND NAVIGATION

Space is vast, both the realspace and N-space continua. But the hyperdimensional void of N-space teems with strange life, and perilous natural phenomena, and even realspace is not so empty and safe a place as once was thought.

Two scales of space travel are used in the campaign: Interstellar travel, via the medium of N-space; and Interplanetary flight, sublight hops in realspace, usually within the boundaries of a star system.

### 0810. N-SPACE TRAVEL

Interstellar travel requires transit through N-space, a hyperdimensional continuum, which exists in a point-to-point congruency with the realspace continuum. Travel in N-space, however, permits movement from point to point at velocities in excess of  $c$ , the speed of light. A starship uses its N-drive to enter the N-space continuum, and to navigate therein. The standard speed for an Empire N-drive is 1 hyperlick (hk) per hour. Travelling 1 hk in N-space is the equivalent of travelling 1 lite in realspace.

N-space navigation requires a functioning Astrogation Computer to control the N-drive, or a pilot with N-space Sense. It also requires two vital pieces of information: the Co-ordinates of the starting point and the destination. Co-ordinates will be fully explained at the start of section 1100. These figures are a series of three numbers, giving the locations in relation to the star Newson, in the Combine, which is the central reference point for all Combine star maps.

Entering N-drive from unknown Co-ordinates, or leaving N-drive (called *normalizing*) at a point other than the programmed destination, or activating the N-drive without a programmed destination for that matter, will put the ship in danger of becoming lost, the result of which is determined from the following table.

TABLE 0810.1: Lost Ship Effects Table

Die	Effect
1	Ship's Computers spot error. No effect on travel. Destination may be set after entering N-drive.
2-4	Ship lost. Will emerge from N-drive at a random location, determined by the GM.
5-6	Ship lost, as above, but in addition, the Astrogation Computer will break down, taking 1-100 points of overkill, and must be repaired before the ship can normalize.

But the greatest danger in N-space travel is not the chance of becoming lost. Time and power will correct any setbacks in that department. The hyperspace continuum teems with monstrous life, strange hazards criss-cross the ship lanes, and the vessels of powerful and sometimes hostile life-forms may be encountered. The hyperdimension is airless, but in addition to this mundane danger, its fabric is so foreign to the mental energy of realspace inhabitants that exposure to the conditions outside the ship can result in the psycho-physical imbalance called N-shock.

For all its hazards, N-space is the key to the stars, and the explorers of the campaign must face its dangers as the mariners of old faced storm, reef and sea monster to reach the shore, where waits wealth and adventure.

### 0811. REALSPACE TRAVEL

Travel in realspace is not without its perils. While no forms of life indigenous to the spaces we know have yet been discovered, the perils of nature, Meteor Storms, Anti-matter Clouds, and other exotic hazards, endanger the would be explorer.

Realspace flight is accomplished by use of the Quasi-acceleration Drive. This mechanism is capable of giving a ship a velocity near that of light in seconds, and is capable of maneuvers that could fly rings around our Terran vessels of the late 20th Century.

To change the ship's velocity by 1% of the speed of light, a Quasi-acceleration of 1 g is applied with the Q-drive, for 1 second. Larger changes are accomplished by applying a larger quasi-acceleration, but the ship must apply this force at a rate equal to the desired velocity change in centics (.01 c, or centi-c, thus centic) squared.

A 2 centic/sec change in the velocity requires a quasi-acceleration of 4 g. The table below gives the whole number values for acceleration using the Q-drive.

TABLE 0811.1: Q-DRIVE VELOCITY CHANGE VALUES

Quasi-acceleration	Velocity change in centic/sec
1 g	1
4 g	2
9 g	3
16 g	4
25 g	5
36 g	6
49 g	7
64 g	8
81 g	9
100 g	10

One must keep in mind that a centic is a distance/time function, equal to a speed of 1000 km/sec. A speed of 100 centics is equal to  $c$ , the speed of light. Any vessel achieving a speed of 100 centics or more is asking for trouble, as the speed of light is still the speed limit in real-space, and Nature does not merely fine speeders in her jurisdiction. A ship which exceeds 99.9 centics in speed must check the following table.

TABLE 0811.2: EFFECTS OF SUPRA-LIGHT SPEEDS IN REALSPACE

Die	Effect
1	Ship destroyed.
2-3	Ship enters N-space, and must roll on Table 0810.1.
4-5	Ship automatically randomizes to point in space determined by the GM.
6	Ship destroyed.

It is not nice to fool with Mother Nature.

We have now set forth the rate of increasing or decreasing speed using the Q-drive, but it is tedious to make the formula to determine the rate of travel at a given velocity in centics. The following table gives the time to travel a distance in dets or AU, the basic units of distance in realspace flight, at a given speed in centics.

TABLE 0811.3: DISTANCE/TIME CONVERSIONS FOR SPEED IN CENTICS

Speed (Centics)	Dets/ Sec	AU/ Hr	Speed (Centics)	Dets/ Sec	AU/ Hr	Speed (Centics)	Dets/ Sec	AU/ Hr
01	.02	.06	34	.68	2.26	67	1.34	4.46
02	.04	.13	35	.7	2.33	68	1.36	4.53
03	.06	.2	36	.72	2.4	69	1.38	4.6
04	.08	.26	37	.74	2.46	70	1.4	4.66
05	.1	.33	38	.76	2.53	71	1.42	4.73
06	.12	.4	39	.78	2.6	72	1.44	4.8
07	.14	.46	40	.8	2.66	73	1.46	4.86
08	.16	.53	41	.82	2.73	74	1.48	4.93
09	.18	.6	42	.84	2.8	75	1.5	5
10	.2	.66	43	.86	2.86	76	1.52	5.06
11	.22	.73	44	.88	2.93	77	1.54	5.13
12	.24	.8	45	.9	3	78	1.56	5.2
13	.25	.86	46	.92	3.06	79	1.58	5.26
14	.28	.93	47	.94	3.13	80	1.6	5.33
15	.3	1	48	.96	3.2	81	1.62	5.4
16	.32	1.06	49	.98	3.26	82	1.64	5.46
17	.34	1.13	50	1	3.33	83	1.66	5.53
18	.36	1.2	51	1.02	3.4	84	1.68	5.6
19	.38	1.26	52	1.04	3.46	85	1.7	5.66
20	.4	1.33	53	1.06	3.53	86	1.72	5.73
21	.42	1.4	54	1.08	3.6	87	1.74	5.8
22	.44	1.46	55	1.1	3.66	88	1.76	5.86
23	.46	1.53	56	1.12	3.73	89	1.78	5.93
24	.48	1.6	57	1.14	3.8	90	1.8	6
25	.5	1.66	58	1.16	3.86	91	1.82	6.06
26	.52	1.73	59	1.18	3.93	92	1.84	6.13
27	.54	1.8	60	1.2	4	93	1.86	6.2
28	.56	1.86	61	1.22	4.06	94	1.88	6.26
29	.58	1.93	62	1.24	4.13	95	1.9	6.33
30	.6	2	63	1.26	4.2	96	1.92	6.4
31	.62	2.06	64	1.28	4.26	97	1.94	6.46
32	.64	2.13	65	1.3	4.33	98	1.96	6.53
33	.66	2.2	66	1.32	4.4	99	1.98	6.6
						99.9	2	6.66666

Using this table, a Player can tell at a glance how long it will take him to travel a given distance at a given velocity.

An example given here now demonstrates the overall process of making a realspace hop using the Q-drive. A Player's ship is in a star system. He desires to travel to a planet lying 5 AU away. The ship's current speed is 0 centics. Wishing to make the minimum possible time, he orders the ship to accelerate to 99.9 centics, at an acceleration of 4 g. It requires the vessel 50 seconds to reach this velocity at that quasi-acceleration (2 is the root of 4, 99.9/2 is nearly 50, therefore, 50 seconds of quasi-acceleration). At 99.9 centics, the ship travels at 6.66 AU/hr.  $5/6.66 = .75$ , so the hop requires .75 hr, or 75 minutes.

#### 0812. ENERGY COSTS OF SPACE TRAVEL

The following amounts of energy are subtracted from a ship's Energy Status Record when the ship performs the maneuver listed.

<i>One hour of flight on N-drive.</i>	1 ERG
<i>One hour of flight on Q-drive.</i>	10 ERG
<i>Planetary landing/ take-off</i>	1 ERG per .5 g of planetary gravity.
<i>Combat:</i>	
<i>Energy allocated to screens per mt.</i>	Subtract energy allocated each mt.
<i>Energy fired from each gun.</i>	Subtract energy allocated each mt.
<i>Enter N-space (turn on N-drive).</i>	10 ERG.
<i>Leave N-space (turn off N-drive).</i>	10 ERG.

Eg. A starship lifts off from the Newson III spaceport. This port has tractor/pressor launch beams, so no energy is required for lift-off or landing. It programs the computer with the Co-ordinates for its destination, a star lying 175.4 lites away, and enters N-space. It spends 10 ERG to activate the drive, and will have spent 175.4 ERG to travel to its programmed exit point, with another 10 ERG required when it normalizes into realspace at the destination. The energy costs for the whole trip, running 175.4 hours, will be 195.4 ERG. The GM may choose to round all fractions to the nearest whole number, in the interests of ease in bookkeeping. If, on the way, the vessel has an encounter that leads to combat, then it will deduct the energy expended from the Energy Status Record. Details for how energy is allocated and dispersed in combat are to be found in section 1000 ff.

While in the system it finds at its destination, the ship spends a total of 22 hours in Q-drive flight, for a further expenditure of 220 ERG. Finally, loaded with loot, the ship re-enters N-space, heading for another system. More energy is deducted, based on the length of that voyage.

The GM will find it useful to deduct all energy for travelling on an N-space flight in a lump, at the beginning of that hop. If the ship survives to exit at its destination, they have spent the energy anyway. If they are killed en route, it hardly matters when the deductions were made, so it might as well be tidy.

Other costs in ship energy are given in these rules, for special operations such as repairs, powering particular equipment, etc. These should be deducted when used. It is easiest, we have found, if the GM calculates the energy expended in a given situation, but the Players are responsible for maintaining the Energy Status figures up to date.



## 0820. ENCOUNTERS IN SPACE

There are a number of different phenomena that may be encountered in space by a shipload of adventurers. Navigation hazards, other vessels, derelicts, or, in N-space, monsters.

The odds of having an encounter are fairly simple. For every hour a ship spends in space, there is a 1% chance it will have an encounter. The mechanics of this are not too difficult. When a starship lifts off, the GM will roll percentile dice. The score rolled indicates the hour when the encounter will occur. If the vessel survives the first encounter, the GM rolls again. The indicated number of hours later, the next encounter comes along. A ship may not have an encounter if it is in a planetary orbit, or if it has landed. The one possible exception to this rule is in the case of an encounter with another ship. The GM may exercise his option to cause the encountered ship to open communications with, or attack, the Player ship. It will depend on the type of ship it is, and the structure of his campaign scenarios.

Let us take an example. The "Hunter," a registered, armed explorer vessel of the Combine, leaves orbit from Newson III, and enters N-space. The GM rolls percentile dice, scoring 32. In hour 32, the ship has an encounter. The "Hunter" survives whatever it was, and the GM rolls again, scoring a 47. In hour 79 of the expedition, the "Hunter" has another encounter. If it also survives this one, the GM rolls, scoring 42. In hour 121, however, the "Hunter" is landed on a planet, and will have no chance of space encounters until it lifts off again. Upon lifting off, the GM rolls the dice, plotting his timetable of encounters from the hour of lift-off.

If a ship is simply in transit, then no special data is needed between encounters. If it is in a system, and carrying out sensor scans, travelling from planet to planet, or what have you, the GM must keep track of the time passing, and when the encounter comes up, he will interrupt whatever is going on with the announcement that various alarms are sounding, indicating the presence of the encountered phenomenon.

It will be to the GM's advantage to keep a "log" on a sheet of scratch paper, tracking the time-progress of a ship. Not only is this useful for recording encounter times, but it can be a shorthand record of the voyage for the GM's records in terms of systems explored, special data or discoveries gained, energy expended, etc. Here is a sample.

(Encounter Rolls)	Starship "Hunter"	Lift-off from Newson III 500.0654
Hour	Event	
GM rolls 35	000	Enter N-drive for Co-ordinates 36, -86, 106. Distance: 141 lites.
GM rolls 58	035	Encounter 3 Voidsharks. Expend 472 ERG in combat.
GM rolls 62	093	Encounter Energy Storm. Mutate Alpar killed, but revived.
	141	Emerge at destination. Activate sensor scan. Subtract 161 ERG travel costs.
	151	Complete scan. Find 4 planets.
GM rolls 69	155	Encounter hostile ship. Destroy enemy in combat. 927 ERG expended.
	156	Commence repairs on ship.
	160	Repairs complete. 30 ERG expended.
	161.5	Shape course for planet #3. 1.5 hours of Q-drive. 15 ERG expended.
Ship is not encounter.	161.5	Enter orbit around planet #3.
	301	(The ship spends 14 days on the planet, in consultation with a friendly culture to have ture on its surface. Several loads of ore are processed and loaded.)
GM rolls 82.		Leave orbit, return to safe N-drive activation range, 2 hours of Q-drive. 20 ERG expended.
GM rolls 90.	383	Enter N-drive, heading for Newson III, a return trip of 141 lites.
Ship is safe in port before hour 473.		Encounter. Evaded by diverting power to drive. 36 ERG expended.
		Emerge in Newson system, enter parking orbit around Newson III.
		Subtract 161 ERG of travel costs. Date is now 500.1098, round to 500.110 by the time travellers reach ground.

A total of 442 hours were spent in the trip, or 44.2 days. These figures are important for gaining experience points (see section 1200) for characters at low levels. The GM will find his own shortcuts with this record, but some form of it should indubitably be kept.

## 0821. ENCOUNTER TYPE DETERMINATION

When a ship has an encounter, the GM will consult the following tables, according to the type of space the ship is in, to determine what it has run into (figuratively speaking). Full descriptions of the vessels, monsters, and natural phenomena listed here are given in the sections following this one, as are rules for trying to avoid contact with the nasty things in the first place.

TABLE 0821.1: N-SPACE ENCOUNTERS

Die	Roll	Encounter
1	1	Monster
2	2	Ship
3	3	Navigation Hazard
4	4	Derelict
5	5	Monster
6	6	Navigation Hazard
7	7	Monster
8	8	Navigation Hazard
9	9	Ship
0	0	Derelict



ion blaster

TABLE 0821.3: SHIP ENCOUNTERS IN N-SPACE

Die	Roll	Encounter
01-10	01-10	Warship
11-30	11-30	Explorer
31-40	31-40	Trader
41-50	41-50	Pirate
51-60	51-60	Slaver
61-70	61-70	Cargo Ship
71-80	71-80	Sniz
81-00	81-00	Hagnagai

TABLE 0821.2: REALSPACE ENCOUNTERS

Die	Roll	Encounter
1	1	Ship
2	2	Navigation Hazard
3	3	Derelict
4	4	Navigation Hazard
5	5	Ship
6	6	Navigation Hazard



fluid gun



star pistol

TABLE 0821.5: N-SPACE NAVIGATION HAZARDS

Die	Roll	Encounter
01-20	01-20	Trans-dimensional Nexus
21-30	21-30	Trans-dimensional Vortex
31-45	31-45	Radiation Storm
46-50	46-50	Energy Storm
51-60	51-60	Gravity Slope
61-65	61-65	Gravitational Anomaly
66-75	66-75	N-shock Cluster
76-85	76-85	Anti-quark Cloud
86-95	86-95	Ether Quake
96-00	96-00	Rogue Missile

TABLE 0821.7: MONSTERS

Die	Roll	Monster
01-05	01-05	Voidshark
06-12	06-12	Echinaster
13	13	Ultra-violet Stelloid
14-16	14-16	Blue Stelloid
17-18	17-18	Yellow Stelloid
19-20	19-20	Red Stelloid
21	21	Infra-red Stelloid
22-27	22-27	Swarmers
28-30	28-30	Mindbomber
31-33	31-33	Psibomber
34-38	34-38	Temblon
39-40	39-40	Randomizer
41-50	41-50	Zaps
51-55	51-55	Hyperzoa
56-58	56-58	Accelerons
59-62	59-62	Radiorgones
63-72	63-72	Tyndaloigor
73-75	73-75	Hoolis
75-76	75-76	Ultra-violet Stellons
77-80	77-80	Blue Stellons
81-83	81-83	Yellow Stellons
84-90	84-90	Red Stellons
91-95	91-95	Infra-red Stellons
96-00	96-00	Gromnon

TABLE 0821.4: SHIP ENCOUNTERS IN REALSPACE

Die	Roll	Encounter
01-10	01-10	Warship
11-20	11-20	Cargo Ship
21-40	21-40	Explorer
41-50	41-50	Pirate
51-65	51-65	Trader
66-75	66-75	Slaver
76-80	76-80	Sniz
81-90	81-90	Roboids
91-00	91-00	Robokiller

TABLE 0821.6: REALSPACE NAVIGATION HAZARDS (SYSTEM SPACE\*)

Die	Roll	Encounter
01-15	01-15	Meteor Storm
16-17	16-17	CT Meteor Storm**
18-40	18-40	Radiation Storm
41-70	41-70	Null Energy Zone
71-85	71-85	Dust Cloud
86-87	86-87	CT Dust Cloud**
88-95	88-95	Gravity Warp
96-98	96-98	Power Flare
99-00	99-00	Rogue Missile

\* Space within a Star System.

\*\* In a system composed of CT matter, exchange the positions of CT Meteor Storm and Meteor Storm and Dust Cloud with CT Dust Cloud. In other words, Terrene Matter is "CT" in a CT system.

TABLE 0821.8: REALSPACE NAVIGATION HAZARDS (DEEP SPACE)

Die	Roll	Encounter
01-25	01-25	Radiation Storm
26-35	26-35	Warp Blast
36-55	36-55	Null Energy Zone
56-80	56-80	Ion Storm
81-90	81-90	Meson Storm
91-92	91-92	Quantum Storm
93-95	93-95	CT Dust Cloud
96-98	96-98	Quantum Black Hole
99-00	99-00	Rogue Missile

TABLE 0821.9: DERELICTS

Die	Roll	Encounter
01-05	01-05	Forerunner ship
06-20	06-20	Alien Ship
21-40	21-40	Empire Ship
41-50	41-50	Forerunner Beacon
51-85	51-85	Empire Information Beacon
86-00	86-00	Life Craft

## 0822. DESCRIPTIONS OF SHIP ENCOUNTERS

The bulk of the ships that the Player-characters will encounter are nowhere near as well designed or built as their own, customized explorer vessels. The GM will have the option of deciding if an encountered vessel is a standard non-player ship, or a "special" or personality ship, that is, one with a fully built crew of characters the GM has introduced into the campaign to give it some depth. Personality ships, like personality non-player characters, will have all the advantages of Player-characters, as they are being handled by the GM as discrete individuals, personalities in their own right. The GM need not go through the time-consuming process of designing such characters and vessels, but he will find that a few notable pirates, or famous soldiers of fortune in the campaign, with histories and motivations of their own, will spice up a scenario notably.

The standard, non-player ships described below will have the following data. The number of Ship Units in size a vessel may be, the number of CREW, STRUCTURE, and SYSTEM points per SU the ship has, and a breakdown of how SU are distributed by function (ie. how many Drive Units, Gunnery Units and weapon systems, etc.) Also given is the number of ships appearing (NA), and their origin-culture.

**WARSHIPS** NA: 1-3 ORIGIN: 30% Combine; 30% Kingdom; 40% Alien.

SIZE: 20% 5 SU; 30% 10 SU; 30% 20 SU; 10% 50 SU; 10% 100 SU.

STRUCTURE: 20 points per SU. SYSTEM: 10 points per SU. CREW: 5 points per SU.

Warships will have twice the required number of Drive Units (2 per 10 SU) and will have 1 Gunnery Unit per 5 SU, with the weapon distribution being 2 ERG Gun systems, 1 Tractor/Pressor system, and 1 Pulser system.

To best illustrate the use of these data, let us construct a hypothetical Warship encounter. The GM rolls a 3-sided die, determining that only 1 ship is encountered. He rolls percentile dice to determine origin of the ship scoring a 65. This indicates that it is a ship from an Alien culture. A roll of 01-30 would have meant the ship was a Combine vessel, and a roll of 31-60 would have meant the ship was from the Kingdom, the Combine's arch-rivals in space exploration. He rolls percentile dice again, to determine the size of the ship. A score of 57 is rolled, indicating that the ship is 20 SU in size. The ship will therefore have 400 Structure points, 200 SYSTEM points, and 100 CREW points.

The vessel will have 4 DU (Drive Units), and 4 GU, firing two ERG Gun systems, a Tractor/Pressor System, and a Pulser system.

Another example, let us say the vessel had been 100 SU in size. It would have 2000 STRUCTURE points, 1000 SYSTEM points, and 500 CREW points. It would have 20 DU and 20 GU, mounting 10 ERG Gun systems, 5 Tractor/Pressor systems, and 5 Pulser systems.

The meaning of all these figures will be made clear in sections 900 ff and 1000 ff, dealing with ship construction and combat respectively.

Having illustrated the uses of encounter data, we will now give the figures for all the types of vessels listed, recapitulating Warships for a start.

**WARSHIPS** NA: 1-3 ORIGIN: 30% Combine; 30% Kingdom; 40% Alien.

SIZE: 20% 5 SU; 30% 10 SU; 30% 20 SU; 10% 50 SU; 10% 100 SU.

STRUCTURE: 20 points per SU. SYSTEM: 10 points per SU. CREW: 5 points per SU.

Warships will have 1 DU per 5 SU, and 1 GU per 5 SU. Weapon distribution is 2 ERG Gun systems, 1 Tractor/Pressor system, 1 Pulser system.

Combine warships will never initiate hostilities with a Combine vessel, though if it is wanted for some crime or in performance of illegal actions, the Warship will seek to place its crew in arrest. In such cases, the Warship will maintain weapon parity, that is, it will not use a lethal weapon such as an Energy Cannon, unless attacked with a lethal weapon. It will instead fire its Pulsters and Tractor/Pressor weapons. Kingdom Warships will almost always seek to take a Combine vessel, though an offer of remuneration will often soften the captain's heart. Alien vessels will react according to the Reaction Dice, unless attacked first.

**EXPLORER** NA: 1 ORIGIN: 33% Combine; 33% Kingdom; 34% Alien.

SIZE: 40% 10 SU; 40% 20 SU; 15% 50 SU; 5% 100 SU.

STRUCTURE: 25 points per SU. SYSTEM: 20 points per SU. CREW: 1 point per SU.

Explorer vessels are supposedly on a par with the Player-ship, but this is not actually the case. When passing in transit, Explorers are not prone to attack unprovoked, but if conflicting claims on a Star System exist, the chances of battle are high, especially if the encountered ship is a Kingdom vessel.

Explorers will have 1 DU per 5 SU, and 1 GU per 10 SU. Weapon distribution will be 2 ERG Guns, 2 Pulsters, 1 Tractor/Pressor. Unless the Explorer is an Alien, which might hope to capture a vessel for study, Explorers will fight to kill.

**TRADER** NA: 1 ORIGIN: 40% Combine; 40% Kingdom; 20% Alien.

SIZE: 10% 3 SU; 15% 5 SU; 20% 10 SU; 20% 20 SU; 30% 50 SU; 5% 100 SU.

STRUCTURE: 10 points per SU. SYSTEM: 5 points per SU. CREW: 1 point per 2 SU.

Trader ships are the equivalent of the peddlers who drove their wagons through the old, American West, on Terra, carrying the comforts of civilization to the settlers. They mainly sell their wares to the colonists and technicians on the worlds they find, and occasionally will deal with the natives of a new world.

Traders will have 2 DU per 10 SU, and 1 GU per 15 SU. They always use ERG Guns for their weaponry, and while a Trader will NEVER initiate combat, they always fight to kill.

There is a 4 in 6 chance that a Trader will have an item of Personal Equipment that a Player wants, for sale at 2-7 times the normal price, and a 1 in 6 chance of there being an item of Ship Equipment other than a Ship Unit, for sale at the same mark-up.

Combine citizens convicted of robbing Combine Traders face severe penalties from the Great Cartels.

**PIRATE** NA: 1-3 ORIGIN: 60% Combine or Kingdom; 40% Alien.

SIZE: 30% 10 SU; 30% 20 SU; 25% 50 SU; 15% 100 SU.

STRUCTURE: 15 points per SU. SYSTEM: 10 points per SU. CREW: 3 per SU.

The question of origin for Pirate vessels is moot, as they will attack on sight, unless they face overwhelming odds. Their primary motivation is the stealing of cargo, and they will not try to destroy a ship unless they are in danger of being themselves destroyed in a losing fight.

Pirates will have 1 DU per 5 SU, and 1 GU per 10 SU. They will have only 1 ERG Gun system, the rest of their GU being divided evenly between Pulser and Tractor/Pressor systems.

The government offers a bounty on Pirate vessels of 100 CR per SU of the Pirate ship, dead or alive.

**SLAVER** NA: 1-2 ORIGIN: 70% Kingdom; 30% Alien.

SIZE: 80% 20 SU; 10% 50 SU; 10% 100 SU.

STRUCTURE: 10 points per SU. SYSTEM: 10 points per SU. CREW: 3 per SU.

Slavers will attack a smaller vessel on sight. Their main concern is the capture of the crew, alive. They will always flee if they are losing a fight, and will often surrender if unable to escape.

Slavers will have 1 DU per 10 SU, and 1 GU per 10 SU. They mount only Pulser systems.

**CARGO SHIP** NA: 1 ORIGIN: 45% Combine; 45% Kingdom; 10% Alien.

SIZE: 50% 20 SU; 30% 50 SU; 20% 100 SU.

STRUCTURE: 5 per SU. SYSTEM: 5 per SU. CREW: 1 per 5 SU.

Cargo vessels of the Combine are protected from Combine vessel's attack by stringent laws. The Great Cartels are unforgiving foes. Cargo ships will always try to run from combat, though if cornered, they fight to kill.

They mount 1 DU per 10 SU, and only carry 2 GU, no matter how large the ship is. Both of these are ERG Gun systems.

**SNIZ** NA: 1-10 ORIGIN: ---

SIZE: 3 SU.

STRUCTURE: 150. SYSTEM: 100. CREW: 20.

The Sniz, you will recall from section 0300, are the xenophobic aliens who were the destroyers of the Empire. Their slim, deadly attack vessels will engage any ship in combat on sight, and will fight until destroyed or escaped.

Each vessel mounts a power plant which is the equivalent of 3 Empire DU, and has a single weapon unit, firing a beam equivalent to an Energy Cannon.

There is a chance of 2% per vessel encountered that the attack ships will be accompanied by a 100 SU Hive-ship, with STRUCTURE, SYSTEM, CREW scores 10 times those of an attack ship. A Hive-ship generates a power output equivalent to 10 DU, and fires 4 Energy Cannon beams at a time.

Data on the Sniz as beings is given in the following section dealing with Monsters.

**HAGNAGAI** NA: 1-6 ORIGIN: .?

SIZE: 10 SU.

STRUCTURE: 100. SYSTEM: 100. CREW: 20.

The Hagnagai are a race of rapacious beings living on planets somewhere in N-space. They have a pirate-slaver mentality, attacking with a Pulser-like weapon to capture a ship, and only attempting to destroy a vessel if they have taken damage. More data on this race is given in the section dealing with Monsters.

Hagnagai ships mount 2 DU, and fire one beam at a time, using either a broad-band Neuro-disruptor beam, which will affect beings of any Base Element Type simultaneously, or an Energy Cannon, if they are fighting to kill.

**ROBOIDS** NA: 1-3 ORIGIN: ---

SIZE: 50% 20 SU; 40% 50 SU; 10% 100 SU.

STRUCTURE: 15 points per SU. SYSTEM: 25 points per SU. CREW: 1 Point per SU.

Details on this robotic race of beings are given in the section on Monsters. Their ships are of Empire type, and their reactions are given in the section following this one.

Roboid ships mount 1 DU per 5 SU, and mount 1 GU per 5 SU. Weapon distribution is 2 ERG Gun systems, 1 Pulser system.

**ROBOKILLERS** NA: 1-2 ORIGIN: ?

SIZE: 100 SU.

STRUCTURE: 1000. SYSTEM: 2000. CREW: ---

Robokillers are gigantic battlecraft, the products of some ancient war between Forerunner cultures, which are programmed to seek out and destroy any form of life or intelligence they can find. They generate 1-100 ERG of power for combat each mt, and fire 4 beams of Energy Cannon intensity each mt. They are capricious, and will often engage in parley with a ship, sometimes allowing it to go free if the Player can answer three riddles, or some pass some equally macabre test. They use Empire type Power Slugs, and are known to sometimes accept these as a ransom. The GM will play these machines with great subtlety, basing his responses on the Reaction Dice. If once a Robokiller enters combat, it will not cease until destroyed, and will always try to pursue its prey.

Robokillers do NOT have N-drive, but if they are in range of a ship, they exert a Tractor Field of great force, which will prevent the ship from executing the shift into the N-space continuum.

These are the basic categories of ship encounter. The specific motivations of a ship, its mission, the personality of the captain and crew, the species of an Alien ship's crew, are all up to the GM. His word is law on all matters of this type.

#### 0823. CREW DETAILS OF NON-PLAYER SHIPS

Ships with Empire type technology may very well have officers with Class abilities to add to its scores in ship-handling. The GM will roll a die for each encountered ship, to see if it has any riggers with bonuses at the action stations in the event of an encounter.

TABLE 0823.1: RIGGER BONUSES FOR NON-PLAYER SHIPS

Die

Roll	GO-rigger Bonus	POWER-rigger Bonus	FIRE-rigger Bonus
1	0	0	0
2	+1	0	One rigger with a +1.
3	+2	+ 1-6	Two riggers with a +2.
4	+2	+ 2-12	One rigger with +1, one with +3.
5	+3	+ 1-10	Two with a +1, one each with +2 and +3.
6	+1-6	+ 3-30	Four at +1-6 each.

This table will provide a range of quick character capability determinations for the GM. He may determine the level of officers by other means if he so desires. Of course, on a ship manned by personality non-player-characters, the skills precalculated by the GM when he built the characters will determine their rigger bonuses.

#### 0830. MONSTERS

Monsters come in two scales: Ship scale monsters, beings up to 100 SU in size, the heirs of the reputation held by sea monsters in the ocean-going adventures of old Earth; and Human scale monsters, beings of a size equivalent to the characters, who must be fought in personal combat.

The Ship scale monsters will be capable of firing rays with the impact of the ship's own massive armament, and many of them can erect defensive screen on a par with that of a 100 SU battleship.

Human scale monsters will either fight from their ships, as in the case of the Sniz or the Hagnagai, or will board the ship in one of several ways. In any case, these terrible foes are no less deadly than the huge Ship scale monsters, for all their smaller size.

#### 0831. SHIP SCALE MONSTERS

The following sections will give their descriptions of the Ship scale Monsters in this format. First, the name of the monster, followed by such data as the Number Appearing; the Hit Points of the monster, representing the amount of damage the monster can take; the monster's Weapon Energy, the amount of energy in ERG that the creature has available for its attack each mt; the Screen Energy, which gives the energy for Defensive Screen each mt; the Hit Score, that is, the score that the monster must roll on a 20-sided die to score a hit on a target when firing a beam; and the Effect of the monster's attack.

**Voidshark**      NA: 1-6      HIT POINTS: 2-20      WEAPON ENERGY: 1-50  
SCREEN ENERGY: 1-20      HIT SCORE: 12      EFFECT: As Energy Cannon

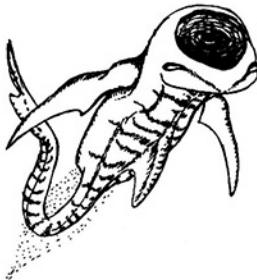
The Voidshark is one the most dangerous of the denizens of N-space. Running from 5-10 SU in size, these creatures are best described as living Bussard ramjets, for they derive their sustenance from the debris around them, thus providing the power they need for their drives and the lethal energy beams they use in combat. Voidsharks will attack a ship ferociously, seeking to break it up into assimilable chunks.

The energy beam fired by a Voidshark in a combat is similar to a ship's Energy Cannon, doing equal amounts of STRUCTURE, SYSTEM, and CREW damage when a shot penetrates the ship's screen. The monsters are vulnerable only to ERG Gun fire, Tractor/Pressor weapons, and missiles. These do structural damage to the monster, killing it if they reduce its Hit Points to 0.

The Voidshark is partially vulnerable to the effects of the EMP Pulser, and is often hunted for research or sport in this manner. On any hit with the Pulser which scores 20 ERG or more of penetration through the monster's screen, there is a 1 in 6 chance that the Voidshark will lose consciousness for 1-100 hours.

While not intelligent, the Voidshark may elect to run from a losing battle. If a Voidshark loses 50% or more of its Hit Points, there is a 2 in 6 chance it will seek to flee. If it is pursued, it will turn, and fight to the death.

The going price for a live specimen of Voidshark at the Combine research labs, is 1000 CR.



**Echinaster**      NA: 1-3      HIT POINTS: 2-12      WEAPON ENERGY: 1-60  
SCREEN ENERGY: 2-20      HIT SCORE: 14.      EFFECT: Drains 10-1000 ERG of power.

The Echinaster is a gigantic energy-being, composed of unstable quark-aggregates in a patterned orbit around a core of degenerate matter. To maintain its highly improbable existence, it requires large quantities of energy, and the breed has learned that starships provide a ready supply of their favorite treat. The patterns assumed by the being's substance resembles nothing so much as an echinoderm, or Terran "sea urchin," hence the name Echinaster, or star-urchin.

If even one ERG of an Echinaster's attack penetrates the screen of a ship, it will greedily suck 100-1000 ERG from the ship's Energy Status stores. It makes no difference what Unit of the ship is struck by this weapon. If unopposed, the creature will gorge itself, consuming 1000-3000 ERG before it is sated.

The Echinaster is vulnerable only to the ERG Gun weapons, and the EMP Pulser. If attacked, the influx of energies will disrupt its balanced structure, and it will insensately continue to feed until it has drained all available power, or been destroyed.

Ships have been known to successfully "bribe" an Echinaster, jettisoning Power Slugs to occupy it while they flee. There is a cumulative 1 in 6 chance of this ploy working. Thus, 6 Slugs will attract the interest of any Echinaster in range, allowing a vessel to run for it.

**Stelloids**      NA: 1      HIT POINTS: 10-100      WEAPON ENERGY: 1-100  
SCREEN ENERGY: 4-40      HIT SCORE: 13      EFFECT: Varies by type.

Stelloids are energy beings, which resemble nothing so much as miniature suns, emitting one or another wavelength of the electro-magnetic spectrum, and running from 10 to 100 SU in size. There are five different types of Stelloid, each of a different color, each color having its particular effect in combat.

**Ultra-violet**      The Ultra-violet Stelloid radiates in the U-V wavelength, and is consequently invisible to beings not using E-M Visigoggles, unless they are Silicoids, who perceive this band of color. Of course, ship sensors will detect it in any case. In combat, the U-V Stelloid emits a blast of radiation. For every point which penetrates the ship's screen, the ENTIRE vessel will be exposed to 2 Radiation Intensity Factors (RIF). Each Unit will be so exposed, no matter where the hit might be.

**U-V Stelloids** are greedy and intelligent, like all their kin, and will often be hoarders of valuable resources. In the specific case of the U-V Stelloid, the monster is fond of radioactive ores, and will often allow a ship to go free in return for an offer of 1 SCL or more of this material. If a U-V Stelloid is destroyed, there is a 25% chance it will leave a residue of 1-10 SCL of radioactive ores, which can be mined by ships equipped with a Nebular Dust Scoop or Meteor Mining Unit.

**Blue** Blue Stelloids project a ray doing two varieties of damage. First, it does SYSTEM damage as an EMP Pulser. It will also drain 20 ERG of the target vessel's Energy Status for every point that penetrates the screen, regardless of location of the hit. A Blue Stelloid will accept Power Slugs, as a ransom, and if it must take the energy by force, it will not try to break off the combat until it has consumed 1000-6000 ERG.

**Yellow** The Yellow Stelloid does not hoard ores or energy. This monster is an avid collector of life-forms, maintaining in its fiery core, a small "zoo" of life-forms, locked in a protective stasis field. It is always eager to increase its collection, and if it vanquishes a vessel, there is a 30% chance that it will take away one of the surviving characters for its collection. The combat beam of a Yellow Stelloid acts as a broad-band Neuro-disruptor, capable of affecting more than 1 Base Element Type at a time. If a Yellow Stelloid is destroyed, there is a 10% chance that 1-3 of its specimens will survive, floating in space still encased in their protective stasis field. Such may be brought on board the ship, and the field may be broken in a lab unit, by the application of 100 ERG to disrupt the field's pattern.

A free gift, that is, a specimen, will often cause a Yellow Stelloid to permit a ship to depart unharmed. A character so lost is assumed to be out of the campaign.

**Red** Red Stelloids fire a beam similar to an Energy Cannon in effect. They hoard heavy metal ores, platinum, iridium, and such, and will often accept bribes of these materials. If destroyed, there is a 40% chance that 1-10 SCL of this ore will be left floating in the former location of the Stelloid.

**Infra-red** I-R Stelloids are invisible, radiating in the I-R wavelengths. The same remarks made about U-V Stelloids apply to them. I-R Stelloids are collectors of crystals of value, rubies, diamonds, etc. They fire a beam in combat doing STRUCTURE damage, as does the ship weapon, the Rattler. If an I-R Stelloid is destroyed, there is a 50% chance it will leave a residue of 1-10 SCL of fine crystal ores, which can be mined as the other types of such treasure.

In closing, we remind you that the Stelloid is intelligent, and may be communicated with via the ship's N-radio. They may rarely be hired, or persuaded to accompany a ship (score of 95 or better on Reaction Dice), and at their most friendly, will allow a ship to pass without any ransom.

Stelloids of any type are vulnerable ONLY to ERG Gun weapons.

Finally, and VERY IMPORTANT, the Stelloid is one of the few monsters capable of living in realspace, and if a ship tries to escape it by normalizing into realspace, the Stelloid will try to follow it, with a 50% chance of success. The monster does not care for our continuum, but it will remain for as long as it takes to settle with the fleeing ship by battle or bribery.

**Swarmers** NA: 2-20 HIT POINTS: 10 WEAPON ENERGY: ---  
SCREEN ENERGY: --- HIT SCORE: 12 EFFECT: As a 1-10 ERG missile.  
Swarmers are a sort of space lemming, living missiles who hurl themselves at ships in an orgy of self-immolation. Swarmers will mindlessly attack until they are destroyed. They are vulnerable to ERG Guns, Rattlers, and Anti-missile Missiles, which will do lethal damage to them, and to anti-missile Pressor fire. One beam of the latter will automatically deflect two Swarmers, causing them to lose their attack that mt. If a ship can launch a decoy, a landing craft, ship's gig, or droned HU, then there is a 1 in 6 chance for each swarmer that the monster will turn its attention to the decoy. Swarmers can make a pass at the ship each mt, until destroyed. If they are destroyed before hitting the ship, they receive no "dying shot."

**Mindbomber** NA: 1-6 HIT POINTS: 4-40 WEAPON ENERGY: 3-30  
SCREEN ENERGY: 2-20 HIT SCORE: 10 EFFECT: Drain Technical Power points.  
The Mindbomber is an entity living on the impulses of mental energy used by Technics for their Powers. As it is a long wait between such meals, Mindbombers will attack until they are destroyed, and will follow a ship into realspace to do so. Once in this continuum, they cannot return home, and will die 10 mt after normalizing. They will not be impaired in their attack until the moment of death.

If a Technic is in a SU hit by a Mindbomber attack, he will lose 2 Power points for each ERG that penetrates. If this drops him below 0 points, he will automatically suffer a Power Overload.

**Psibomber** NA: 1-6 HIT POINTS: 4-40 WEAPON ENERGY: 3-30  
SCREEN ENERGY: 2-20 HIT SCORE: 10 EFFECT: Drain Psionic Power points.  
The Psibomber is similar to the Mindbomber in all respects, except that it drains Psionic Power from Mutates in a hit SU.

**Temblon**            NA: 1-10    HIT POINTS: 2-20    WEAPON ENERGY: 2-20  
                  SCREEN ENERGY: 2-20    HIT SCORE: 12    EFFECT: As Rattler

Temblon are basically fond of the flavor of organic matter, and have come to regard starships as convenient containers of their treat. It attacks the hulls of ships with STRUCTURE damage, as does the Rattler weapon. When a SU has been hulled, the Temblon, without ceasing to attack with their vibratory beam, will extend powerful tractor beams into the open Unit, and on a roll of 1 in 6, any character in the Unit will be pulled out of the damaged Unit into the waiting maw of the Temblon. Such death is final, and unless the character has a Clone Record, he is lost forever. The GM should check for each character in the SU for each mt that he is in it.

Temblons are made of a unique substance, mostly metallic, bonded together by their rapid rate of vibration. They are invulnerable to all weapons except the Rattler and the EMP Pulser. A destroyed Temblon will yield .1 SCL of heavy metal ores, of Very Rich quality (see the section on loot for the going price of ore of this quality).

**Randomizer**            NA: 1    HIT POINTS: ---    WEAPON ENERGY: ---  
                  SCREEN ENERGY: ---    HIT SCORE: 8    EFFECT: Randomize ship into realspace.

Debate exists among the scientists of the Combine as to the status of the Randomizer as a life-form. But whether it is a natural phenomenon or a living thing, its results are at least inconvenient for the starfarer.

A Randomizer resists all weapons known to Empire science, or any other known technology. If a ship fails to avoid it, it remains locked in N-space, within range of the monster's effect, for 3 mt. If in any of those mt, the Randomizer scores a hit, then the ship will be dragged along for 1-10 days of N-space travel at incredible speeds. At the end of the indicated time, it will be dropped into realspace at a random location determined by the GM. The ship is immune to all other encounters while being towed about thus, but must subtract the standard 1 ERG per hour of time in N-space.

If a ship attempts to drop into realspace to avoid the Randomizer, there is a 50% chance it will follow them, requiring the ship to risk being caught in any event.

**Zaps**            NA: 2-12    HIT POINTS: 1-10    WEAPON ENERGY: 1-10  
                  SCREEN ENERGY: 1-10    HIT SCORE: 10    EFFECT: As Energy Cannon.

Zaps are small, deadly monsters, about .5 SU in size. They project beams of force similar to the Energy Cannon's ray. They are intelligent, and may be communicated with via the ship's N-radio. The monsters are fond of Power Slugs, and not only may they be bought off with these, but are sometimes amenable to being hired by a ship, to acts as a mobile escort. They cannot normalize into realspace themselves, but are capable of riding along with a ship in so doing, in a HU, or under tow. They are mildly telepathic, and may communicate with by Mutates up to 10 dets away in realspace.

Zaps can live in and operate in a planetary atmosphere, but do not like to do it, and must paid extra energy for atmospheric duty.

A group of Zaps taking casualties of more than 50% will flee combat on a roll of 1 or 2 in 6.

**Hyperzoa**            NA: 1    HIT POINTS: 100.    WEAPON ENERGY: ---  
                  SCREEN ENERGY: ---    HIT SCORE: ---    EFFECT: STRUCTURE damage, see text.

The Hyperzoa is a large, unicellular monster, 10 SU in size, which, unlike most other monsters, does damage by direct contact with the target ship. It is attracted to the vessel's mass, and will try to eat it until destroyed. The Hyperzoa will attack when in range, and will close with the ship in 3 mt. It cannot be outrun by any vessel under any circumstances. Upon the third mt, the monster will collide with the ship, locking its substance around any 10 contiguous SU of the vessel. The GM will roll to determine hit location in the normal manner, and the creature will cover the nearest 10 SU to the unit hit. (Eg. If it hits SU 19 of a 20 SU ship, it covers SU 11-20 of the vessel) Each SU it covers will take one 6-sided die of STRUCTURE damage per mt, until the monster is killed.

The Hyperzoa is vulnerable to ERG Guns and Missiles only. When it is in contact with the ship, only the ERG Guns may be fired, but they will hit on any score over 1 on a 20-sided die.

There is an 80% chance that the monster will follow a fleeing ship into realspace, where it will die in 10 mt, even if it is exposed to no other weapon fire.

**Accelerons**            NA: 1-6    HIT POINTS: 1-6    WEAPON ENERGY: 1-20  
                  SCREEN ENERGY: 1-20    HIT SCORE: 10    EFFECT: Expose ship to high gravity.

Accelerons are sleek monsters, moving by a gravitational phase-wave method which baffles Empire science. A side effect of this mode of travel is the generation of gravitational waves, which expose those caught in them to momentary changes in acceleration. For each ERG of penetration, the WHOLE ship is exposed to a gravitational force of 1 g per ERG.

Accelerons are driven to insane attack by the vibrations of the N-drive, and will not only not follow a ship that normalizes, but will not even remember that it was ever there.

They are vulnerable to Rattler fire only, their tremendous internal gravity, fueled by small Black Holes according to some theories, repelling all other forms of attack automatically.

**Radiorgones**      NA: 1-6      HIT POINTS: 1-20      WEAPON ENERGY: 1-20  
SCREEN ENERGY: 1-20      HIT SCORE: 12      EFFECT: Exposes hit SU to radiation.

These monsters have metabolisms using radioactive ores for energy. They will seek to destroy a ship to consume the various radioactive substances used in labs, drives, etc. There is a 2 in 6 chance that they will be decoyed away from a vessel by a jettisoned SCL or more of radioactive ore.

Radiorgones fire highly radioactive blasts at their prey, and the SU hit by such an attack will be bathed in 3 Radiation Intensity Factors for every ERG that penetrates the ship's screen.

Radiorgones are vulnerable only to hits by EMP Pulsers or ERG Guns. If killed by the latter, they are totally destroyed, but if killed by damage from the EMP Gun, their intact bodies may be recovered, each such trophy yielding 1 SCL of radioactive ores.



#### 0832. HUMAN SCALE MONSTERS

The following monster data are in a slightly different format. The monsters in question are *human scale*, that is, they are between .1 and 10 meters or so in size, and if not met in combat in a ship, they are fought on the personal combat scale. Data given is the Name of the monster; its Hit Points (these are on a par with character Hit Points, while those of the ship scale monsters are on a par with ship damage points); their Hit Score; and the effect of a hit by the monster. In many cases, human scale monsters will have a special attack form which gives a specific effect, but many of them are also capable of using personal weapons, and these cases will be specifically noted.

**Tyndaloigor**      NA: 1-6      HIT POINTS: 2-20      HIT SCORE: 12  
Effect: 2 dice of Screen Penetration @ Damage Factor of 1 + Insanity.

The Tyndaloigor, pictured above, is a denizen of N-space, about 2 m long, with a 3 m wing-spread, they resemble a manta ray with two long sucker-tipped tentacles for a head. These are tipped with cruelly toothed suckers, with which the Tyndaloigor may strike at an opponent from up to 10 m away.

The Tyndaloigor can "phase out," like a Mutate using the Sideslip Power. In this state, they will move close to and into a ship, undetected by sensors, to materialize inside in search of their prey.

This monster feeds on the fear impulses of the insane, living brain. To generate this vile food, the Tyndaloigor will strike at a victim, remaining out of phase until they are in range, and then appearing, to make their attack. Remember, with this as with all personal combat attacks, the Hit Score must be equalled or exceeded on the roll of a 30-sided die! See section 1050 ff for details.

A Tyndaloigor's tentacle will generate 2 dice of *screen penetration*, striking as an Energy Handweapon (see section 1050 ff). Besides doing damage normally in this manner, anyone who is struck by a Tyndaloigor must save vs. Insanity with a PSI ST. If the character does not save he will be *paralyzed and insane*, screaming in terror at the visions the Tyndaloigor will flood into his brain. Victims will remain in this state until the Tyndaloigor has been killed. If the monster maintains its hold for 5 mt or more, or if it flees unslain (after 10 mt of feeding), the victim will remain insane until healed.

Tyndaloigor are non-breathers, immune to gas attacks. They are Silicon Base Element Types, and vulnerable to all weapons attacking that metabolism. Their general ST vs. attacks allowing an ST is 14. They have no armor or screen.

**Hoolis**      NA: 1-3      HIT POINTS: 1-30      HIT SCORE: 12  
Effect: Ability drain; 3 die Blaster Bolt.

Hoolis are quasi-material monsters, composed of energy and anti-matter in a suspension allowing them to exist in contact with normal matter. No one is sure of their actual appearance, as they are able to project hypnotic waves, causing all who do not make an IQ ST to see them as the embodiment of their fondest desires. They are partially invisible to those who escape this trance.

A Hooli can appear anywhere on the ship. The initial point of their appearance is randomly generated by the GM. When the Hooli appears, ALL characters in the Unit must make their ST, or be entranced. In this state, they will be insensible of all that occurs around them, for a period of 1 hour. Those who save need not do so again, even in the presence of a second Hooli, for 1 hour.

A Hooli will go to one of its entranced victims, and commence to drain away 1 IQ point per .t until it is killed, driven off, or the victim is totally drained. It may be prevented by doing this by being attacked. Each mt that the Hooli takes any damage, it will not be able to drain IQ, though it may counterattack its foe with a short range Blaster bolt, generating 3 dice of penetration at a damage factor of 10. It may fire two such beams each mt, at a range of up to 50 m.

If a victim is totally drained, he will die, and if revived, he will be insane until he is cured. If a Hooli cannot entrance at least one victim, he will vanish away.

Hoolis are somewhat intelligent, and may be parleyed with via telepathy or a similar effect, but they will never willingly relinquish an entranced victim.

Hoolis are vulnerable only to Energy weapons, material missiles doing them no damage at all due to their immaterial make-up.

**Stellons**      NA: 1      HIT POINTS: 5-50      HIT SCORE: 10  
Effect: *Varies by type.*

Stellons are small versions of Stelloids, about 5 m across. They also come in five colors, each with its special ability.

**Ultra-violet**      Visible only to beings with E-M Visigoggles, or to Silicoids, the U-V Stellon fights by flooding an area 20 m in radius with high intensity radiation, of 1-100 RIF. The exposure of a character to this force will depend on the quality of his armor, any anti-radiation drugs or Powers he is using, etc.

**Blue**      Blue Stellons project a beam of high-voltage electricity, doing 4 dice of screen penetration, at a damage factor of 5. The effects of this power on equipment is on a par with an EMP Gun. Note that Silicoids are totally immune to this weapon.

**Yellow**      The yellow projects a field 50 m in radius, acting upon beings as a Neuro-distorter of 3 dice penetration. It may affect all beings in range simultaneously, regardless of their Base Element Type.

**Red**      Red Stellons fire 2 beams per mt, equal in all respects to a Blaster Rifle. That is, 6 dice of penetration, at a damage factor of 10.

**Infra-red**      I-R Stellons, invisible as are U-V Stellons, projects a ray of Psionic power, which will affect any hit target not in a Thought Screen, requiring them to make a PSI ST. If the victim does not save, he will go insane for 1 hour, and then fall into a coma for 1-10 days from which he cannot be revived until the indicated time.

All Stellons may fire high intensity energy beams, of 3 dice penetration and a damage factor of 2. To see which ability they are using, roll two 6-sided dice each mt of combat. A roll of 2 or 12 means they are using BOTH abilities. A roll of 3-7 means they are using the energy beam effect. A roll of 8-11 means they are using their special attack power.

Stellons are vulnerable to attacks made with Blasters, Ion Chatters, EMP Guns, or Luxblades only, and are immune to any other form of attack except for Class Powers. Their general ST against such attack is 10.

When a Stellon is killed in combat, there is a 30% chance it will leave behind it a crystal about 10 cm across. This may have one of several interesting properties. The GM will roll a 10-sided die to determine which it is.

<u>Die Roll</u>	<u>Result</u>
1-3	No special power. The crystal is worth 1-100 x 1000 CR.
4-6	Crystal doubles Power score of Mutate, Technic, or Biotech holding it.
7-9	Crystal allows holder to exercise a randomly chosen Power once per 10 hours.
0	Crystal adds one 6-sided die to all Abilities of first person to hold it, then vanishes.

Stellons are telepathic, and may be convinced to join up with a group, for enough energy in payment. They can survive in realspace indefinitely, and are helpful to those who can win their trust.

**Grommon**      NA: 1-2      HIT POINTS: 20 + (1-100)      HIT SCORE: 15  
Effect: *Varies widely.*

The Grommon, pictured on the next page, are a race of beings whose home-planet was destroyed several hundred millenia ago. Already giants of mentality, they took up a life in open space, learning to travel in realspace or N-space by the power of their gigantic brains alone. Today, they have lost almost all vestiges of their existence as planet dwellers, and are the almost featureless beings shown in the picture. But they have also developed immense powers of mind to compensate.

A Gromnon will possess all the Class Powers of a Mutate, and 1-6 Bonus Powers, with an inexhaustible Power Score. The GM may wish to impose a limit on the abilities of the Gromnon in this respect.

The Gromnon is also capable of engaging in ship scale combat, generating a beam with all the characteristics of an Energy Cannon, and capable of generating a screen, both with an energy of 1-100 ERG.

The Gromnon is an essentially peaceful being, but gives short shrift to any who attack it. The creatures are intensely curious about the nature of the Universe, and will often accompany a group of explorers for a time. Gromnon have the capabilities of both N-drive and Q-drive travel.

The Gromnon is able to survive in any environment up to the surface of a star. The most extreme conditions imaginable on a planet surface will not bother them at all, though they face the same perils from attacks by a life-form that any character does. In personal combat, the Gromnon generate three dice each of armor and screen, however, which puts their defenses on a par with Power Armor.

The Gromnon are not so philosophical a race as to refuse to accept payment for their company, and are open to offers of energy or valuable minerals. This loot is stashed in an extra-dimensional cell by the creature, and if a Gromnon is killed, there is a 20% chance that 1-100 thousand ERG, in the form of Slugs, and 1-10 SCL of valuable resources, will materialize. This cannot occur in a confined area, however.

**Roboids**                    NA: 1 per SU of ship size. HIT POINTS: Varies. HIT SCORE: Varies.  
Effect: Varies.

Long ago, before the Sniz Wars, the scientists of the Empire developed what seemed to be the perfect robot. Self-aware and self-programming, with independent action capability and a full range of judgement circuits, the Roboids seemed to be the final culmination of centuries of cybernetic research.

But as the new machines were distributed across the Empire, to take over the dangerous and tedious tasks that still plagued the Sents of the Empire, disturbing reports began to filter back to the capital worlds, reports of accidents, of disasters caused by machine breakdowns, of death and destruction.

Early suggestions that these were deliberately caused by the Roboids were scoffed at as a case of "frankenstein Neurosis," the fear held by some life-forms of free-willed machines. But before long, the mounting evidence painted a damning picture, which left no doubt that the Roboids were out to supplant their creators.

What followed is known as the Robotic Wars, and it pitted the Powers of the Empire citizens against the mechanical perfection of the Roboids. When, after years of hit-and-run warfare the great fleets met, it was the dreadnoughts of the Roboids that went down to defeat at the hands of the Legion's ships.

But, here and there, isolated pockets of the machines escaped the mopping-up operations, and began to build again. Bereft of the great power sources of Empire civilization, the survivor Roboids retooled themselves to live off of the life-energy impulses of sentient beings, and took to careers of vampiric piracy.

Roboids exist in several different forms, and the distribution of these types will be based on the number of Roboids encountered on a ship.

Of every 10 Roboids: 4 Will be Mark I.

4 Will be Mark II.

1 Will be Mark III.

1 Will be Mark IV.

For every 20 Roboids, there will be 1 Mark V Polydroid as a Commander.

The capabilities of the various models of Roboid are:

**Roboid Mark I**            Hit Points: 2-20                    The Mark I is a simple, war-robot, equipped with a built in Blaster Pistol, and with 1 die each of armor and screen.

**Roboid Mark II**            Hit Points: 3-18                    The Mark II is a more powerful version of the Mark I, equipped with an Ion Chatter weapon, and with 2 dice each of armor and screen.

**Roboid Mark III**      **Hit Points:** 3-30  
                            **Hit Score:** Special

The Mark III is a "battery-Roboid," designed to leech the life-force of living beings to provide power for its fellows. The monster extends a field of force 50 m in radius, with three dice of screen penetration. For every point that penetrates, the Mark III will drain 1 Hit Point from the affected character, converting it to energy. Mark III Roboids have two dice each of armor and screen.

**Roboid Mark IV**      **Hit Points:** 3-30  
                            **Hit Score:** Special

The Mark IV is similar to the Mark III, but it is designed to steal power from a ship, or other installation using an Empire power plant. It can tap into the power plant from any Unit on the ship, and will drain 100-1000 ERG per mt until it has obtained 1-10 thousand ERG, or until it is destroyed.

**Roboid Mark V**      **Hit Points:** 4-40  
                            **Hit Score:** 12

The Polydroid is the ultimate Roboid. It has malleable shell, which can assume the shape of any human scale character, though it is not able to use any Powers or devices requiring Psionic, Technical, or Empathic Power points, and it cannot assume the form of an energy being such as a Hooli or Stellon.

The Polydroid is also capable of:  
- Firing a built in weapon with the power of a Blast Rifle.  
- Extending a field as a Mark III, but with 6 dice of penetration.  
- Maintaining 3 dice of armor and screen.  
- Firing a broad band Neuro-distorter, capable of affecting any Base Element Type simultaneously, with 6 dice of penetration.  
- Becoming partially invisible (semi-transparent).

All Roboids are motivated by the unpredictable dictates of their random-variable programming. A given group of Roboids will have one, overriding motive in an encounter, based on the following table.

Die

Roll

Motivation

1	Destroy life.
2	Obtain 1-10 Slugs of energy.
3	Obtain mineral resources, at least 1 SCL, for research and construction.
4	Obtain Technic to repair a Roboid.
5	Obtain location of a populated system to raid.
6	Destroy life.

Roboids can communicate, and in a parley, the GM will add 20 to Reaction Dice rolls when an offer consonant with the prime motive has been made. Any other offer will receive a -20. Roboids whose prime motive is to destroy life will not parley, but will attack until destroyed or escaped.

Roboids will fight to the death to procure the satisfaction of their prime motive, but once they have done so, they will always seek to retreat, taking minimum possible losses. If pursued or cornered, they will fight with cold ferocity, until the threat is destroyed.

A "live" Roboid is worth 1-6 thousand CR to the Combine government research stations. A destroyed specimen is worth 1-6 hundred CR.

Roboids are vulnerable to all lethal Energy Weapons, to EMP Guns (as Neuro-distorters), and may be attacked with projectile weapons, but will take only 50% of normal damage from them.

**Hagnagai**      **NA:** 20 per ship      **HIT POINTS:** 4-24      **HIT SCORE:** 17  
                            **Effect:** By weapon type.

The Hagnagai, pictured at the top of the following page, are, as stated in section 0822, a species which lives on planets located in N-space. Their baroque vessels have full maneuverability in that medium, on a par with Empire vessels, but they cannot normalize into realspace, as the vibrations of realspace are lethal to their race.

These monsters have developed a thriving business of piracy and slaving; capturing the vessels and crews passing through their home-dimension. Their ships are armed with weapons as described, designed to do non-permanent damage to a target, so as not to destroy its valuable cargo and personnel.

The Hagnagai do seem to possess a means of rendering their salves immune to the ravages of N-shock, though they cannot reverse the process in their own interest, for which the civilizations of realspace may be grateful. When in combat range of a ship, the Hagnagai vessel will extrude a powerful Tractor field, which will not lessen the target's freedom of movement in N-drive, but will absolutely prevent it from normalizing until it has escaped the range of the field.

A Hagnagai ship can often be bought off in energy, an offer of at least three Slugs being required to placate them. But all ships will receive a -10 on the Reaction Dice in such parleys, due to the extreme rapacity of the Hagnagai.

The Combine offers a standing bounty of 1,000,000 CR for the location Co-ordinates of a Hagnagai home-world. There is a 1 in 1000 chance that a ship will find such a planet on a given voyage.. Roll three 10-sided dice each time a ship enters N-space, and on a roll of 000, the vessel will locate a Hagnagai world.

It will require 1 day of survey around the planet for a ship to determine its Co-ordinates, and there is a 1 in 6 chance each hour, that the Hagnagai will detect the presence of the intruder, and lift-off 10-100 ships to capture and destroy it.

Thus, the GM will roll a 6-sided die 10 times.

A roll of 1 on any roll means the Hagnagai are attacking, and the intruder had better run for it. If the ship has completed 1 or more hours of survey, there is a chance that the computer has enough data to deduce the location anyway. The ship has a 10% chance of this happening for each hour of survey it completed.

Thus, the "Hunter," stumbling across a Hagnagai world, surveyed it for 4 hours before their sensors picked up a 40 ship battle fleet heading towards them. The "Hunter" managed to outrun the Hagnagai, and the GM then rolled percentile dice. The score was 57, too high for the data to be enough. Any score up to 40 would have meant that the "Hunter" had deduced the location of the Hagnagai world, and that its crew was in line for a 1,000,000 CR reward.



**Sniz** NA: 20 per attack ship. 200 per Hive ship. HIT POINTS: 1-60.  
HIT SCORE: 10.

The Sniz are the xenophobic aliens who were the destroyers of the Empire. Long thought extinct, their ships have been sighted in recent times, following the age-old pattern of destruction.

The Sniz are an insectoid race, with a hive-mind, composed of a variable number of drones under the command of a "Brain" ruler. They breathe a Sulphur-Nitrogen atmosphere, and are the products of a 2 g field. But though they often will take-over a suitable world, using it as a shipyard and breeding center, they seem to have adapted to life in their great ships, as creatures of space. They have a Boron metabolism, and their Classification Code is OGHFO.

Sniz have a base Ability score of 10 in their native-q, but they have NO PSI or Empathy.

The Sniz use Particle Disruptors in combat, weapons similar to Blasters, but with more power. Their technology has also developed armor and screen equal to that of Empire science. An unarmored Sniz will still have one die of armor, due to his thick, chitinous carapace.

The Sniz are unremittingly hostile towards all other life-forms, and will fight until they are destroyed. Only a Hive ship will ever break off a combat and run, and then, only if it has taken over 50% damage in all three areas (STRUCTURE, SYSTEM, and CREW).

A live Sniz is worth 500-3000 CR ([1-6] x 500 CR) to Combine researchers, and their artifacts are of varying value as collector's items or subjects of research.

#### 0840. DERELICTS

Derelicts are the lost, dead ships of various cultures. With the exception of the Life Craft, all derelicts are empty of life. The GM has the option of preparing a derelict vessel that has automatic defenses against intruders, or that is infected with a plague, or some similar unpleasantness. All derelicts have a chance of containing some form of treasure, as will be indicated in section 1200 ff. A Life Craft has a 20% chance of having living survivors, and the GM can introduce some interesting scenarios in this manner, if he is so minded. (The cast-away heir to the throne of Beta Orionis V, you say?)

## 0850. NAVIGATION HAZARDS

The presence of a Navigation Hazard is detected by a Medium-range Sensor Pack, feeding data to the appropriate computer. In the event that either of these two devices is not operating, a ship will not have any warning of a Hazard's approach until it is too late to dodge. In realspace, the use of the E-M Visi-sensor will allow visual detection of the Hazard at a range of 1 det.

In theory, the optimum range of a Medium-range Sensor is 10 dets in realspace, or 10 hm in N-space. In actuality, such a sensor can detect a Hazard at up to 10 units of distance, but is really going to have an effective range of 1-10 dets or hm.

All Navigation Hazards have an arbitrary Danger Factor of 1-10, a rating of the size, violence, and imminence of the Hazard.

To determine if a vessel is going to hit or avoid a Hazard, the GM will roll a 10-sided die twice, the first roll determining the Range (R) at which the ship's sensors detect the Hazard, and the second roll determining the Danger Factor (DF) of the Hazard.

The percentage ratio of the Range over the Danger Factor, times 20, equals the percentage chance the ship has of AVOIDING the Hazard.

Thus,  $20 \times [R/DF] = \text{Percentage chance of Avoiding Hazard.}$

Eg. A vessel encounters a Navigation Hazard, and the GM rolls the 10-sided dice to determine the factors of the situation. The Range of detection is 4, the Danger Factor of the Hazard is 7.  $(20 \times [4/7]) = (20 \times .57) = 11\% \text{ chance of avoiding the Hazard.}$

A number of modifiers exist to add to this chance.

In either N-space or realspace:

For every +1 the GO-rigger has, add 5% to the odds of avoiding the Hazard.

For every -1 the GO-rigger has, subtract 5%.

In N-space ONLY:

The POWER-rigger may divert energy to the N-drive. Each DU will divert 1-10 ERG, and the POWER-rigger will add his bonus to the total.

For every ERG diverted to the drive, add 1% to the odds.

In realspace ONLY:

The vessel will have a given amount of time to reduce its speed before hitting a Hazard. Consulting Table 0811.3, the GM will find the number of dets/sec covered by the vessel at its current velocity. This will give him the data necessary to calculate how much time the vessel has to slow its speed before the Hazard strikes, and the slower a vessel is going, the higher the odds of avoidance are.

The Warning Time in such a case is  $[(R/v)/DF]$ , where  $v$  is the velocity of the ship in dets/sec. Thus, a cautious ship, at a speed of 1 centic, detects a Hazard at 10 dets out. The GM determines the DF to be 8. The ship has a Warning Time of :

$$[(10/.02)/8] = (500/8) = 62.5 \text{ seconds Warning Time.}$$

The ship may use this time to reduce its speed by the value given for the Q-drive in Table 0811.1.

The velocity of the ship at the end of the Warning Time will modify the odds of Avoidance.

Speed (in centics)      Modify odds by

0-10	+50
11-30	+20
31-50	+5
51-60	-10
61-80	-30
81-90	-60
91 or more	-80

Eg. A ship in N-space detects a Hazard at 6 hm, with a DF of 3. Base odds for Avoidance are  $20 \times 6/3 = 20 \times 2 = 40\%$ . They have a GO-rigger with a +5, for a bonus of +25%. The POWER-rigger diverts the output of his two DU to the drive, for 7 ERG, and adds his bonus of 2-12, rolling a 5, for a total of 12 ERG diverted to the drive, for a +12% bonus. The ship has a final percentage chance of 77% for avoiding the Hazard. A roll of 77 or less on the percentile dice will mean the ship has safely avoided the Hazard. A roll of more than 77 means the Hazard has been struck.

A vessel in realspace encounters a Hazard. They pick it up at 6 dets out, and it has a DF of 8. The base odds for avoidance are  $20 \times 6/8 = 20 \times .75 = 15\%$ . The ship has a speed of 60 centics, for a Warning Time of  $(6/1.2)/8 = 5/8$  seconds, so no deceleration is possible. The GO-rigger has a +3, for a bonus of 15%, but at a speed of 60 centics, the odds suffer a -10% penalty, for a final percentage of 20%. A roll of 20 or less on the percentile dice will mean the Hazard has been avoided. A roll higher than 20 will mean the Hazard has hit the ship.

## 0851. DESCRIPTION OF N-SPACE HAZARDS

*Trans-dimensional Nexus* The Trans-dimensional Nexus is a perturbation of the interface between N-space and realspace. If a vessel strikes a Nexus, it will instantly normalize into realspace, taking 1-6 points of STRUCTURE damage in each SU of the vessel, due to the sudden strain. The ship will automatically be lost, at a random position in realspace determined by the GM. An excellent method of doing this is a roll of the percentile dice for each Co-ordinate of the location, randomly assigning a positive or negative value to each roll. The GM should modify any roll that will put the ship in a position off of the campaign star-maps.

*Trans-dimensional Vortex* A more violent form of the Nexus. Vessels striking it will suffer the same result as if they had struck a Nexus, but in addition, there is a 60% chance that each TU will suffer a 2-12 SYSTEM point hit in one of its system Circuit Function Boxes. See section 0900 ff, on ship's equipment, for details on these terms.

*Radiation Storm* A violently emitting cloud of radioactive energy, which will suck a ship into its core and bombard it with 1-100 ERG of radiation each mt the ship is inside it. A vessel may erect its screens to cut out a portion of this energy, but for every ERG that penetrates, the entire ship will be bathed in 5 Radiation Intensity Factors (RIF).

A vessel struck by a Radiation Storm will be caught in it until a score of 1 is rolled on a 6-sided die, rolling each mt. If the GO-rigger has any bonus at all, a +1 will be added to the roll, but not more than +1, no matter how high his bonus actually is.

*Energy Storm* This hazard is the same as a Radiation Storm in all respects, but also does SYSTEM damage. Treat each penetration of the screens as a hit by an EMP Pulser, doing damage to a randomly located TU. See section 1000 ff on ship combat for a fuller explanation on damage location.

*Gravity Slope* A distortion in the N-space continuum generating extremely powerful gravitational waves. A vessel striking a Gravity Slope will experience a momentary change in the ship's gravity of 1-6 for every point of the Hazard's DF. That is, the gravity is equal to the score of as many 6-sided dice as the DF. For a Gravity Slope with a DF of 4, the GM will roll four 6-sided dice, and the crew of the vessel is exposed to acceleration equal to the score rolled.

*Gravitational Anomaly* The N-space equivalent of a Black Hole. A ship striking a GA has a given timetable of actions which may lead to escaping its effect. The vessel will have two mt in which to attempt a breakaway from the GA. In this time period, it will be possible to abandon ship in the Life Craft, with a 100% chance of escaping the GA's pull. The third mt, no escape is possible for either the ship or the Life Craft, and the pilot may attempt to steer the starship into the core of the GA, in an attempt to travel through it.

The "breakaway" maneuver in the first two mt requires 1 mt to build up diverted energy in the drives, and the second mt to try and pull free of the GA by brute force. In mt 1, the POWER-rigger will generate 1-10 ERG from each DU, adding his bonuses, if any. In the second mt, the GO-rigger will try and pull free, and any escaping Life Craft will be jettisoned. A breakaway has odds of success of 1% per ERG diverted to the drive, +2% per bonus point of the GO-rigger. If the breakaway succeeds, the ship will take 1-10 points of STRUCTURE damage in each SU, and may pick up the Life Craft, if any were used.

If the breakaway fails, the GM rolls a 20-sided die, adding the GO-rigger's bonus to the score rolled. If the final score is over 10, then the ship will normalize into a random point in realspace, taking 1-10 points of damage as with the breakaway. If the final score is less than 10, the ship, and all on board are totally destroyed. If the ship normalizes, the rest of the adventure must be played in two segments, the first being the adventures of those on board the ship, the second being the adventures of those in any Life Craft that escaped. No contact between the two vessels is allowed, as they are separated by GM-knows-how-big an interval of time and space.

Any characters remaining on board a ship to try and save it from a GA should receive a Heroism bonus in experience points.

*N-shock Cluster* A segment of N-space where the inimical vibrations of that continuum are amplified. All characters onboard a ship striking a Cluster must make their PSI ST or succumb to N-shock (see section 1200 ff for results of this condition).

*Anti-quark Cloud* A Hazard which depletes the energy of vessels which strike it. A vessel which is hit by an Anti-quark Cloud will lose 10-60% of its Energy Status. Thus, if a ship with 12000 ERG of energy hits an Anti-quark Cloud, and the GM rolls a 4 on a 6-sided die, the vessel will lose 40% of its energy, or 4800 ERG, leaving it with 7200 ERG in its Energy Status score.

**Ether Quake** A violent distortion of the continuum, which is so destructive that ship striking it will take 2 points of STRUCTURE damage for each point of DF the Hazard has, in each SU. That is, an Ether Quake with a DF of 10 will do 20 STRUCTURE points of damage to each SU of a vessel exposed to it.

**Rogue Missile** A derelict missile, floating in space as the left-overs of some battle, which will attack the vessel as a target. A vessel which fails to avoid this hazard has only a 2 in 6 chance of deploying any anti-missile defenses. If no defenses are deployed, the missile will hit a randomly located SU, doing 1-100 ERG of damage, as in battle.

#### 0852. REALSPACE HAZARDS

Note that two locations may be said to exist in r-alspace. System space is the area inside the orbit of the last planet of a star, or inside a 1000 AU radius of a star with no planets. Deep space is a location in realspace that is not within these critical boundaries.

**Meteor Storm** A cloud of meteors. The ship will take one hit by a meteor for every point of DF the cloud has. Each hit will be randomly located, as a missile hit, doing 1-100 ERG of damage as a Missile. Thus, a ship striking a Meteor Storm with a DF of 8 will suffer 8 hits.

Note that a vessel avoiding a strike by this Hazard can match orbits with the Storm, and mine it for resources according to the rules given in section 1100 ff on meteor mining.

**CT Meteor Storm** A Meteor Storm wherein the meteors are composed of CT. The ship striking this Hazard will take hits as described for Meteor Storm, but each hit will do 1-100 ERG of damage as a Missile, and for each point of damage done, the entire ship will be exposed to 1 RIF.

Vessels avoiding a hit by this Hazard can match velocities with it, and mine the CT drift, if they have the necessary equipment to do so.

**Radiation Storm** As the N-space Hazard, but the Storm only Generates 1-60 ERG of power.

**Null Energy Zone** A Zone of space having deleterious effects on the ship's power plant. A vessel struck by this Hazard will lose 1000-6000 ERG, and there is a 5% chance for every point of DF the Zone has (5-50%) that each TU will suffer a SYSTEM hit of 3-18 ERG force.

**Dust Cloud** A cloud of dense (by space standards) dust, which will do damage to a ship based on its velocity. A ship will take 1 point of STRUCTURE damage in each SU for every 5 centics of velocity it has. If the ship is moving at less than 5 centics, it will take no damage.

**CT Dust Cloud** A cloud of CT dust. No matter what velocity the ship is making when it hits the CT Dust Cloud will do one 10-sided die of damage to each SU of the vessel for every point of DF it has. And for every point of damage done, the ship will be exposed to 1 RIF. If a Unit is hulled by this damage, there is an 80% chance per mt that all Terrene matter located in it will be totally destroyed, including any characters.

A ship that avoids striking a CT Dust Cloud may mine it, subject to the same rules as apply to mining a CT Meteor Storm.

**Gravity Warp** An anomaly in the gravitational fabric of the star system, with a bizarre effect on the Q-drive. No matter what velocity the vessel is at, it will be subjected to a quasi-acceleration of 1-100 g, with a concomitant increase in the ship's velocity. This will have two effects. First, the crew may be exposed to the danger of Gravity Shock, and second, the vessel's speed may be increased above that of light. If this occurs, the Players must consult Table 0811.2.

Eq. A ship at a velocity of 50 centics is struck by a Gravity Warp. It is exposed to 46 g for 1 mt (5 seconds). An acceleration of 46 g in Q-drive means a change in velocity of 6.8 centics per second.  $6.8 \times 5 = 34$ . The ship now has a speed of 84 centics, and is not in danger of going supralight. Of course, the characters on board may be less than happy with the effect on their systems of 46 g. They must consult section 0448 to determine the possibility of a Gravity Abreastion.

**Power Flare** A blast of electromagnetic static generated by a solar flare. It is treated as a hit by an EMP Pulser in combat, generating 1-100 ERG of power. Screens are effective in reducing this effect, and penetrating energy will strike a randomly located TU doing SYSTEM damage.

**Warp Blast**

The Warp Blast is a rip in the fabric of realspace. Striking this Hazard causes the ship to randomize to another location in realspace, determined by the GM. There is a 10% chance for every point of DF the Warp Blast has, that the ship's N-drive blow out under this strain, with an overkill of 1-100.

**Ion Storm**

A cloud of charged particles, in intensely heavy concentrations. A ship will take one randomly located hit for each point of DF the Storm has, each hit doing 1 point of structure damage for every centic of velocity the ship has. Thus, a ship striking an Ion Storm with a DF of 5 will take 5 hits. If the ship has a velocity of 30 centics, each hit does 30 points of STRUCTURE damage.

**Meson Storm**

A Storm of sub-atomic particles, charged with tremendous energy. The Meson Storm does all the damage of an Ion Storm, but it will also do 1 SYSTEMS hit, randomly located, for each point of DF, doing 1 point of damage for every centic of velocity the ship has.

**Quantum Black Hole**

This Hazard exerts a tremendous gravitational pull on the ship. The timetable of events when a ship has struck this Hazard is identical to that for a Gravitational Anomaly for the first two mt. The third mt, the GO-rigger may attempt to accelerate to 100 centics, in order to break through the Black Hole. He may apply any acceleration he wishes to the ship, adding the velocity gained in 1 mt of that quasi-acceleration to the velocity of the ship at the time it hit the Hazard. A ship has a 1% chance per centic of velocity of breaking through. Add 1% for each +1 the GO-rigger has to this probability. If the score rolled by the GM on percentile dice is less than or equal to the velocity of the vessel, it will be randomized into a location in realspace determined by the GM. If it does not succeed in this, it will go into orbit around the center of the phenomenon, in an almost absolute time-stasis in relation to the rest of the universe.

Eg. A ship strikes a Black Hole at a velocity of 30 centics. It attempts to breakaway by diverting energy to the drives, diverting 34 ERG. The GM rolls a 49 on the dice, and the breakaway fails. The GO-rigger, having remained at his post ("Not MY SHIP you don't," as the saying goes), orders an acceleration of 50 g, the highest he can safely take. 5 seconds of quasi-acceleration at 50 g gives a velocity increase of 5 x 7.07 or 35.3 centics. At a final velocity of 65.3 centics, the ship hits the Black Hole. The GM rolls percentile dice. A roll of 35 or less will randomize the ship into another location. A higher roll will leave it stranded in a time-locked orbit, where a second represents the passing of millenia in the rest of the universe.

A rescue operation is possible, if the following conditions are met. First, a Life Craft or message must be gotten away, giving the location of the Black Hole. This can only give all the necessary data if it is launched/transmitted in the first two mt of the contact. Second, a character who receives the message must be in a position to mount a rescue operation. The usual practice would be to send the message to another Player-character back at the Home-port. The GM must calculate the time the message will arrive, and check the addressee's location in the time line of the campaign, to see if he has received it yet, or if he can receive it at a given date of arrival. A rescue ship is a custom job, costing an extravagant sum. It must mount a single GU, with a Tractor/Pressor system installed. It will have to carry one DU for each SU of the ship to be rescued, as well as its own required allotment of 1 DU for every 10 SU. The ship must be fitted with various other Units and equipment, to be flyable. It is then run out to the location of the Black Hole, which may be varied from its initial location randomly by the GM, though the rescue ship will be able to find it. This is why a rescue operation without the message is not possible, as an ephemeris for the Black Hole must be calculated from the data in the message.

Once there, the rescue ship will expend 100 ERG for every day it searches, and will require 1-100 weeks to locate the ship in the grip of the Black Hole, and to tow it free.

A rescue ship will cost 1000 CX per SU, and cannot be converted to any other use. Once built, its units may not be exchanged for any other type of SU.

To give an illustration of this operation, let us say the starship "Duckbuster" has been caught by a Black Hole. As it is whizzing in to the core of the phenomenon, it fires off a message torp addressed to a friend at Newson III, containing the sensor log data on the Black Hole. He gets the message, discovering that the ship has over a million credits worth of loot on board. The "Duckbuster" was a 20 SU ship. He has a rescue ship built, requiring about 25 SU (25,000 CX) and convoys out to the new location of the Black Hole in his own ship, with the rescue craft. He spends 35 weeks to get the "Duckbuster" out of trouble, at a cost in energy of 35000 ERG. Total cost of expedition, figuring energy for transit, and a few combats on the way, about 60,000 CX.

Unless you have credit to burn, or your best character is on board, or the treasure of all time is in the hold, it is usual to let a ship lost to a Black Hole stay in it.

## 0900. BUILDING A SHIP

The most important step in preparing to play Space Quest, after the construction of a character, is the building of a starship. Unlike most role-playing games, where the main object in outfitting a character is limited to a sword and suit of armor, or a horse and six-gun, the Player in Space Quest must expend time, effort, and not a little of his characters' credit in carefully designing and outfitting his vessel. For the characters, the ship is transport, shelter, armor, weapon, and center of power for all aspects of their adventure in space.

Starships are not cheap. The expensive vessels, custom made, that the Player-characters will buy are even less cheap. Unless some super-wealthy scion of the best families is a member of a party, all the characters will probably have to go deep into debt to build their ship. The GM should leave all arrangements about who owns how much of the ship strictly up to the Players.

Once the Players' characters have raised the necessary credit, the process of ship-building goes roughly like this.

1. Decide how large a Hull is desired. Deduct the cost of this, and all subsequent purchases, from the Credit of the character paying for it.
2. Install one Ship Unit (SU) for each SU of capacity the Hull has. Certain types of SU are required to operate a vessel (Command Unit, Drive Unit, etc.). Others are optional.
3. Determine what Ship Systems are needed, buy them, and install them in the ship's Technical Unit(s) according to the rules given later.
4. The Players will now allot their remaining funds to buy ENERGY, in the form of 1000 ERG Power Slugs at 1 CK per ERG. The total energy purchased is entered in the Ship Record Sheet as Energy Status. From the reserve of energy, a ship may draw such smaller fuel cells as are needed.
5. Any funds left over after purchasing energy may be used to buy mining equipment, medical gear, and other useful items. Any money left over can be banked until the ship's return, or converted into more energy, and thus carried with the ship.

To build a ship which will answer all the characters' needs will take time and money, as stated above. But once a vessel has lifted off, it cannot run back to get that cup of sugar the cook forgot, or the needed drug to save a character's life. So under no circumstances should the often tedious process be hurried.

## 0910. SHIP HULLS

There are six basic sizes of hull. They are premade, and no other sizes are available. Hull sizes are: 3, 5, 10, 20, 50, or 100 SU. Prices for these, and all other ship components, are given in section 0940, the Ship Component Price List.

A Hull must be filled completely with Ship Units. No "blanks" are permitted.

*No Hull larger than 10 SU in size is capable of maneuvering or landing in a planetary atmosphere.* Vessels 20 SU or larger must carry landing craft, or auxiliary ships, if they are to get their crew or cargo onto the surface of a planet.

All Hulls are fitted with the circuitry needed to power the Units installed in it, and each SU of volume in a Hull has movable bulkheads, capable of being arranged in various shapes. All bulkheads can be sealed vacuum-tight in the event of a Unit being breached to space, by a command from the ship's Command Unit, once it is installed.

All Hulls are equipped with the bounce tube, a rapid, intra-vessel transport system, propelling a character at a rate of 1 SU per second.

## 0911. SHIP RECORD SHEET

Once the Hull size is determined, the Players can set up the Ship Record Sheet. This is simply a piece of lined paper, the lines numbered so that a record of the status of each SU is apparent at a glance. At the top of the page will be the name of the vessel, date of commission (when it first lifted off), current date, and the ship's Energy Status, the amount of ERG currently available in the power plant.

We have no specific form to give the GM at this point, but here is a brief example of how the sheet is kept in the original campaign.

### SHIP RECORD SHEET

"Cheezit"	10 SU Explorer	Commissioned: 501.453	Current Date: 502.295
1.	CU (Command Unit)		Energy Status: 23,056
2.	GU.(Gunnery Unit)	ERG Gun system.	
3.	EU.(Environmental Unit).	Set for Humans/Trilax.	
4-6.	HU (p)	(Pressurized Hold Units)	
7.	EU.	Set for Silicoids.	
8.	OU(Operations Unit).	Autodoc.	
9.	TU(Technical Unit).	1.Astrogation Computer. 2.Fire-control Computer. 3.Engineering Computer. 4.Navigation Computer. 5.Autodoc 6.Biomed- cal Computer. 7.Long-range realspace Sensor 8.Medium-range realspace Sensor. 9.Medium Range N-space Sensor. 10.Onboard Sensor.	
10.	DU(Drive Unit).		

Naturally, the GM will want to spread his information out a bit more than this format size will allow. It is best for the GM and Players to collaborate on the drawing up of the record sheet, and then for the Players to be responsible for its maintenance. This will take that much more of the burden off of the GM, in his wild fight with the rulebook, maps, dice, etc. But the details of this process are the sole decision of the GM in his own campaign, and his word on how such matters are conducted is final.

A final note on the record sheet. While a space craft may be assumed to be built in any shape desired, some means of determining what lies where must be used. Therefore, the SU are built into the ship in the order they are written on the record sheet. SU #1 is next to SU #2, and SU #8 lies between SU #7 and #9. To get from SU #2 to SU #6 is a journey of 4 SU, a matter of 4 seconds in a bounce tube, or 4 mt on foot.

Moreover, in combat, a hit against the ship will be located in one SU, as a rule. For a 10 SU ship, the GM will roll a 10-sided die. Rolling a 7 locates the hit in SU #7, etc. For other sizes of ship, roll the appropriate size of die. Details on this process will be in section 1000 ff, under the heading Ship Combat.

#### 0920. SHIP UNITS

The term Ship Unit, or SU, does not only refer to a measure of volume in space craft, but also refers to the special Units that are installed in an empty Hull to make it into a true starship.

Two types of SU exist: Primary SU and Secondary SU.

Primary SU are the Command Unit, Gunnery Unit, and Drive Unit.

All other SU are Secondary SU.

#### 0921. THE COMMAND UNIT

The Command Unit, or CU, is the bridge of the vessel. It is the station for the GO-rigger, or pilot, and the central control station for the ship. Every ship MUST HAVE at least 1 CU.

The CU contains the input plugs for the GO-rigger.

The CU contains the ship's radio and N-radio installations.

The CU contains the Primary Circuit Modules. Each CU can control 10 other Primary SU. If the CU is shut-down by damage, none of the SU hooked into its PCM's can function until it is repaired. If more than 10 Primary SU are installed on a vessel, then either a secondary CU must also be installed, or a Primary Circuit Extension Module must be installed. Either solution will give the ship 10 more PCM's. But if a second CU is installed, only one CU may be in command of the ship at one time. If conflicting GO-rigger commands are received by the Astro-gation Computer, it will disregard both, and fly the ship on its own.

The CU contains monitors for all SU on the ship, and control for any automatic equipment on the ship may have a set of back-up controls installed on the CU console,

The CU can sustain 30 points of STRUCTURE DAMAGE, and 20 points of SYSTEM damage.

#### 0922. THE GUNNERY UNIT

The Gunnery Unit (GU) is the weapon section of the ship. One GU can accomodate the mechanism for one weapon system. It requires the facilities of shipyard to change the installed weapon system for another.

The GU contains the input station for one FIRE-rigger.

The GU can sustain 30 points of STRUCTURE damage.

#### 0923. THE DRIVE UNIT

A ship must have at least one Drive Unit (DU) for every 10 SU. The DU can provide drive power for itself and nine other SU, so that a 100 SU vessel will require 10 DU, a 50 SU ship, 5 DU, etc.

The DU contains the input plugs for one POWER-rigger.

Each DU can generate 1-10 ERG for a ship's weapons, screen, and emergency maneuvering power.

A ship can have more than the minimum necessary DU installed, if desired, to provide extra power for combat and emergencies.

A DU can store an infinite amount of energy, and no matter where a Power Slug may be inserted into the ship, the energy is added to the total Energy Status.

The DU contains the mechanisms of the N-drive and Q-drive.

A ship which loses more than the necessary amount of DU needed to power the vessel cannot move at all until the damaged DU is repaired. Thus, a 20 SU vessel with only one operating DU is dead in space.

A DU can sustain 30 points of STRUCTURE damage, and 30 points of SYSTEM damage.

#### 0924. THE TECHNICAL UNIT

The Technical Unit (TU) is the SU in which the control circuitry for all major ship devices, and the hardware for all computers and sensors, is installed.

Each TU holds 10 Circuit Function Boxes. Most ship's equipment requires an allotment of 1 CFB to operate. The equipment must be permanently installed in a given CFB of a TU, and a note made on the record sheet as to what equipment is operated by a CFB in a given TU. If a weapon or other hit doing SYSTEM damage should strike the TU, a random roll of a 10-sided die is made, determining in what CFB the damage will be sustained.

It requires the work of a character qualified for repair in a given device, or of a Tech- nician, for one hour, with an expenditure of 10 ERG, for a piece of equipment's control circuitry to be switched to another CFB.

To illustrate, if a ship were fitted out with 20 pieces of equipment (computers, sensors, some medical gear, odds-and-ends) it would require 2 TU to hold the controlling circuitry for the machinery.

#### 0925. THE ENVIRONMENTAL UNIT

While the entire ship may be set for a single type of environment, only the Environmental Unit (EU) may vary from this norm. It is customary to adjust the atmosphere, temperature, artificial gravity, etc., of a ship for the Human/Trilax range, as the Silicoids can survive in this environment, whereas the Carbon races cannot survive in theirs. The EU, however, can be set for the ideal conditions of each character living in it.

The EU holds five cabins. Each cabin may be set for a precise temperature, gravity, and pressure. The overall conditions of atmosphere, ambient radiation, etc., as well as the food supply in the EU, must be all of one setting. Each cabin will hold one character comfortable for as long as there is available power. An EU can support 10 characters for only 10 days, before the life-support mechanisms break down under the increased demand.

Five beings of the same Base Element Type and atmospheric composition may live in a given EU. All others will find some element or other of the EU uncomfortable, if not lethal.

The EU can sustain 30 points of STRUCTURE damage, and 50 points of SYSTEM damage.

*A NOTE ON ARTIFICIAL GRAVITY:* The Artificial Gravity of the ship may be set at only one level for the whole vessel, with individual settings permitted for the cabins in the EU. The settings must be made in the shipyard, and only a shipyard can change them. In the event of a vessel undergoing acceleration, the additional force will be added to the gravity in which a character is currently located.

#### 0925 a. THE LIFE CRAFT

Each EU is equipped with one Life Craft, able to hold only five characters, and equipped to support the same life-forms as occupy the EU normally. Characters located in a Life Craft when their EU is exposed to damage of any kind, will not suffer any harm until and unless the EU has been hulled. At that point, the vessel will be launched into space automatically, unless an "Abort Launch" signal is received from the GO-rigger, or the occupants of the Craft.

A Life Craft has 1000 ERG of power, and N-drive and Q-drive.

A Life Craft can sustain life-support for as long as it has any power left.

A Life Craft has simple sensors for navigation and astrogation, but NO weapons or screen.

A Life Craft can sustain 20 points of STRUCTURE damage and 30 points of SYSTEM damage.

#### 0926. THE OPERATIONS UNIT

The Operations Unit (OU) is a standardized Unit for the installation of laboratories, medical facilities, factory and mining gear, etc. It has rigger plugs for use of the ship's computers, and various types of power outlet. An OU sustains 30 points of structured damage.

#### 0927. THE BOAT UNIT

The Boat Unit (BU) will require 3 or more SU of Hull space. It is a launching deck which contains an entire other ship, built in the normal fashion, as an auxiliary vessel, or gig, and also contains the support gear needed to fuel, launch, and recover it.

BU are available in sizes holding a 3 SU, 5 SU, or 10 SU gig. The gig will be immune to all damage until the BU Unit holding it is hulled. Note that the entire BU need not be hulled. If the BU unit contiguous with SU #1 of the gig is hulled, then SU #1 will suffer the consequences of all subsequent hits to that SU, though the other two BU units may be intact.

A BU unit can sustain 30 points of STRUCTURE damage.

#### 0928. HOLD UNITS

Several varieties of Hold Unit (HU) are available.

The standard HU is UNPRESSURIZED! It will be open to space or planetary atmosphere, and is separated from the rest of the ship by airlocks. It is usually used to hold mineral ores or other imperishables.

The Pressurized HU, or HU(p), is pressurized, and contains the same environment as the rest of the ship at large.

Either form of HU may be "droned." This modification fits the HU with a remote controlled mini-drive, enabling it to maneuver for brief periods in realspace ONLY. The system requires 1 ERG to land on a planet, and 1 to take off. It will hold up to 10 ERG at a time, and may be maneuvered by Q-drive at the usual energy costs. It must at all times be under the remote control of the ship, either by a living controller, or a computer.

The accelerations used by droned HU will kill any character inside, should they try to use it for a landing craft.

All HU can sustain 30 points of STRUCTURE damage.

All HU hold 1 SCL of cargo.

#### 0929. SUMMARY

While we have tried to make the functions of the SU clear, and will indicate the requirements for a given SU by the equipment listed in the following sections, the GM has the final say as to the fitness of a given SU for a given use.

In any case, remember that a Hull must have 1 SU for every SU of capacity, or it will not last out the first flight. Unfilled Hulls are unstable, and will blow up in 1-100 hours. A Player may be able to afford a 100 SU Hull, but can he afford to fill it?

#### 0930. SHIP SYSTEMS

Any device whose function is to use, store, generate, or distribute energy in a controlled fashion, on the ship, in its daily routine, is considered a ship system. Note that just as a SU will have a STRUCTURE point score, so will a ship system have a SYSTEM point score. A hit to the controlling CFB of a system will do SYSTEM damage to it, and if it loses more points than it has, it will shut down. A system taking more damage than it can sustain is said to suffer overkill. Any overkill in excess of 100 points of damage will render a system irreparable, a pile of slag, a hunk of junk.

The main ship systems are computers, sensors, weapons, and medical equipment.

#### 0931. COMPUTERS

The computer in Space Quest is a remarkable device. Almost self-aware in many ways, it performs its functions automatically, and will always inform the Player-character of impending danger that it is programmed to detect. In more subtle matters, the Players must figure out the correct questions to ask, and the GM must in his turn, decide if the computer has the data. Eg. of a conversation between Player and computer (portrayed by the GM) in normal course of play:

Player: We're out of N-drive, so what do we see?

Computer: Readout: one star, type G3.

P: Anything else?

C: Insufficient time to assimilate data. Wait 1 day for further readout.

(Time passes)

C: Readout: Star has four planets at orbital distances .... end print.

P: No other...

C: Warning--- Navigation Hazard approaching---Meteor Storm.

P: Action stations everybody, we...(horrible crashing noises. Silence.)

Well, at least it tried to warn them.

The GM must concentrate to keep track of what data is being scanned, and at what point in timetable it will be ready for readout. He must also keep in mind that certain things (radio waves, ship's drive emanations, etc) will pop-up almost at once, and should try and keep these consistently placed in the flow of play. Especially in the early stages of setting up the campaign, the GM will make a mistake in this regard. When this occurs, the progress of play should be traced back to the point where the error occurred, and picked up fresh from there. If this will do the Players out of some hard-won victory, then the GM should let the error stand, of course. Fairness and even-temper will win the day in such cases.

Ship's computers have many different functions, operating within various ranges, from many lites away, to onboard the ship. Certain computers are necessary for the ship to operate, others are almost but not quite mandatory, and others are frills.

This section will list the functions of each computer under the heading of L-R (Long-range) M-R (Medium-range), or ON (Onboard).

All computers require 1 CFB to operate, and can sustain 20 points of SYSTEM damage.

**ASTROGATION COMPUTER: Required for ship operation.**

L-R - At any range: the computer can determine the co-ordinates of the ship's location by scanning the visible star-field around the ship. The stars must be visible for this function to be used. This operation requires 10 hours.

- At a range of 1 lite. The computer analyzes the spectral class of stars in range. This is instantaneous.

ON                   - Pilots the vessel in the absence of the CO-rigger at base values (no bonus).  
- Handles incoming communications, monitors for radio or N-radio waves, and can control all "droned" units.  
- Plots all Co-ordinates for interstellar flight, and handles all calculations for any form of ship movement.

**ENGINEERING COMPUTER: Required for operation of ship.**

ON                   - Controls and enhances all onboard repair work.  
- Runs all DU at base values.  
- Measures onboard radiation intensity.  
- Maintains general ship's life support system (not EU).

**FIRE-CONTROL COMPUTER: Required to use any ship weapon.**

M-R                - At combat range (10 dets). determines the status of enemy vessel: what weapons it fired, what screen power it has, what damage it has sustained.  
ON                - Can fire weapons automatically at base values. Will always fire one weapon per target, firing at weakest screen or most damaged opponent.

**SURVEY COMPUTER:**

L-R                - Within a range of 1000 AU. Determines if a system has planets, asteroids, or nebular material belts.  
- Reads out orbital ranges for such objects, if they are present. It requires 1 day to scan the system and determine the data for these two functions.  
M-R                - Range: 1 det. The computer determines the diameter, density, atmosphere, temperature range, gravity, and atmospheric pressure of a planet under survey. It also gives a rough idea of the general geography of the planet.  
This function requires 1-10 hours.

**TECHNICAL COMPUTER:**

L-R                - At a range of 10 AU. The computer detects the presence of any artificial objects in space: ships, derelicts, beacons, etc. It reads out their size in SU, and detects the use in this range of the N-drive or Q-drive, indicating Empire type technology.  
M-R                - At 5 dets. Detects the presence of radiation and its intensity.  
- At 1 det. Detects the presence of artificially generated energy, its quantity, type (Empire Ionic, fusion, fission, coal, etc.).  
After 1-6 days of surveying a planet at this range, the computer can deduce its level of Technological Development.  
ON                - Aids the study of alien artifacts in a lab unit. After 1-10 hours of scanning an artifact, the computer can deduce the Technological level that produced it.

**NAVIGATIONAL COMPUTER: Highly recommended if the ship is to survive.**

M-R                - Range: 10 dets. Detects the presence of any Navigation Hazards. Detects the presence of CT. Both functions are instantaneous, subject to the restrictions of section 0840.

**BIOMEDICAL COMPUTER:**

M-R                - At 10 dets, determines the presence of life in any form (crew of a ship, monster, planetary population). Instantly determines the Base Element Type of this life-form.  
After 1-6 hours of scanning, it will determine if the life-form is intelligent, and read out the full Life-form Classification Code for that life-form. The computer does not indicate the level of intelligence, only its presence.  
ON                - Operates all automated medical equipment on the ship. It can deduce the complete environmental needs of a life-form after 1-6 hours of scanning.

**SOCIOLOGICAL COMPUTER:**

M-R                - At 1 det. Detects the number and size of communities on a planet. Determines the Cultural Organization, Social Organization, Organizational Strength, and Xenophobia Factor of a culture, after 1-10 days of survey. This figure is reduced 50% if the culture uses radio communications that the computer can scan, once it knows the language.

**PROSPECTOR COMPUTER:**

M-R                - At 1 det. Determines the presence of exploitable resources on planet. Gives number of deposits, their location, and size in SCL. This includes mineral deposits (petrochemicals, radioactives, heavy metals, crystals), and chemical radicals (Jovian atmosphere compounds and the compounds found on "bio-soup" worlds). See section 1100 ff for details.  
The computer can also operate remote controlled mining equipment on planet or in space.

**LIBRARY COMPUTER:**

ON - The computer stores full banks of Empire cultural material, literature, music recordings, holographs of artworks, etc. It stores the standard techmanuals for repairing ship equipment. It has the general reference works of history and science. The computer stores the ship's log, and general records.

Finally, it maintains a complete linguistics bank, capable of determining the structure of a language swiftly, if it can have access to it. From a living specimen it will learn the language in 1-10 days. From monitoring radio communications, it will learn it in 1-10 hours. If the culture uses a dialect of Galac, the Empire lingua franca, it will be able to use the language in 1-100 minutes. If the library computer has a language in its banks, it can provide instant translation for characters using the Portable Sensor Pack, or ship radio facilities.

**ASTRONOMY COMPUTER:**

L-R - The computer duplicates the location finding functions of the Astrogation Computer

- At a range of 20 lites, the computer can determine the Co-ordinates of a star in range. Thus, it is not necessary to limit travel to stars whose positions were purchased at the home-port. This scan requires 2-20 hours.

**0932. SENSORS**

Computers cannot function without data. This commodity is procured by the sensors, of which four major types exist: Long-range sensors; Medium-range sensors; Onboard sensors; and the E-M Visisensor.

All sensors require 1 CFB and can sustain 10 SYSTEM points of damage.

**LONG-RANGE SENSORS:** There are two types of this sensor, one for realspace use, and one for N-space use. For purposes of this game, assume a lite to be equal to 1 hm, and an AU to equal 50 hm, in terms of N-space distances. Computers cannot perform their L-R functions without input from the type of sensor proper to the space they are functioning in. One sensor will provide data for any number of computers. If the sensor is not functioning, the computer cannot perform its L-R functions.

**MEDIUM-RANGE SENSORS:** These also come in the N-space and realspace forms. Assume 1 det is equal to 1 hm for game purposes. Again, without the proper sensor, a computer cannot perform its M-R function.

**ONBOARD SENSOR:** Only one type of Onboard sensor exists, and it is usable in any location. If a ship has no functional Onboard sensor, then its computers cannot perform their ON functions, and for the ship to operate at all, the activities such as piloting, gunnery, and engineering must be manned by riggers at all times, or shut down. If a rigger is in command of an action with no computer support, he will lose all bonuses, and can only operate the equipment at base values. It is advisable to carry several of these sensors, as back-up units.

**E-M VISISENSOR:** One such unit will provide visual scans of up to 1 det in range to the vision screens located in each SU. It is usable safely only in realspace, as those who look at N-space risk N-shock. It not only perceives the visible spectrum, but can amplify the U-V and I-R wavelengths into visibility too.

**0933. MAJOR MEDICAL EQUIPMENT**

Medical equipment must be set up in an OU, and such an OU is designated sick bay on the record sheet. Some of this equipment requires a CFB, some requires volume in an OU, some is automated, some is not. The details are stated for each piece of gear.

**AUTODOC:** Requires 1 OU of volume, 1 CFB, and must be under the control of the Biomedical Computer, a Biotech, or a character with the Medical Science skill for the species of the patient.

The Autodoc is a fully automated sick-bay. It will treat patients of ONE Base Element at a time, treating up to 5 patients simultaneously. It treats the following conditions in the given time:

<u>Condition</u>	<u>Time for treatment</u>
Restore lost Hit Points.	1-3 hours.
Cure diagnosed disease..	1-10 hours.
Regrow lost limbs/organs	1 day/limb.
Gravity Shock	1-10 hours.
Radiation Sickness	5 hours/degree of sickness.
Vacuum Shock	1-3 hours.

**MANUAL MEDICAL SYSTEM:** Requires only 1 OU, and must be run by a Biotech with the Medical Science skill for the patient's species. It requires no CFB or energy, and will be destroyed only if the OU in which it is located takes more than 50 points of overkill in STRUCTURE damage.

This is a fully stocked sick-bay, on the order of a 20th century Dispensary. All its functions are directly and manually controlled by the ship's medical staff. A single Biotech can treat 3 patients at one time in this system, and it will require his full attention to do so. It can treat the following conditions:

<u>Condition</u>	<u>Time for treatment</u>
Restore lost Hit Points	1-6 points per day.
Cure diagnosed disease	1-6 days.
Gravity Shock	2-20 hours.
Radiation Sickness	1 wk/degree of sickness up to second. Cannot help more severe cases.
Vacuum Shock	1-20 hours.

It is usual practice to store all drugs not currently in character's medikits in the sick bay, so as to have them at hand for needed treatment.

**DIAGNOSTAT:** Requires 1 CFB and must be under the control of the Biomedical Computer or a Biotech to operate.

The Diagnostat is a small sensor/computer device which scans a subject suffering from a disease in order to diagnose what he is infected with, so that a cure can be precribed. Treatment of undiagnosed diseases is impossible, unless the Universal Antibiotic is effective. The system can determine the nature of a pathogenically induced infection in 1-100 hours of scan. The GM, as he develops his campaign, will be able to determine if a disease is already "known" to the medical science of the Combine, and will reduce the required time accordingly.

The diagnostat can also determine the presence and severity of Radiation Sickness in a subject, and should a character be in a damaged condition for reasons unknown to the rest of the crew, the diagnostat can determine the extent of damage, and the probable cause.

Eg. A character is found in an onplanet encampment, wounded and in coma. The diagnostat informs the Players that he was struck by a poison dart, from which the party may deduce the presence of concealed and hostile natives, even if they did not witness the ambush.

**NUTRIENT ANALYZER:** Requires 1 CFB and the control of the Biomedical Computer, or any Biotech, or any character with a Medical Science skill or Dietician skill.

The Analyzer will scan potentially edible materials for nutrient content. It will then read out the result for a given Base Element Type. It will do this for any desired Type other than the energy or rock eating species. Readouts will be in one of the following forms: "Edible and fully nutritious;" "Edible and partially nutritious---requires supplements of ...;" "Inedible---not assimilable by proposed Type;" or "Toxic."

**BIOSTASIS CHAMBER:** Requires 1 CFB and .2 OU.

The Biostasis Chamber is a perfect suspended animation chamber, capable of holding any Human scale being. It will arrest the passage of time for any dead or living character, and once the field is on, the chamber is invulnerable to harm, as it will be completely shielded by the stasis effect. The device requires 1 ERG to activate the field, and 1 ERG to deactivate it. Once the field is on, the loss of the CFB, the destruction of the OU, or even of the ship, will not deactivate. Only the application of 1 ERG through a properly circuited CFB will do that, or the application of another stasis field in contact with the first. It may be assumed that space has a small number of such chambers floating in it, debris from destroyed vessels.

**PSYCHO-INTEGRATOR:** Requires 1 CFB and .1 OU.

The Psycho-integrator treats all forms of insanity or mental damage. It can treat only one being at time, and can be set for only one species. This setting is made at the time of purchase, and is permanent. The device requires 1-10 hours to effect a cure, and may be used in tandem with the autodoc or other forms of physical treatment. It works automatically, even if no control is present from computer or character.

**BIOSPHERE SIMULATOR:** Requires 1 CFB and .5 OU.

This large chamber can accomodate three human scale beings, or larger beings up to .5 SU in size. It will provide the full environmental requirements for the species of the inhabitant. It provides atmosphere, gravity, temperature, pressure, ambient radiation, food and drink, etc. The environmental needs of the being must be known, to program to the Simulator, and the chamber must be programmed by the Biomedical Computer. It requires 1 hour to cycle up this system to operating status.

The chamber is also fitted with an airlock, and a set of medical waldoes for treatment of the inhabitants from outside.

The Biosphere Simulator consumes 10 ERG per day of operation (1 ERG/hour).

#### 0934. SERVOMECHANISMS

Servos are remote operating devices, extending the range of operation of various computers, in onboard operations. All servos are hooked up to a certain computer, and if that computer is not operative, neither is the servo.

In addition, each servo requires 1 CFB, and each servo has 10 SYSTEM points.

**MASTER CONTROL SERVO:** Allows the GO-rigger to take over the rigging of one other station on the ship, either as FIRE-rigger or POWER-rigger. The GO-rigger will reduce his bonus by the score accruing to the Ability necessary to run the unit he is backing up, so that a GO-rigger who is also acting as a FIRE-rigger would lose the benefit of his PSI score in piloting the ship, and would lose his IQ bonus if he acted as a POWER-rigger. Contrariwise, if his score in the Ability concerned is sufficient for a bonus in the station he is taking over, he will receive it. The GO-rigger must have the requisite skill to operate the rigger function he takes over, and he may only take over in the absence of a functional rigger at that post. This is an emergency device, not an override. It is designed to back up a dead or disabled rigger, or a vacant rigger station. The servo hooks up to the Astrogation Computer.

**ENGINEERING EXTENSION SERVO:** Hooks up to the Engineering Computer. Allows the POWER-rigger to control 1 extra DU. Normally, one rigger controls one SU. With one extender, the rigger can control two DU. With another servo, he can control three DU. Note that this is of great importance if the Engineering Computer should be knocked out, though under normal circumstances, the servo is unnecessary, as the Computer allows a rigged-in engineer to control all the ship's DU.

**REPAIR OPERATIONS SERVO:** A small robot, equipped with various tools, and drawing energy directly from the ship's Energy Status. One servo can service one SU at a time. If a SU or system is damaged but not yet hulled or shut down, the Servo can repair 1-6 points of damage per mt, at a power cost of 1 ERG per point repaired. The servo cannot repair units that have taken more than 100% damage, though their use will enhance the process of repair by living crews. Servos move through the ship as do living characters, via bounce tube or "on foot." Hook-up to Engineering Computer.

**MEDICAL RESCUE SERVO:** Similar in appearance and movement to the Repair Operations Servo, this device functions as an onboard ambulance, going to SU as directed by any living character, to retrieve dead or wounded characters, administer first-aid, and carry them to sick bay.

The servo is equipped with an Emergency Medikit, and draws power directly from the ship. A record must be kept of what drugs it is stocked with.

Hook-up to the Biomedical Computer.

#### 0935. SHIP WEAPON SYSTEMS

These are the systems installed in the GU, for use in ship combat. Remember, one GU will hold one weapon system unit.

Weapon systems require no CFB, and can sustain 20 points of SYSTEM damage. They take damage only from shots which hit the GU.

Each weapon system has various formats in which it may use its systems, not all of them necessarily warlike.

In combat, each weapon system can fire one beam, with the full power of the ship's weapon energy behind it.

**ERG GUN SYSTEM:** The ERG Gun system fires beams similar to the ray of a Blaster, but of immensely more power, by several orders of magnitude. Remember that ship weapons fire multi-ERG blasts, while Handweapons use centi-ERG blasts.

Both formats of the ERG Gun do equal amounts of damage in all three areas when they hit. That is, a 20 ERG hit from an ERG Gun will do 20 points each of STRUCTURE, SYSTEM, and CREW damage.

The weapon formats are:

Energy Cannon- A single beam of tremendous power.

Energy Torpedo- A burst of 5 pulses of energy. These will be aimed as the FIRE-rigger wishes, and are of use in combat with multiple opponents. Each torpedo will have 20% of the available weapon energy. Thus, if the ship has 35 ERG of weapon energy in a mt, each torpedo will have a 7 ERG charge. Round fractional values to the nearest whole number.

**TRACTOR/PRESSOR SYSTEM:** Tractor beams pull things towards the ship. Pressor beams push things away from the ship. The system has three formats.

Tractor- A beam with several applications. In combat, a hit of even 1 ERG penetration by a tractor beam will increase the odds of the firing ship to hit with other weapons by +2. It will also, however, increase the odds to hit for the target vessel by +1, due to the locked relative position of the two vessels that mt.

Against a passive target, the tractor beam can be used to draw it into contact with the ship, or to hold it in some position within the 10 det range, or to tow it along with the ves-

sel. If a ship is towed into or out of N-space, the transition will require 10 extra ERG each time. Any resistance will break this tow.

At the GM's option, a tug of war application will be possible, whereby a resisting ship is taken under tow. Each mt, the firing vessel will put weapon energy into the tractor beam, and the resisting ship will divert energy to the drive. Ratio the drive power of the resisting vessel over the weapon power of the firing ship, to determine the percentage chance of the resisting ship breaking free of the tractor.

**Pressor-** This beam has two defensive functions. First, a hit with a Pressor beam of even 1 ERG penetration will penalize fire from the target vessel against the firing vessel by -2. It will also reduce the odds of a hit for the fixing vessel against the target vessel with other weapons by -1.

The Pressor is also of use in repelling missile attacks. A single Pressor beam will automatically deflect 2 missiles each mt.

**Rattler-** This format is a beam of alternating tractor and pressor forces, in a megahertz frequency. It delivers STRUCTURE damage to any target it hits.

**PULSER SYSTEM:** This system generates pulses of energy designed to disrupt the energies of machinery or living nervous systems. There are two formats.

**EMP Pulser-** Fires a beam doing SYSTEM damage.

**Neuro-disruptor-** Fires a beam doing non-lethal CREW damage, in exactly the same manner as the Neuro-distorter Handgun. The Neuro-disruptor must be set for one Base Element Type, and a ship's FIRE-rigger must know what Element to set it for. If sensor data exists on the Base Element Type of an opposing crew or monster, then the Fire-control Computer will automatically set the weapon.

**MISSILE ARRAYS:** There are various types of missiles available. The actual weapon system purchased is a Missile Rack, of which one will fit in a GU. Each rack will hold a number of missiles varying by type. It requires 1 mt to reload a rack after it has been fired, and firing and reloading simultaneously is forbidden. The use of missiles requires no energy, though a SYSTEM hit will still knock out the GU, as the ballistics equipment will go down.

Available missiles are:

**Attack Missiles-** For use in realspace only. Missiles have warheads of 1-100 ERG, and Players must specify what kind they are buying at the time of purchase. These may also be used for bombardment of a planetary target. A Missile Rack holds 10 Attack Missiles.

**Anti-missile Missiles-** Small interceptors, designed for defense against attack missiles. They may be used in either N-space or realspace. Each AMM fired has a 10% chance of intercepting an Attack Missile, and the Fire-control Computer will always allocate 10 AMM to an Attack Missile, until it has allocated all of the AMM fired. The FIRE-rigger may override this, deploying the AMM as he desires. A Missile Rack holds 100 AMM.

Eg. A ship is under attack by 15 Attack Missiles. It has 100 AMM in the rack. They are fired, and if uninterrupted, the Computer will automatically knock out 10 of the Attack Missiles. If the FIRE-rigger desires, he may allocate them in another pattern, say 6 AMM each, with the odd 10 AMM allocated to bolster the odds against the first 10 Attack Missiles. Thus, there is a 70% chance for each of the first 10 Attack Missiles of being intercepted, and a 60% chance for the last 5. Of course, an unintercepted Missile must still score a hit, but remember that Missile hits are not impeded by screen.

**N-Jump Missiles-** Attack Missiles designed for use in N-space. They function exactly as do Attack Missiles.

**Chaffers-** Devices fitted with warheads which spread a cloud of sensor-scrambling "chaff" around the ship firing them. For each Chaffer fired, the ship will gain a +1 defensively, but loses -1 on its own odds to hit a target.

A Missile Rack holds 5 Chaffers.

**Planetkillers-** A mega-ERG bomb, used to destroy bodies of planetary mass. This would be the equivalent of a 10 BEGATON thermonuclear device! A Planetkiller requires 2 GU fitted with Missile Racks to fire it.

A GU may store an effectively infinite number of missiles of the type it requires. If a really huge number of missiles are purchased, the GM may require part of the supply to be stored in a HU.

Missiles are relatively cheap, and not very accurate. But when they hit, the full power of their warhead is experienced by the target as STRUCTURE and SYSTEM damage, unmodified by the target's screen. A Missile hit against a hulled SU will also do CREW damage to any characters in it.

The precise functions of combat between ship scale opponents will be given in section 1000.

#### 0936. MISCELLANEOUS SYSTEMS

These are installations used in exploration, power generation, mining and industry, research, etc. Each has different requirements.

**POWER GENERATORS:** Used to manufacture Slugs for the ship's Energy Status while in flight, there are three kinds.

**SOLAR ACCUMULATOR-** Requires 1 CFB and .5 OU.

The Accumulator will generate 10 ERG/hr from solar energy, when activated within 1 AU of a star. It burns out and must be replaced after generating 5000 ERG.

**RAMSCOOP ACCUMULATOR-** Requires 1 CFB and 1 OU.

The Accumulator converts interstellar or interplanetary dust, planetary atmosphere, etc., into energy, at a rate of 100 ERG/hr. Values triple if the Ramscoop is deployed in a nebular cloud, dust cloud, or similar high concentration of detritus. The Accumulator burns out after generating 10,000 ERG.

**IONIC CONVERTER-** Requires 1 CFB and 2 OU.

Converts matter to energy at a rate of 1 ERG per kilogram. Matter may be fed into the device from onboard the ship, if supplies, or characters are willing to sacrifice themselves for energy. If the accumulator field is deployed in space, the following values apply:

<u>Deployed in:</u>	<u>Energy Yield</u>
Open space.	20 ERG/hr.
Nebular Matter	500 ERG/hr.
Asteroid Belt/Atmosphere	1000 ERG/hr.

The Converter burns out after generating 500,000 ERG.

**MINING AND MOBILE RESOURCE PROCESSING EQUIPMENT:** Used to extract and process resources both in space and onplanet. All ground operations can be remote controlled from the ship, or else will require a crew of 2 characters.

**MOBILE ORE EXTRACTOR-** Requires storage in 1 HU.

This small, mobile factory can mine and process 1 SCL per day of mineral resources on a planetary surface. It can withstand all natural hazards on a Terrestrial world, but is not usable on a Jovian one. It cannot move on its own, but must be ferried from place to place in a droned HU, or by some other means of transport with a 1 SCL capacity.

The Mobile Ore Extractor requires 1 ERG per day of operation, and uses centi-Slugs for fuel. It can extract any form of resource: heavy metals, petrochemicals, radioactives, or crystals.

**ATMOSPHERIC SCOOP MINER-** Fits into an HU. The unit can process 1 SCL per day of chemical compounds from a planetary atmosphere. The unit will automatically distribute this to empty HU as chosen by the Players.

The unit requires 1 ERG from the ship's Energy per day of operation.

**NEBULAR SCOOP MINER-** Similar to the Atmospheric Unit, but designed to scoop-mine Nebular Clouds.

**FLUID REFINING PLANT-** A mobile plant for extracting the chemical compounds on "biosoup" worlds. Requires same transport, storage, and energy facilities as the Mobile Ore Extractor.

**TRACTOR-MINER-** Small device, requiring only .1 SCL, this unit pin-points and grapples meteors and asteroids in mining operations in asteroid belts and meteor drifts.

The unit requires 1 CFB, and can handle a mass up to 10 SCL in size.

**CT-SPACE MINER-** A device used to mine CT meteors, asteroids, and dust. It requires 1 CFB, and 1 OU for the control mechanism. The device refines 1 SCL/week of CT.

**CT-STORAGE HOLD-** A mechanism designed to generate energy walls in an HU so that CT may be stored in it. For each HU so treated, the ship requires 1 CFB and 1 OU for the controls.

There is a flat 10% chance of accident each time an HU is filled. If this occurs, the ship will take 10-1000 ERG of damage in the HU, and will be exposed to 100-600 RIF over the entire ship.

**CT-PLANET MINER-** A Mobile ore extractor designed for use on CT worlds. It is fully automated, and refines 1 SCL/day of CT. The Miner is used once only, as it cannot be cleansed of all the CT after use, and is left on the planet mined. CT-proof ferries are required to load the ore onto the ship, into the CT-Storage Holds. These ferries are also used only once, and are droned. There is a cumulative chance of 2% per hour that the Miner will have an accident and blow up.

All CT onloading is performed by automated tractor beams located in the CT-Storage Hold. At 100.000 CR per SCL of the stuff, CT mining is profitable. But you sweat for every millicredit you earn.

The Miner consumes 1000 ERG per day, and carries 5 Slugs. More are not necessary, as it has a rated life of only 50 hours.

**TRANSPORTERS:** After the destruction of the Empire, teleportation research was banned by the fearful survivors. But recently, the lid has been raised on such research, and crude transporters are now available for use.

The teleportation system used in Space Quest requires a sending station and receiving station, and cannot transmit living matter! A character has only a 1% chance of surviving such a transit.

**TRANSPORTER SENDING UNIT:** Requires 1 CFB and 1 OU.

The Sending Unit has a maximum load capacity of 1 SCL. It requires 100 ERG to transmit a load, and has a maximum range of 10 dets. The use of a sender requires a Receiving Unit in range, to which the Sender can tune-in.

**TRANSPORTER RECEIVING UNIT:** Requires 1 droided HU.

The Receiver is ferried to the planet's surface, or other location, and switched on. It has a maximum capacity of 1 SCL. The Receiver is a passive unit, requiring an activation signal from a Sending Unit signifying readiness to receive before it will transmit its load. The Receiver requires 10 ERG to operate each time it transmits, which will be charged to the Energy Status of the ship holding the Sending Unit.

**VEHICLES AND DRONES:** These are various mobile units available, some manned, some not.

**ATV (All-Terrain-Vehicles)-** These are vehicles of various sizes capable of movement on any Terrestrial world, and in some cases, of limited realspace travel. All of them use centiSlugs for fuel.

**ATV-1:** A one man vehicle, shaped like a bubble. Capable of speeds of 200 kph in normal atmospheres (pressure 3-20), 100 kph in denser media (fluids or thick atmospheres), and a speed of .01 centic in a vacuum. The ATV-1 requires 1 ERG per hour of operation, and has life-support systems which are active as long as power is available.

**ATV-4:** A larger vehicle, holding 4 characters, and .01 SCL of cargo. Capable of the same speeds as the ATV-1. Consumes energy at the same rate as the ATV-1.

Both the ATV-1 and the ATV-4 require .02 HU of storage space, but they may be launched with no special equipment or preparation, through the HU's cargo hatch.

**ATV-40:** An All-Terrain truck, with a 3 character cabin, and capable of pulling one of two types of trailer. The top speed of the ATV-40 is 100 kph, and it cannot move except on dry surface. It has no flight or submersible capabilities.

The ATV-40 has space for two centiSlugs, and consumes 2 ERG/hr.

The standard ATV-40 trailer is a pressurized container, holding .5 SCL of material.

The ATV-40c trailer is a miniature EU, set to hold up to 10 characters of the same environmental type comfortably for 1 day on a charge of 10 ERG.

**Armor for ATV units:** An ATV can be armored, providing four dice of armor, but this will reduce its speed by 50%. An ATV can also be fitted with a semi-portable screen generator, providing 4 dice of screen. These defenses are on the personal combat scale.

Screen generators require 100 ERG/hr, and are fitted to take Slugs for fuel.

**Armed ATV units:** An ATV-1 can mount one Blast Rifle to be controlled by the driver. An ATV-4 can mount two rifles of any sort, controlled by the passengers, and an Energy Mortar, a semi-portable energy weapon firing a 1 ERG beam, generating 10-60 points of screen penetration on a hit, or doing explosive damage as a 1 ERG grenade, depending on the control setting made by the character operating it. An ATV-40 can have two rifles of any sort mounted on the cabin, and can mount 6 rifles and two Energy Mortars on the trailer.

Armed ATV units require a centiSlug weapon power module for weapon energy. Any ATV with spare cargo space can carry extra centiSlugs.

**LANDING CRAFT:** Requires 1 HU for storage.

A Landing Craft can be launched with no special equipment, like an ATV-1 or 4. It has a capacity of .75 SU, and can hold 10 characters safely. For every extra character on board, a 10% chance of a crash exists. The maximum load is 20 in any case. Subtract 5% from this chance if the pilot of the Craft is a Spacer, and subtract 20% if he is above 3rd level.

A Landing Craft requires 1 ERG per g of the planet it is landing on to do so, and an equal amount for take-off. It can have a maximum charge of 50 ERG, drawn from the Energy Status of the mother ship. Landing Craft have no special sensors, screen or weapons.

**TROOP LANDING POD:** A one character landing module, designed for a one-way trip. It requires .02 HU to store, and can be tossed into a predetermined landing pattern. Only a character in Power Armor will survive the roughness of the landing, and the pods are usually used for troop drops onto combat planets. A sort of space-age paratrooper unit.

**DRONE RECON UNIT:** Requires 1 OU for storage and telemetry gear.

A remote-control satellite, capable of close orbit, overflight, or landing, used to visually survey a planet. A Recon Unit is fitted with a small sensor, and can feed data back to any of the ship's computers from a range of 10 dets. Its main advantage is picking up precise visual data on a prospective landing site, or spying on the inhabitants of a world.

The Recon unit uses a Power Slug for fuel, and requires 10 ERG per hour of operation.

**ATTACK FLIER:** An atmosphere capable plane, with VTOL capability, armed with two Blast Rifles with extended range. It can attain speeds of mach 5, and must be ferried down to the planet's surface to be of any use. With its computer support equipment, one of these could take out several dozen of the best Terran jet fighters of the late 20th century.

The Attack Flier also has bombload capacity for 20 bombs, either HE, incendiary, or Crystal head, of up to 50 ERG power.

#### 0937. LABORATORY INSTALLATIONS

A Lab Unit must be installed in an OU. Each lab requires a full OU of volume. A lab will not be damaged until the OU has taken over 50 points of overkill in STRUCTURE damage. If this occurs, the Lab Unit is ruined, and cannot be repaired.

**BIOLOGICAL LAB:** Used for research on any life-forms.

**PHARMACEUTICAL LAB:** A Biotech or character with the Pharmacy skill can manufacture any standard drug in 1-20 hours, at a cost of 10-100 ERG. This will produce 1 dose of the drug.

**ARMORY/SHOP UNIT:** An Armorer or Technic can produce one normal weapon here in 1-10 hours at a cost of 10-100 ERG. A Technic can make replacement systems, at the GM's option, in 10-100 hours (1-100 days) at a cost of 100 ERG per day. A Technic, working from schematics, can produce an Alien Device in 1-100 days at a cost of 200 ERG/day.

**TECHNICAL LAB:** A Character can study Alien Devices in this lab, to determine how they work.

#### 0940. SHIP COMPONENT PRICE LIST

<u>Ship Hulls</u>	<u>Cost</u>	<u>Sensors</u>	<u>Cost</u>	<u>Weapon Systems</u>	<u>Cost</u>
3 SU	300	L-R realspace	100	N-jump Missiles	4 per ERG
5 SU	500	M-R realspace	75	Chaffers	10
10 SU	1000	L-R N-space	200	Planetkiller	1,000,000
20 SU	1900	M-R N-space	150		
50 SU	4500	Onboard	50	<u>Power Generators</u>	<u>Cost</u>
100 SU	7000	E-M Visisensor	50	Solar Accumulator	5000
				Ramscoop Accumulator	10,000
				Ionic Converter	500,000
<u>Ship Units</u>	<u>Cost</u>	<u>Medical</u>	<u>Cost</u>		
CU	250	Autodoc	200		
DU	500	Manual System	100	<u>Mining Equipment</u>	<u>Cost</u>
GU	150	Diagnostat	75	Mobile Ore Extractor	1500
TU	120	Nutrient Analyzer	50	Atmospheric Scoop Miner	1000
EU	200	Biostasis Chamber	200	Nebular Scoop Miner	2000
OU	100	Psycho-integrator	100	Fluid Refining Plant	1000
HU	50	Biosphere		Tractor-miner	500
HU(p)	75	Simulator	750	CT-space Miner	10,000
Droned HU	HU price x 2.			CT-storage Hold	5000
BU:					
3 SU	300	<u>Servos</u>	<u>Cost</u>	CT-planet Miner	50,000
5 SU	500	Master Control	150	CT Ferry Drone	2500
10 SU	1000	Engineering	50		
		Repair Operation	100	<u>Transporters</u>	<u>Cost</u>
		Medical Rescue	100	Sending Unit	100,000
		Primary Circuit		Receiving Unit	10,000
<u>Computers</u>	<u>Cost</u>	Extension Module	100		
Astrograph	200			<u>Vehicles</u>	<u>Cost</u>
Engineering	200			ATV-1	100
Fire-control	200	<u>Weapon Systems</u>	<u>Cost</u>	ATV-4	500
Survey	150	ERG Gun	500	ATV-40 w/standard trailer	1000
Technical	250	Tractor/Pressor	250		
Navigational	150	Pulser	400	ATV-40c	1500
Biomedical	100	Missile Rack	100	ATV Armor	Cost of ATV + 50%
Sociological	250	Missiles:		ATV Screen Generator	300
Prospector	300	Attack Missile	2 per ERG		
Library	250	AMM	.5		
Astronomy	200				

<u>Vehicles</u>	<u>Cost</u>
ATV Mounted	
Rifles	2 x Cost of rifle.
Energy Mortar	500
Landing Craft	1000
Troop Landing	
Pod	50
Recon Unit	2500
Attack Flier	3000

<u>Lab Units</u>	<u>Cost</u>
Biological Lab	1000
Pharmaceutical Lab	2500
Shop/Armory	2500
Technical Lab	1500

#### 0950. CREW

The Players will, of course, form the main body and officer cadre of their own crew. It is possible that they will wish to increase their options by hiring non-player crewmembers, and the possibilities for this will be discussed below.

But first, we must explain in some detail the three principal positions on a starship in flight, manned by the characters heretofore referred to as "riggers."

Riggers are characters who have received the Rigger Operation, allowing the computers and controls for space flight mechanisms to be plugged into and controlled by their central nervous systems. This allows them to react as if the ship's elements were part of their own body.

A rigger controlling a Primary SU with the support of the correct computer will receive various bonuses they can add to the base values of the Unit's function. A rigger without computer support can keep a Unit functioning at base value, even if the necessary computer has been totally destroyed.

#### 0951. THE GO-RIGGER

The GO-rigger is the ship's pilot. He may be a Spacer, or another character with the Astro-gation skill. A GO-rigger will receive a bonus for the ship's maneuverability. The primary application of the bonus is in combat, where the GO-rigger bonus will be subtracted from the odds for the attacking ship's weapon fire to hit. The bonus has other applications, as stated in the Navigational Hazards section, where the skill of the pilot is a factor in saving the ship.

The basis for this bonus is the sum of the character's PSI and IQ scores, as shown in the following table.

TABLE 0951.1: GO-RIGGER BONUS

<u>PSI+IQ=</u>	<u>Bonus</u>
3 or less	-5
4-5	-4
6-7	-3
8-10	-2
11-13	-1
14-19	0
20-22	+1
23-26	+2
27-30	+3
31-34	+4
35-36	+5

A GO-rigger is stationed in the CU of a ship, and must be on station and rigged-in to the ship's systems to exercise his special gifts.

#### 0952. THE POWER-RIGGER

The POWER-rigger is the ship's engineer. He may be a Technic, or another character with the Engineering skill. Like any rigger, he must have had the Rigger Operation. A POWER-rigger will receive a bonus in the form of extra energy coaxed from the ship's power plants for combat,



It will be seen that the computer will often do a better job than a GO-rigger with mediocre Abilities.

The Spacer Class receives certain extra bonus opportunities in this area. A Spacer may derive a bonus from his Speed score, as shown in Table 0443.2. In addition, the Spacer will receive a +1 at the beginning of the campaign, and a further +1 for every three levels he has attained.

Thus, a character with an IQ and PSI totalling a 23 would have a GO-rigger bonus of +2. But if he were a Spacer, he would have a +3 at the start of his game-life, and at third level, he would have +4. At sixth level, +5, etc.

emergency maneuvers, etc., in the situations where such power is used as set forth in the rules. The base bonus value is determined by the POWER-rigger's IQ score, as set forth in Table 0444.2. The Technic Class will receive a further bonus of +2 ERG for every level they attain, starting at 1st level (i.e. the beginning of play).

Thus, a character with an IQ of 15 will add 2-12 ERG to all power generated by DU under his control, and if he were a Technic, he would add +2 to this total at 1st level, +4 at 2nd level, etc.

Such energy is not gotten free, for nothing, and is subtracted from the ship's Energy Status. The POWER-rigger does not create energy, but simply increases the efficiency of the power sources under his control. A POWER-rigger's station is one of the DU, and he must be on station to operate.

#### 0953. THE FIRE-RIGGER

The FIRE-rigger controls a GU in combat. *A single FIRE-rigger may only control one GU!* The FIRE-rigger uses a form of crude precognition to aim his weapons at the location his target will be in when the beam or missile gets there. The strain of this form of activity does not allow him to split his concentration between two posts.

The FIRE-rigger derives a bonus, added to his odds to hit a target, from his PSI score, as given in Table 0445.1. The Warrior Class will add a further bonus to this of +1 at the start of play, and a further +1 for every three levels attained. Thus, a character with a PSI of 13 will have a bonus of +1. A Warrior would have a +2 at 1st level, and +3 at 3rd level, +4 at 6th level, etc.

#### 0954. OTHER ACTION STATIONS

The question of what else constitutes an action station is important, for only characters at such a station will gain experience from ship combat. A few of the possibilities are:

Medical: Biotechs on stand-by in the ship's sick bay(s).

Rescue: Characters in space armor ready to go into hulled units to rescue injured.

Repair: Characters on stand-by to make repairs on SU or systems damaged in combat.

The GM and Players may work out other possibilities, but one thing must be clear: a character cowering in the Life Craft of his EU is not on a station, and does not accrue experience.

#### 0955. NON-PLAYER HIRELINGS

Players may wish to have their characters hire aides, and there are two overall classes of such. First, a single character, a member of one of the Professional Classes, with full Abilities and Powers. The GM will do well to whip up a batch of these ahead of time, so that no game time is spent in the rather laborious process of building such a character if the Players go a-hiring.

Such hirelings are always 1st level, and a group of Players wishing to hire one must apply at the local Guild Hall of the Class they wish to hire. There is a 60% chance each week that a non-player-character seeking employment will be on hand.

Such characters will require full outfitting by the Players, and must be payed 20 CR per wk. If he should still be going around with the Players when he advances a level, increase his salary by 10 CR/level.

The Players shall be responsible for maintaining the records of this hireling, and in the main they will control him as if he were a Player-character. But the GM reserves the right to determine the character's actions in the event of danger or stress, and attempts to use the hireling as Blaster-fodder will not be well received by the hireling.

This type of non-player-character is called a "personality non-player-character," and enjoys all the benefits accruing to the Player-characters themselves.

Players may not wish to deal with this type of character, and may, instead, hire teams of non-player-characters who are NOT members of a Class. These teams will have various skills, and cannot perform any function other than the one they are hired for. Available teams are:

Repair Team: A team of two technicians, not Technics, who are skilled in repair work to STRUCTURE and SYSTEM damage sustained by the ship, or equipment.

Medic Team: A team of two characters with the Medical Science skill for all three of the species in the Combine, who will act in the sick bay or as part of a surface expedition.

Combat Team: A squad of five Marines. Their main function is in onboard actions, but they also function as field infantry. There are four levels of competence in these squads: Green troops, fresh out of training camp; Average troops, who have seen some limited action; Veterans, who have been in a number of actions; and Elites, men who are only just short of being Warrior Class material. The Abilities of these characters will be equal to 50% of their Racial Maximum, should they be engaged in personal combat, and their effect in tactical combat will be explained later.

All such non-player characters will be less durable than the Player-characters, receiving no bonuses except for the training they receive, paid for by the Players. All teams hired must be equipped by the Players, with the exception of the more advanced Combat Teams.

Combat teams require armor and weapons to function, but they might have acquired some of the tools of their trade already, depending on the troop quality.

Green troops will have nothing. They must be outfitted completely at the Players' expense.

Average troops will have what is called Armor Kit #1.

Veterans will have Armor Kits #1 and #2.

Elite Troops will have Kits #1-3.

Armor Kit #1 consists of a suit of Macroplast Armor and a Slug Pistol, with Monolevel Screen.

Armor Kit #2 consists of a suit of Space Armor and a Blaster, with a Duolevel Screen.

Armor Kit #3 consists of a suit of Combat Space Armor with a Q-screen Harness and a Blast Rifle.

Any additional weapons or armor must be purchased by the Players for the Marines.

#### 0956. NON-PLAYER TEAM SALARIES AND COSTS

Salaries accrued by teams that are killed in action are to be paid to the Space Workers Brotherhood, the union handling support occupations in space, with an additional 100 CR memorial fee for each team member killed.

<u>Team Salaries</u>		<u>Armor Kits</u>	<u>Cost</u>
Repair Team	10 CR/wk.	Armor Kit #1	170
Medic Team	25 CR/wk.	Armor Kit #2	330
Combat Team:		Armor Kit #3	760
Green	5 CR/wk.		
Average	10 CR/wk.		
Veteran	20 CR/wk.		
Elite	50 CR/wk.		

All Armor Kits come with weapons loaded and screen and armor powered. Extra ammo or power cells must be purchased by the Players.

#### 0957. HIRELING LOYALTY AND MUTINY

If a group of Players:

- withhold hirelings' salary.
- kill or deliberately endanger a hireling, beyond the normal capacities of his job.
- continue an expedition in a dangerously damaged ship.

Then there is a chance of mutiny on the part of the hirelings.

The GM will roll percentile dice, adjusting for the Empathy score of the senior Player-Spacer on board. If the roll is less than 30, the hirelings may mutiny. Roll a 6-sided die:

TABLE 0957.1: MUTINY EFFECTS TABLE

Die

<u>Roll</u>	<u>Effect</u>
1	Crew reconsiders. No mutiny.
2-3	Crew demands double wages for rest of expedition. If not granted, they mutiny.
4-5	Crew demands an immediate return to port. If not done, they mutiny.
6	Crew will mutiny.

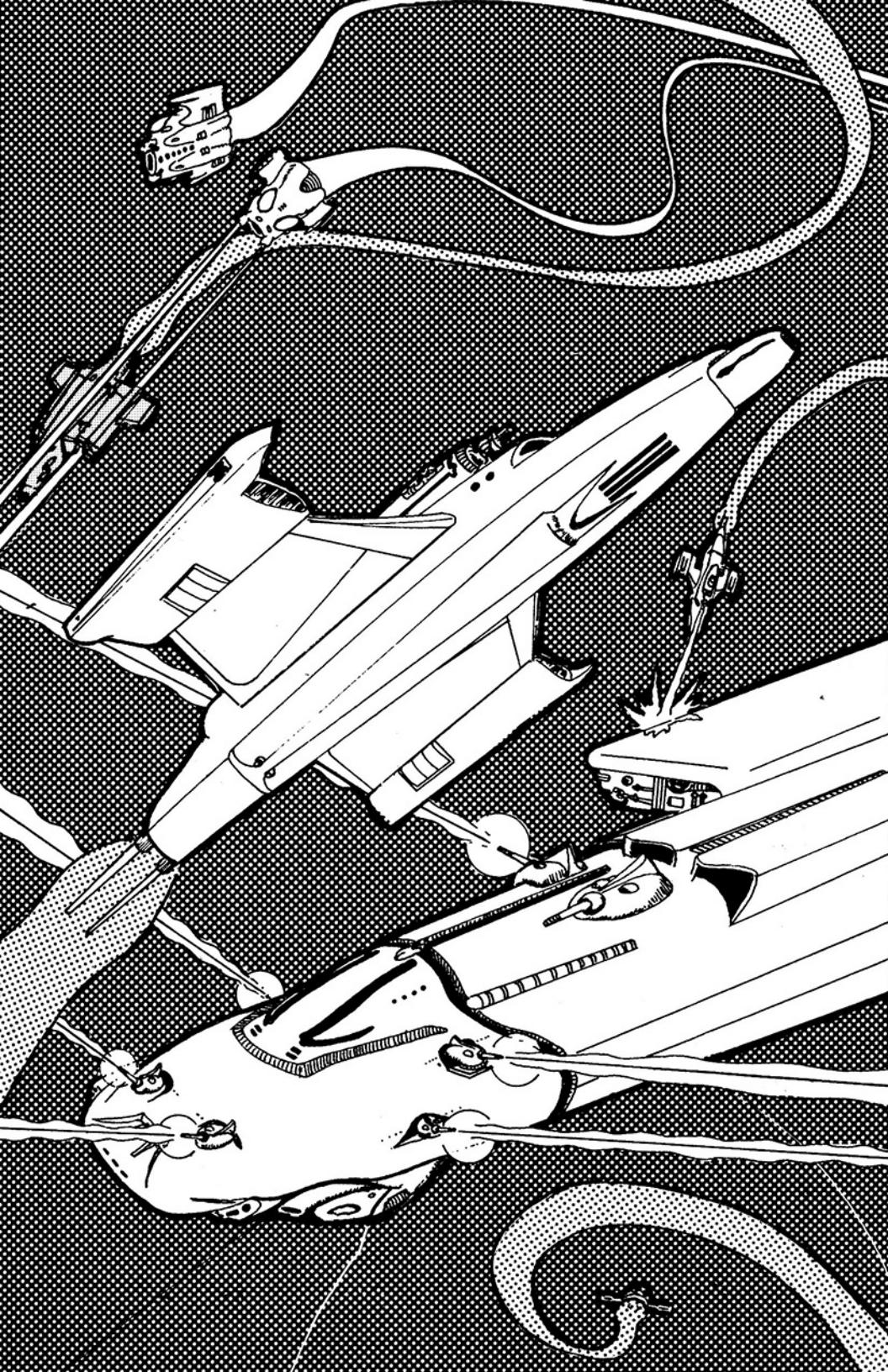
A mutinous crew will seek to take control of the ship by force of arms. If opposed, they will fight to kill, but if a Player-group surrenders at once, they will simply return to port. A court of inquiry will be held upon a mutinied ship returning to port, and the results are determined by the roll of a 6-sided die.

TABLE 0957.2: COURT OF INQUIRY RESULTS

Die

<u>Roll</u>	<u>Result</u>
1	Crew found justified. Players must pay fine of 1000-6000 CR.
2-3	Crew found justified. No fines or penalties on either side.
4-5	Crew jailed.
6	Crew jailed. Space Workers Brotherhood pays 1-10 thousand CR fine to Players.

There is a lot of material in a good mutiny scenario for a GM to play with. A crew may decide to maroon the Players, or cast them adrift in a Life Craft. An encounter may occur in the middle of the battle for control. Any number of things are possible.



## 01000. COMBAT

There are many possible scales of combat. Ship Combat occurs between two vessels, or a ship and a ship scale monster; Personal Combat, combat between small numbers of human scale foes; Boarding actions, fought in a quick and bloody style by opposed teams of characters; Grand tactical combat, for which rules exist on space or ground engagements between large numbers of opponents. The GM must decide in a given case, what the appropriate scale for a combat is, in terms of fairness and playability. Usually, the case will be clear cut enough that the correct action is obvious. In less natural situations (1 Player vs, an army of mounted knights, for instance) the GM will be the final authority on the combat scale employed..

## 01010. SHIP COMBAT

All vessels in such combat are assumed to be at a fixed realtive velocity and constant range, of 5-10 dets, or hm in N-space. The range does not add or detract from the hit probabilities of a ship weapon, and only becomes a major factor in certain maneuvers described below. Weapon range is 10 dets or hm, and the odds to hit are the same as inog as the target is in range.

Combat results are resolved simultaneously.

In ship combat, there are four factors to be considered: Determination of the amount of energy allocated to the ship's weapons; determination of the energy allocated to the ship's defensive screen; determination of a hit or miss for the weapons fired; and finally, the amount, location, and type of damage done by a hit.

## 01011. WEAPON ENERGY

Each mt of Ship Combat, the opponents must determine the amount of energy they have available for their weapons. Each ship will have a variable amount of energy, based on the number of DU it has. Monsters have an assigned range of available energy.

Each DU will provide 1-10 ERG for the weapons. The GM will roll a 10-sided die for each operative DU on the ship, and total the scores. If a ship has a very large amount, the GM may prefer to multiply the roll of a single die by the number of DU. To this score will be added any bonuses due the POWER-rigger, and any other energy bonuses the ship may have accrued from special devices or some such. This total score is the weapon energy for that mt.

Each GU using energy to fire its weapons that mt will put out a blast of power equal to the weapon energy. Thus, in a given mt, the "S.S. Ess-ess" generates 32 ERG of weapon energy. It has three GU firing weapons, and each shot will have a force of 32 ERG.

The total energy expended in a mt is equal to the Weapon energy times the number of GU firing. Thus, in the mt described above, the "S.S. Ess-ess" expended a total of 3 x 32, or 96 ERG.

## 01012. SCREEN ENERGY

Each mt of Ship Combat, the GM will repeat the process described above to determine the energy available for the ship's screen. Screen energy is expended whether a shot strikes the screen or not. Thus, if a vessel generates 23 ERG for the screen, 23 ERG have been expended.

Expended energy should be kept track of on a sheet of scratch paper, not only for reference in the event of a hit scoring, but so that the expenditures may be deducted from the ship's Energy Status, on the record sheet.

Rolls to determine energy allocation can be tedious, and the GM may wish to have Players roll for their ship, while he handles the non-player opponents. In any case, patience with the process until familiarity is attained is required. Any arrangements to ease the strain that are acceptable to the GM should be used, as long as an accurate record of the energy expenditures is kept.

## 01013. HIT DETERMINATION

For each GU firing, the GM must determine if a hit is scored. Note that a hit will not automatically have any effect on the target, as the shot must penetrate the target's screen.

Each of the available weapon systems has a base score which must be equalled or exceeded on the roll of a 20-sided die to make a hit. For each shot fired, the GM will roll a die, add any bonuses accruing to the firing FIRE-rigger, subtract any bonuses accruing to the opposing GO-rigger, and compare the final score to the table below.

TABLE 01013.1: SHIP WEAPON HIT SCORES

Weapon System	Score
ERG Gun System	12
Tractor/Pressor System	14
Pulser System	14
Missiles	16

Eg. The "Hunter" fires its two Energy Cannon at the "Mallow-mars." The "Hunter" has a FIRE-rigger on GU #1 with a +4 to hit. Its second GU is firing on automatic. The "Mallow-mars" has a GO-rigger with a +2 defensively. The FIRE-rigger on "Hunter" is firing at +2. The GM rolls, scoring a 10 with the first roll, and a second roll for the automated shot scores 3. The first shot has a final score of 12, scoring a hit on "Mallow-mars." The second shot missed by a mile, or even a det.

#### 01014. SCREEN PENETRATION

When one or more hits are scored on a target, it must be determined if the shots hitting are of sufficient power to penetrate the screen, thus doing damage. Subtract the screen energy from the weapon energy of the shots hitting. The difference, if any, will be the number of ERG penetrating. Thus, if a 10 ERG shot strikes a 9 ERG screen, one ERG will penetrate to do damage. If a 10 ERG shot strikes an 11 ERG screen, it will bounce off harmlessly.

The hits of the same weapon form in the same mt on the same screen are counted cumulatively. Thus, if two Energy Cannon shots hit a screen, their weapon energy being 12 each and its screen energy being 13, 11 ERG will penetrate to do damage.

However, these cumulative hits must be the same weapon exactly. Different forms of the same weapon system, or different systems entirely, are counted separately.

#### 01015. TYPES OF DAMAGE

As set out in section 0935, the different weapons have different effects when they hit. STRUCTURE damage is damage done to the hull of the SU it hits. For each ERG that penetrates, 1 point is subtracted from the STRUCTURE score of the SU.

SYSTEM damage is damage done to the control circuits of a system. If a weapon doing this kind of damage hits an SU containing such equipment, the damage is subtracted from the SYSTEM score of the equipment involved. This is particularly dangerous if the SU hit is a TU.

CREW damage is done to the personnel located in the SU hit. Lethal CREW damage is subtracted from the Hit Points of the characters involved. The CREW damage done by the Neuro-disruptor is ratioed over the Co-ordination scores of the affected characters, to generate the percentage chance that they will be rendered unconscious by the action of the beam.

In each case, 1 ERG of penetration will do 1 point of damage to the affected element of the ship struck.

Recapitulating the effects of each weapon briefly:

*Energy Cannon* and *Energy Torpedoes* do equal amounts of STRUCTURE, SYSTEM, and CREW damage.

*Tractor* and *Pressor* beams affect the odds of hitting the target vessel with other weapons, and have auxiliary uses as described in section 0935.

*Rattler* hits do STRUCTURE damage.

*EMP Pulser* hits do SYSTEM damage.

*Neuro-disruptor* hits do paralyzing CREW damage, as described above.

*Missile* hits do STRUCTURE and SYSTEM damage. A missile hit on a hulled SU will do lethal CREW damage to any character in the SU.

#### 01016. DAMAGE LOCATION

We here introduce the main difference between Player-ships and non-player ships. A Player ship is carefully laid out on the Ship Record Sheet, the location of each character established. But the data on the non-player ship is sketchy in the extreme.

Thus, the location and effects of damage on the two types of vessel are very different.

When a shot has penetrated the screen of a Player-ship, the GM will roll a die with sides equal to the number of SU in the Hull of the vessel. The number rolled indicates the number of the Ship Unit hit, in the order of the SU as they are located in the record sheet. The hit will do its damage to that SU only.

Thus, if a ship takes an 83 ERG hit in SU #x, then SU #x will take 83 points of STRUCTURE damage, hulling it with 53 points of overkill. Any SYSTEM elements in the SU will be exposed to 83 points of SYSTEM damage (unless it is a TU, see below), and each character in the SU will take 83 points of damage.

If a SYSTEM hit strikes a TU, the GM will roll a 10-sided die, and only the CFB whose number is so determined will take damage. Pretty good engineering, huh?

Thus, Player-ships, or specially designed ships used by "personality" non-player characters, will take a good deal of punishment.

Note also that energy penetrating as a result of concentrated fire by the same type of weapon will count as a single hit, no matter how many shots went into it.

In contrast, non-player ships have a flat score in each of the three areas of damage. No location roll is made for hits made against them. Instead, the total damage penetrating the screen is subtracted from the total.

If a ship loses all its STRUCTURE points it is totally disintegrated. If a ship loses all its SYSTEM points, it is a derelict, with no power or movement. If a ship loses all its CREW points, they are either dead or paralvzed. The ship can continue fighting on automatic controls, if it has any SYSTEM points left, but the computers will surrender if the STRUCTURE damage is more than 50% of the ship's total score.

#### 01011. CRITICAL DAMAGE

This is a tricky point to adjudicate for Player-ships. If the Astrogation Computer is knocked out, and no GO-rigger is on station, then a ship will stop moving. If the Engineering Computer goes, then without a POWER-rigger the ship has no power for combat or the drive. The GM will have to base his estimate of the criticality of such damage on the ability of the Player-characters to respond to the loss.

In the question of STRUCTURE damage, there is one hard and fast rule, for Player-ships. Each time a SU takes more than 100 points of overkill, it is lost forever, irreparable. This will weaken the hull structure of the whole vessel, and determination must be made to see if the ship will break up in space. The ratio of the number of SU so slagged over the total number of SU in the ship equals the percentage chance of the vessel breaking up. Thus, if a 10 SU ship has one SU totally destroyed, it has a 10% chance of breaking up. If it survives this roll, no further check need be made until such time as another SU is slagged. The roll must then be made again, adding the newly destroyed SU to the total. If a ship breaks up, it will crack in two at the location of the SU most recently slagged, destroying ALL equipment and crew located in the adjacent SU totally (Player-characters receive a Speed ST for getting out in time), and ALL the other SU in the ship will take 40 points of STRUCTURE damage.

For non-player ships, this is a danger of wider proportions. For all damage in an area in excess of 50% of the ship's total score, there is a 2% chance per point of further damage that the non-player ship will lose all remaining points in that area. That is, in a non-player ship that has a total of 100 CREW points, for every point of CREW damage it sustains over 50 points, it will have a 2% chance of losing all its remaining CREW points. This is rolled for in each mt that it takes further damage in the danger area.

Eg. A non-player ship with 100 STRUCTURE points has lost 52 of them. That mt it has a 4% chance of blowing up. Next mt, it takes no further STRUCTURE damage, and need not roll that mt. Next mt, it takes 30 more points of damage, and must roll to check its new 68% chance of sustaining critical damage. The GM rolls a 42, and the ship explodes.

If a ship is in danger of critical damage in more than one area, the GM will roll separately for each probability.

#### 01012. COMBAT MANEUVERS

A number of ship maneuvers are possible, at the option of the GM. It is suggested that the campaign avoid these rules until the GM and Players are comfortable with the basic rules.

#### 01013. BREAKOFF

A ship can attempt to escape from a combat by making a transition into the other continuum, cutting or activating the N-drive, as is appropriate. To do so, the ship must divert all power to the drive, generating no energy for screen or weapon. The ship will be vulnerable in this state for 1 mt, exposed to all enemy fire. If the ship takes a hit of any kind, there is a 2 in 6 chance that it will not be able to make the transition for one more mt. This can go on indefinitely, until the ship escapes, ceases its efforts to escape, or is destroyed.

Monsters that can follow into realspace have their odds of success given in the Monster sections. A ship that attempts to pursue its prey must execute a breakoff of its own, and it has a 1 in 6 chance of success, if it follows the breaking-off vessel on the next mt.

#### 01014. CLOSE/RUN/PURSUIT

A vessel may seek to close with an opponent, in order to board it.

A vessel may seek to flee from an opponent without changing continua.

If one vessel retreats from a closing vessel, or chases a fleeing a vessel, a pursuit condition exists.

At the time that a vessel begins a closing or running action, the GM will roll a 6-sided die, to determine the relative distance separating the ships at that point. A roll of 1 means the distance is 5 dets or hm, a roll of 2 means 6 dets, 3 means 7 dets, etc.

Upon determining the separation, the GM will roll a 6-sided die for each mt the ship is closing or running. This will be added or subtracted as is appropriate. The new separation is then noted.

If a pursuit exists, both ships will roll a 6-sided die. The higher score will indicate the vessel that closes closer or runs farther, as the case may be, the interval between the ships changing by the difference between the ships as a number of dets.

Eg. A ship tries to flee its opponent, the initial separation is 7 dets. The opponent pursues. Ship #1 rolls a 4, ship #2 rolls a 3. Ship #1, the runner, pulls ahead by 1 det. The separation is now 8 dets. The ships are still in firing range of each other, and may exchange fire, if they desire.

Die rolls are modified as follows. For every DU whose output is added to the drive, a ship will add +1 to its die roll.

If a ship has a GO-rigger with a bonus greater than the bonus of the GO-rigger on the opposing ship, it will add 1 for every point of superiority.

If the ship has a similar superiority in the score of its POWER-rigger, it will add the difference to its die roll.

If a ship gets farther than 10 dets from a pursuer, the two ships are out of range. If the pursuer cannot close to 10 dets or less within 3 mt, then the running ship will have lost the pursuer permanently, as the long-range sensor scans for ships cannot find a vessel that is actively trying to stay hidden.

If a ship closes to within 0 dets or less, according to the dice, then either ship may attempt to grapple and board the other.

#### 01015. BOARDING ACTIONS

If a pursuit brings the ships into a range of 0 or less then a grappling attempt may be made. A ship may grapple twice each mt, and no special equipment is needed, as long as at least 1 SYSTEM point is left for the grappling ship.

A grappling attempt will succeed on a roll of 2 on a 6-sided die. Once a ship is grappled, only a disconnecting action ordered by both vessels simultaneously will ungrapple them. Thus, victory or treaty are the only ends possible for a boarding action.

Ship weapons of either grappled vessel will not be able to fire at such close quarters, and fire directed at grappled vessels will strike both equally.

Once a ship has grappled an opponent, either may begin cutting boarding portals. It requires three mt to do this. Non-player ships will cut 1-2 portals, and Player-ships have free choice on the matter. Note that if two ships of unequal size grapple, the smaller will cover only some of the SU of the larger, in the manner described for an attack by a Hyperzoa. The GM will randomly determine the location of boarding portals cut by a non-player ship as if determining hit locations.

#### 01016. BOARDING COMBAT

The following rules are designed to quickly settle boarding combat actions where large numbers of non-player characters are concerned. If such an action boils down to a duel between a few characters on either side, the GM should revert to the Personal Combat rules.

A SU can hold 20 men, the equivalent of 4 squads of Marines (4 Combat Teams). Note that a character in Power Armor takes up the space of two men on the ship.

If a SU is filled when a foe seeks to enter it, only one squad on each side can fight across the area of a standard bulkhead hatch or boarding portal.

A Player ship will have combat teams designed by the Players, and a non-player ship will have teams following this table.

TABLE 01016.1: NON-PLAYER SHIP MARINE COMPLEMENTS

Ship Type	Percentage of crew in teams	Troop Quality	Armor Kit
Warship	30%	Veteran	#3
Explorer	10%	Veteran	#3
Trader	10%	Average	#1
Pirate	50%	Average	#2
Slaver	25%	Average	#3
Cargo	1 squad	Green	#1
Sníz	50%	Elite	#3
Hagnagai	50%	Veteran	#2

The percentage figures represent what proportion of the ship's CREW score stands for boarding team members. Note that this is applied to the CREW score at the moment of boarding. A vessel with 20% team effectiveness, with a CREW score of 35 at the moment of boarding, will have 7 men in their team. It is possible that all possible boarding strength will be gone before a ship can close to boarding range.

Boarding combat is resolved by the scores rolled on a 10-sided die by each opponent. The side rolling the low score will subtract the difference from its troop count.

Eg. Two squads with no modifiers on their die rolls are fighting it out. Squad number one rolls a 7, and number two rolls a 2. Squad number two is eliminated.

To determine the die roll modifications that a team may receive, it is necessary to consider four factors: Numerical strength; weapons used; troop quality; and armor kit.

Numerical strength is calculated as follows. A non-player-character counts as one man. A Player-character, or a "personality" non-player-character counts as two men, except in the case of Warriors, who count as three. Any character in Power Armor will count as two men.

Eg. A non-player-character in Power armor counts as two men. A Player-character in Power Armor counts as four men. A Warrior in Power Armor counts as five men, or one squad.

If the numerical strength of the opposing teams is unequal, consult the table below, checking the modifier applied to the difference between the two sides. The numerically superior team will ADD the modifier given to the die roll, and the numerically inferior side will SUBTRACT it.

<u>Difference</u>	<u>Modifier</u>
0-1	0
2-5	1
6-9	2
10-12	4
13 or more	6

In any combat on board the ship, whether it is boarding combat or personal combat, a question arises concerning the effect of the more powerful weapons on the delicate innards of the SU where the combat occurs. Thus, the personal weapons are divided into three classes, and each has a different probability of causing damage to the SU during combat.

"Safe" weapons are Needle Guns, Neuro-distorters, Tangle Guns and non-energy handweapons.

"Risk" weapons are Slug Guns, Fluid Guns, Splat Rifles, and Energy Handweapons.

"Danger" weapons are hand grenades, Blasters, Ion Chatters, Particle Disruptors, Gamma Maces, and EMP Guns.

The use of Crystal Explosive, Neutrex, missiles, and other heavy explosives will destroy anything in the SU and will hull the Unit as well, doing 1-100 points of STRUCTURE damage.

"Safe" weapons may be used with no risk to the contents of the SU. "Risk" weapons have a cumulative 10% per mt chance of causing ALL SYSTEMS in the SU to shutdown, with 1-100 points of overkill. "Danger" weapons have a similar chance of 20%. These odds are constant, whether one side or both are using the unsafe weapons. It also applies to monsters using effects comparable to the unsafe weapon types.

After each mt of onboard combat, the GM will roll percentile dice, to see if the SU has been damaged. If the score rolled is less than or equal to the accumulated probability of damage occurring, then the SU systems will shutdown. This makes combat in a TU a tricky matter for the defenders in a boarding action. Unfortunately for the defenders, the more dangerous weapons are also the more powerful ones. The weapons used will modify the die roll.

<u>Weapons used</u>	<u>Bonus</u>
"Safe" weapons	0
"Risk" weapons	+1
"Danger" weapons	+2

The quality of non-player troops will modify the die roll, as will the armor worn.

<u>Troop quality</u>	<u>Bonus</u>	<u>Armor Kit</u>	<u>Bonus</u>
Green	-1	#1	0
Average	0	#2	+1
Veteran	+1	#3	+2
Elite	+3	Power Armor	+3

Any Warrior in command: +2

Non-Warrior Player-character in command: +1.

Note that Player-characters, or "personality" non-player-characters, are not automatically eliminated by their team's taking a loss. If such a character is on a losing team, he will take one 6-sided die of damage per point of difference between his side's roll and the winning roll.

Remember that the effects of damage in this kind of melee will depend on the weapons used by the winning team. If armed with non-lethal weapons (Neuro-distorters, drugged Needles, etc.) they will not have killed their opponents, but only incapacitated them.

Even if lethal weapons are used, assume 5-30% of the losers casualties are not dead, but only so wounded as to be unconscious or immobilized. Roll a 6-sided die and multiply the result by 5% to determine this proportion.

#### 01017. EXAMPLE OF A BOARDING COMBAT

A team of 5 Player-characters in Power armor is clashing with a 10 man team of pirates in a boarding action. The Players shun the use of the Armor's Blast Rifle for their Slug Rifles. The pirates are using Blasters. As set forth in Table 01016.1, the pirates are in Armor Kit #2, and they are Average troops.

The Players have a numerical strength of 2 for each character (non are Warriors) plus two each for the Armor, for a total of 4 men per character, or 20 men.

The pirates have a strength of 10 men.

The Players have a superiority of 10, so they will add 4 to the die roll, and the pirates

will subtract 4 from their die roll.

The total bonuses for the Players total  $4+1+3=8$ .

The total bonuses for the pirates total  $(-4)+2+1=(-1)$ .

In mt 1, the Players roll a 2, for a total of 10. The pirates roll a 7, for a total of 6, and lose four men. The Players now have a superiority of 14, and the modifier changes to 6.

The pirates are now rolling at -3, and the Players at +10. The pirates will almost certainly be wiped out, and may be routed.

At the end of mt 1 the GM rolls percentile dice. As the pirates are using Blasters, any roll less than 21 will cause damage to the SU. He rolls a 47, and nothing happens. At the end of mt 2, if fire is exchanged, he will roll again. A 40 or less will do damage. He rolls a 39, and all systems in the SU shut down at (rolling again) 53 points of overkill.

Assuming all 10 pirates are casualties, the Players discover that 20%, two pirates, are still alive after the combat. These prisoners may be executed (ejection from an airlock without a suit is the traditional manner), or brought back to the Combine for trial, with the possibility of a reward on their heads.

#### 01018. MORALE AND MOVEMENT IN BOARDING COMBAT

Boarders not in Power Armor may use the bounce tubes of a boarded ship, if these have not been cut off at the central controls in the CU or DU.

Boarders in Power Armor, or any other character for that matter, must move via the ship's hatches at 1 SU per mt. If these hatches are sealed off from the CU, or manually on the spot, then the boarders must cut through them, requiring 1-3 mt to do so.

These restrictions on Power Armor movement apply to all cases, not merely Boarding actions.

In a Boarding action, if any side gains a die roll bonus 10 points or more greater than the bonus of their opponents, then the opponents may be pushed back or routed on the next mt that the superior side wins the roll.

Eg. Team #1 has a +6, and Team #2 has a -4. Team #2 must check the following table the next mt that they take a loss.

TABLE 01018.1: BOARDING MORALE

Die

Roll	Result
1	Team surrenders.
2	Team routes. Boarders will try to return to their own ship. Defenders will retreat to their ship's CU. A team that cannot do so will surrender.
3-4	Team retreats 1 SU in either direction. A team that cannot retreat will route. A team that cannot route will surrender.
5-6	Team continues combat.

This die roll may be modified.

With a Player-character or Warrior in command, a team adds 1 to the die roll.

Against opponents who take no prisoners, or slavers, the team adds 1 to the die roll.

Elite troops will add 1 to the die roll.

Player-characters and "personality" characters will have free will in this regard, and may stand against impossible odds for as long as they desire.

A team must have an accessible SU at their backs to retreat. They must have a clear path to their ship's CU or their boarding portal to route.

A boarding team unopposed may move in any direction they can. They may always closely pursue a retreating or routed opponent.

#### 01020. PERSONAL COMBAT

Personal combat is combat between a few characters on a side. It may occur on the ship or out of it. In a combat where a Player-character is facing a duel, shootout, or similar one-on-one confrontation, and in all encounters with human scale monsters, or dangerous animals on planet, this scale is used.

In Personal Combat, as in Ship Combat, the main functions to determine are hitting the target, and penetrating its defenses. The amount of penetration, modified by the weapon used, is the determining factor for the damage done.

#### 01021. HIT DETERMINATION

In all forms of Personal Combat, whether using guns or handweapons, or in unarmed combat, the determining factor for the base hit score is the Co-ordination score of the attacker. Assume a score of 50% of the Racial Maximum for non-player-characters. If no species Ability ranges are determined for the attacker's race, assume a 12 to be the score.

In Personal Combat, unlike any other form of combat in Space Quest, the hit score is rolled for on a 30-sided die, not a 20-sided one.

The final score rolled on this die, after all modifiers have been added, must equal or exceed the score given in the following table, based on the Co-ordination score, if the attack is to hit the target. Use the Base Co-ordination score, not the effective score.

TABLE 01021.1: BASE HIT SCORE

Co-ordination Score:	2-4	5-7	8-11	12-14	15-16	17-20	21-23	24
	26	22	20	16	12	10	8	6

All die rolls are modified according to the following values.

Attacks with Handguns, Mechanical Weapons, or Thrown Weapons:

Range:	Weapon type and firing pattern:
Point-blank	+4 Projectile weapon +1
Short	+2 Beam +2
Medium	0 Fan (wide-angle beam) +6
Long	-1 Burst +4
Extreme	-4 Sphere +2
	Gas/Fluid +5
	Mechanical Weapon -2
	Thrown -3
	Shoulder weapon +1

Firer is:

		Target is:
Braced and aimed	+1	Braced and aimed +2
Moving	-2	Moving -1
Flying	-3	Flying -3
Evading (trying to)	-3	Evading -2
Blinded	-6	Blinded +3
Firing from Cover	-2	Immobilized +4
Firing more than 1 weapon	-1 to each weapon	A vehicle +2
Wounded: 1-50% damage	0	In cover -3
51-75%	-1	Invisible -10
75% or more	-3	Partially visible -5
In Power Armor	+1	Surprised +4
		Shot from behind/Ambushed +6

Gravity will affect the modifiers for both opponents directly, in addition to the effects it will have on Ability scores.

If the current-g is 2 g more than the native-g, or more, the firer subtracts 4 from the die roll.

If the gravity is 1.5 to 2 g more, the firer subtracts 3.

If the gravity is 1 to 1.5 g more, the firer subtracts 2.

If the gravity is .5 to 1 g more, the firer subtracts 1.

If the gravity is within .5 g either way, the firer makes no modification to the die roll.

If the gravity is .5 to 1 g less than the native g, the firer adds 1 to the die roll.

If the gravity is 1 to 1.5 g less, the firer adds 2.

If the gravity is 1.5 to 2 g less, the firer adds 3.

If the gravity is 2 g less, or less than that, then the firer adds 4.

Finally, remember that Warriors will add +1 for every three levels they have attained, and that characters may have accrued further bonuses by weapon training.

Attacks with Handweapons or in unarmed combat:

The modifiers for gravity will apply as listed above.

Other modifiers are:

Attacker is:		Defender is:
Fighting offensively	+1	Fighting offensively +1
Fighting defensively	-1	Fighting defensively -1
In any armor but Power Armor	-2	A Silicoid +2
In Power Armor	-4	A Warrior -2
Blinded	-6	A Trilax -1
Using more than one weapon	-1 to each weapon.	Invisible -5
Wounded:	As above.	Partially invisible -3
		Blinded +3

01022. WEAPON EFFECTS

This section will recapitulate the data so briefly outlined in sections 0711-0715, with the full data on the various weapons and their effects in combat.

**Energy Handguns:**

Weapon	Fire Pattern	Range in meters:				Rate of fire/mt	Penetration	Damage Factor	Energy Consumption
		Short	Medium	Long	Extreme				
Blaster	Beam	20	50	100	500	2	4	10	5 cE*
	Burst	10	30	60	100	1	3	8	20 cE
	Fan	5	10	15	20	1	2	5	20 cE
Blast Rifle	Beam	30	80	250	1000	2	6	10	10 cE
	Burst	15	40	70	100	2	4	8	25 cE
	Fan	10	15	20	25	1	3	5	25 cE
Ion Chatter	Burst	15	30	50	80	1	5	2	10 cE
Tangle Gun	Sphere	5	20	50	100	2	2	2**	10 cE
Gamma Mace	Beam	10	30	60	100	1	4	20***	20 cE
	Fan	5	10	15	20	1	4	10***	50 cE
EMP Gun	Beam	10	20	40	80	2	3	Special	10 cE
Neuro-distorter	Beam	20	80	100	250	2	4	2****	10 cE
Neuro-rifle	Beam	30	100	180	500	2	6	3****	20 cE
	Fan	5	10	20	30	1	3	2****	25 cE
Particle Disruptor	Beam	12	36	72	360	1	6	10	6 shots
Laser Type D	Beam	10	40	70	250	1	3	10	10 shots
Laser Type E	Beam	10	30	50	180	1	2	6	2 shots

\* cE- Abbreviation for "centiErg," an energy unit equal to .01 ERG. A milliSlug battery has a charge of 100 cE.

\*\* The damage indicates the number of mt the Tangle Sphere will hold the target immobilized.

\*\*\* Each point of damage generated exposes the target to 1 RIF.

\*\*\*\* Ratio the damage generated over the target's Co-ordination score to determine the percentage chance of the target being paralyzed by the weapon for 1-100 minutes.

All other damage figures given are direct physical damage, and the score generated is subtracted from the target's Hit Points, in a normal manner.

To illustrate how to read this chart, let us take the example of the Blaster. A Blaster can fire a Beam, Burst, or Fan of energy. The ranges for the Beam are 20 meters or less for Short range, 20-50 for Medium range, 50-100 for Long range, and 100-500 for Extreme range.

A Beam will do 4 dice (6-sided) of penetration, and the damage factor for the Beam is 10. This means that the damage factor times the points penetrating the target's screen equals the damage sustained by the target. Rate of fire indicates how many times a weapon may fire in a mt using a particular pattern. A weapon may use only one pattern in a given mt. A Blaster can fire 2 Beams in a mt, and each Beam will consume 10 cE from the battery.

Remember that only a screen unit will defend against Energy weapon penetration. An unscreened target will take the full value rolled on the penetration dice times the damage factor as damage.

**Energy Handweapons:**

Weapon	Penetration	Damage Factor	Energy Consumption
Luxblade	4	10	1 cE per mt of operation.
Neroverod	3	4*	5 cE per hit.
Force Glove	2	6	1 cE per mt of operation.
Stasknife	1	3	1 cE per minute of operation.
Stasblade	2	5	1 cE per mt of operation.
Vibroknife	2	2**	1 cE per hit.
Vibrosword	3	4**	5 cE per hit.

\* As a Neuro-distorter.

\*\* Does physical damage AND has a chance of exposing victim to paralyzing effect. Ratio damage done by the hit over the current Hit Point score of the victim. This is percentage chance that the victim will be knocked out for 1-10 mt by the vibrations of the weapon.

*Projectile and Mechanical weapons:*

Weapon	Pattern	Range in meters:				Rate of fire/mt	Ammo Consumption
		Short	Medium	Long	Extreme		
Slug Pistol	Shot	10	25	50	100	2	1 round.
	Burst	5	10	15	20	1	10 rounds.
Slug Rifle	Shot	20	50	100	1000	3	1 round.
	Burst	10	30	80	500	1	10 rounds.
Missile Projector	Shot	20	75	500	10000	1	1 round.*
Needle Gun	Shot	5	7	10	50	3	1 round.
Grenade Pistol	Shot	30	100	500	2000	1	1 round.*
Fluid Gun	Shot	10	20	50	80	1	1 round.*
Splat Rifle	Burst	5	20	30	50	1	10 rounds.*
Repeater Crossbow	Shot	10	30	60	100	1	1 round.
Power Pulley Bow	Shot	10	20	50	100	1	1 round.*

*Ammo Effects:*

Ammo	Penetration	Damage Factor	Ammo	Penetration	Damage Factor
AP Slug	5	2	Thermosol Canister	5	10
HE Slug	3	8	Cryosol	5	10
AP Missile	6	5	Hyperacid	6	15
HE Missile	4	10	Gas	0	Gas effect.
Incendiary Missile	3	20			
Standard Needle	2	2	HE Hand Grenade	3	15
Electrocharge	2	10	Fragmentation	5	10
Drugged	2	2+drug effect	Gas	0	Gas Effect.
			Standard Quarrel	2	1
			HE tip	2	5
			Electrocharge	2	10
			Standard Arrow	1+3	1
			HE tip	1+3	5
			Electrocharge	1+3	10

\* The weapon only holds one round. In the case of the Grenade Pistol, the weapon is only used once, and cannot be reloaded. In the case of the Splat Rifle, the weapon holds a 10 round cartridge, which is fired in one blast.

Hand grenades may be thrown 5 m for every point of Effective Physical Power the character has. They have a burst radius of 5 m for the HE grenade, 10 m for the fragmentation, and 10 m for gas. A gas cloud will last for 10 mt, and then dissipate.

A Crystal Explosive charge will do great damage. A 1 ERG charge will have a radius of total destruction for .5 km around ground-zero. For .25 km beyond that, anything not in an armored ATV, Power Armor, or equivalent shelter, will be destroyed, and the named forms of protection will have only a 20% chance of survival. Beyond that, all characters not in heavy protection will have a 10% chance of being killed, to a radius of another .25 km. Thus, a 1 ERG explosion of Crystal will have a total effective radius of 1 km. Increase this overall figure by 50% for each additional ERG, dividing the zones of destruction proportionately.

A Neutrex Grenade will generate 500 RIF at ground-zero, and this will attenuate at a rate of 50% every 100 meters. A Neutrex Missile acts similarly, but generates 1000 RIF at the point of detonation.

While such loads are delivered at Extreme range for the weapons used, it will be seen that great accuracy of aim is not really required for an effective hit.

*Non-energy Handweapons*

Weapon	Penetration	Damage Factor
Knife	2 points	6
Sword, spear	1-1	5
Mace, axe	1	6
Two-handed weapon	1+2	5
Electroweapon		Add 10 to normal score.
Titanium Alloy	Add 1 die	

It will be seen that the superior alloy does not affect damage factor, but increases the penetration, while the reverse holds true for the electroweapons. The base figures are used for primitive cultures, where the raw material weapons are in use.

#### 01023. PATTERNS OF FIRE

Some explanation is called for in the use of patterns of fire.

A single shot is self-evidently a single beam or missile, directed at a single target.

A Fan, or wide-angle beam, is a broad cone of fire, with a 20° beam spread. At this angle, a beam will cover an area at its end target zone equal to 50% of its length. That is, at 10 m, a fan will be 5 m wide. All targets within a zone covered by the fan are subject to its fire, and hit determination must be rolled for them. If a large number of targets are in the zone, the GM can use a single hit determination roll, with every point scored above the required base score indicating a hit on 2 of the targets.

A burst is a series of autofire shots of either energy or bullets. A burst hitting a target will expose him to 1-10 hits. The GM will roll a 10-sided die to determine how many shots actually strike a target. If any shots are left over, and more targets are immediately to the side of or behind the primary target, the GM must roll to see if the extra shots hit anyone else. On a roll of 1-2 on a 6-sided die, the GM will select another target, and roll a 10-sided die to determine how many shots strike him. If more shots are still left over, the GM will repeat this process until he has allocated all 10 shots, or a score of 3 or more is rolled on the 6-sided die, indicating that the remaining shots missed.

A Fluid or Gas spray will cover an area 10 meters in radius from the target point selected by the firer. If a miss is rolled in the hit determination, the GM will roll a 6-sided die. On a roll of 1, the charge lands within 10 m of the target anyway, and he is still hit. Of course, firing these weapons into a crowd will always hit someone.

A Sphere of energy, as shot from a Tangle Gun, is 1 meter in diameter. If another possible target is within this range of the hit target, then he has a 2 in 6 chance of being caught also.

In all cases, if the targets have defenses relevant to the weapon used, they will determine penetration separately.

#### 01024. DAMAGE

All characters whose defenses are penetrated will take the appropriate form of damage. If the weapon does simple physical damage, then every point that penetrates is multiplied by the damage factor for the weapon, and this is subtracted from the character's Hit Points.

Eg. Ming has just shot Flash with a Blaster, hitting him. Flash is in Power Armor, with three dice of screen. Ming's Blaster has four dice of penetration. Ming rolls four 6-sided dice, and Flash rolls three. Ming rolls a 15, Flash rolls an 11. 4 points penetrate to Flash. 4 times the damage factor of 10 is 40. Flash takes 40 points of damage.

Remember that SCREEN defends against Energy attack, and ARMOR defends against material weapons. Thus, a character hit by bullets who is only wearing screen, will take the full effect of the hit, that is, the full score rolled in penetration times the damage factor. The reverse case (a Blaster against mere armor) would hold for Energy hitting an unscreened target.

In all cases where a modifier is uncertain, or the actual state of the combat is unclear, the GM will be the final arbiter.

#### 01025. ARCHAIC WEAPONRY

In their adventures on other worlds, it is likely that characters will come up against a situation where they face archaic or Alien weapons. The GM has pretty much a free hand in this matter, as to the effective defense against a weapon, or the power of an Alien weapon. We here include a table of some equivalences in the game's system for ancient weapons or their counterparts.

Weapon	Penetration	Damage Factor
M-100 carbine	4	3
M-16 carbine	3	4
.45 Automatic	3	5
.38 Pistol	2	2
Early repeating Carbine	2	1
Musket	1+1	2
Crossbow	1+1	3
Arrow	1	1

You will find certain weapons listed on the earlier tables as well. Some, like sword and similar weapon values, are self-explanatory. The last three entries on the Energy Handguns table, however, bear some explaining. A Particle Disruptor is a Sniz weapon, the equivalent in their technology of a Blaster. A Class D Laser is the energy weapon found on Technological Level D planets, and a Class E laser is its counterpart on a Technological Level E world. These will be explained more fully in section 1100 ff.

A GM wishing to develop the potentials of Alien and Archaic weaponry further is referred to the many excellent books of rules for wargames in various periods currently on the market, as valuable sources of predigested research.

### 01030. GRAND TACTICAL COMBAT

Space requirements (editorial, not astronomical) forbid us giving much detail on engagements between large numbers of vessels, or large troop engagements. These short rules provide a quick means of settling such combats, but GM's who wish to develop more detailed rules will find many published rules on the market that will be of great help. We WILL have a full set of ship tactical rules coming out within the year, unless this concern goes broke.

### 01031. SHIP TACTICAL COMBAT

The GM will total up the number of ships on each side, their general strengths, the number of DU they have, etc.

Take the total number of STRUCTURE points of all the vessels on each side. These are a sort of fleet scale Hit Point score.

Take the total number of DU on each side. The base number is the fleet defense factor. The DU count times the GU count is the fleet offense factor. Count Missile Rack GU separately.

Each side will roll a 10-sided die, multiply by the offense factor and record the sum. Add 3 point to this for each Missile GU the fleet has firing that mt. This figure is the fleets attack power for that mt. The GM will record the score for both fleets, and then rolls percentile dice for each of them. The percentage rolled is the percentage of the attack energy to score a hit on the opponent. Subtract the opponents defense factor from the attack energy to determine damage. Each fleet will subtract the damage from its Hit Points. Each player will distribute this damage as he wishes, but each amount of damage sufficient to destroy a ship must do so. A player with several 100 SU warships and a host of smaller craft may wish to concentrate all the damage his fleet takes on one of his heavy craft. Or he may wish to remove a number of his smaller vessels, leaving his heavies intact. This free choice reflects his tactical disposition of the fleet.

The process continues until one fleet runs, surrenders, or is destroyed.

### 01032. GROUND TACTICAL COMBAT

Our main concern is the fate of battles where groups of Marines under Player command are engaged in large battles. To determine the effectiveness of the force, work out the odds modifiers for each man in the ground force, and compare the total to the enemy strength.

One marine = one man. A Warrior = 5 men. A Player-character = 2 men.

Add these bonuses to the odds for each man equipped according to this list.

Armor Kit #1-#2	2
Armor Kit #3	3
Power Armor	5
Energy Pistols	2
Energy Rifles	5
Grenades or explosives	4
Each armored ATV	20
Each Attack Flier	20
Elite Troops	2

Troops armed with Empire weapons will enjoy a great advantage in fighting troops with more primitive weapons. From this table, determine the Technological Development of the troops facing the ground force, and multiply the troop strength as modified by the previous table by the number shown.

Tech. Devel.	Coefficient
A-C	1
D	2
E	3
F*	4
G**	6
H	8
I***	10
J or lower	12



Eg. A force of 100 Marines has been landed on a planet which a group of Players are reducing by force of arms. Each is in Power Armor, for a bonus of 500. Each is armed with Blasters, for a bonus of 200. There are 2 Armored ATV with them, for an extra 40. Their total effective troop strength for odds purposes is  $100+500+200+40=840$ .

The planet is a mediaeval world, Technological level I. As will be explained, the Marines are invulnerable to the attacks of this culture, as their Power Armor cannot be damaged by the technology's weapons. 100 brave knights ride out to smash the invader. The knights will be facing incredible odds, since the Marines will multiply their 840 by 100, so that the battle is at odds of 84,000 to 100, or 840 to 1. The Marines will attack before the knights close to combat range, and on any die roll above 2, they will blow the charging chivalry to smithereens. Good-bye Camelot.

\* Technology less than level F cannot harm Power Armored characters.

\*\* Technology less than level G cannot penetrate two dice of armor.

\*\*\* Technology less than level I cannot penetrate 1 die of armor.

No technology under C has energy weapons sufficient to pierce 3 dice of screen.

No technology under D has energy weapons to pierce 2 dice of screen.

No technology under F has energy weapons.

Once the odds have been determined, each side will roll, turn and turn about. The first roll will go to the side with superior weapon range. If they are equal, toss a coin or roll a die to determine initiative. The rolling Player is the Attacker.

TABLE 01032.1: GROUND TACTICAL RESULTS

Die Odds:

Roll	1-3	1-2	1-1	3-2	2-1	3-1	4-1	5-1
1	Ae	Ae	Ae	Ae	Ar	ne	ne	ne
2	Ae	Ae	Ar	Ar	ne	ne	Dr	Dr
3	Ar	Ar	ne	ne	ne	Dr	Dr	De
4	Ar	ne	ne	ne	Dr	Dr	De	De
5	ne	ne	ne	Dr	Dr	De	De	De
6	Dr	Dr	Dr	De	De	De	De	De

Ae- Attacking force is wiped out.

Ar- Attacking force falls back 500 meters.

ne- No effect. Stalemate.

Dr- Defending force falls back 500 meters.

De- Defending force wiped out.

A force immune to penetration by the weapons of the opposition will modify effects as follows. An Ae/De result for their team will be treated as an Ar/Dr. Any other result is ne.

A force facing odds greater than 10 to 1 against them will retreat on an ne result, and all other results are a "wiped out" result.

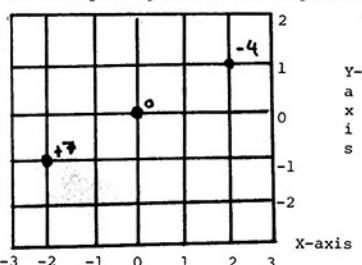
A force facing odds greater than 100-1 against them will not stop running after they have gone 500 meters on a retreat result.

A note on time: 1 turn of combat on this scale equals 1 minute.

#### 01100. BUILDING THE UNIVERSE

In Space Quest, the campaign cannot begin until the GM has mapped out and stocked a number of stars and their systems, recording their place in the heavens on a map. This map is a simple series of dots on a sheet of graph paper, locating the stars in relation to Newson III, the center of the Combine.

To determine the location of a star, it is necessary to draw a graph on the map sheet with the home-port system of the Players at the 0,0 point, that is, the center of the graph.



The crude but effective illustration to the side indicates the basic mechanics of star mapping.

The graph paper is marked with the standard, Cartesian X and Y axes along the side of the paper, so it will not get in the way. These axes limit a plane parallel to the plane of the galaxy, lying through the equator of Newson.

The X-axis co-ordinate of a point in space on this graph is called the Ordinate.

The Y-axis co-ordinate is called the Abcissa.

Thus far, we are in the realm of high school Algebra I. If the galaxy were two-dimensional, our star map would be complete if we put a dot

on the graph for the location of a star in terms of X and Y. But the universe is a three-dimensional structure (we are NOT going to worry about Time), and so a means of determining the distance from the X/Y plane must be used. This is solved by Cartesian algebra by the introduction of a third axis, the Z-axis. In our simple cosmography, the Z co-ordinate for a point is called the Declination.

So we have a system whereby each point in space is defined by three numbers. For campaign purposes, each number is a figure in lites, giving the distance along its leg of the graph that separates it from Newson.

Thus, the point in the upper right corner of the illustration is a star lying at co-ordinates 2, 1, -4. That is, it lies 2 lites along the X-axis from 0, heading to the right, so it is a positive value. It is 1 lite up the Y-axis from 0, and lies 4 lites below the plane of the X/Y graph.

The star in the lower left corner of the map is -2, -1, 7.

The GM should head the entries on his System Record Sheets with the co-ordinates of the system in question. These are the co-ordinates which Players must feed into their computers to travel by N-drive.

#### 01101. TRUE DISTANCE DETERMINATION

For this aspect of the campaign, if for no other, a table of square roots, or a calculator with that function, will be needed by the GM or a Player.

True distance in this system is determined by the application of the Pythagorean Theorem to the difference between the co-ordinates of the point you are travelling from to the point you are travelling to.

To take a simple example:

Referring to the map, you can see that a ship leaving Newson to travel to the upper right star corner, is entering N-drive at 0, 0, 0. It will program the the Astrogation Computer with the destination co-ordinates 2, 1, -4. But how far is the trip going to travel in a straight line?

The answer is determined by subtracting the Ordinate from the Ordinate, Abcissa from Abcissa, and Declination from Declination of the two points, squaring each result, total the three squares, and extracting the square root of the sum.

Thus, Ordinate minus Ordinate:  $0-2=-2$ .  $(-2)^2=4$ .

Abcissa minus Abcissa:  $0-1=-1$ .  $(-1)^2=1$ .

Declination minus Declination:  $0-(-4)=0+4=4$ .  $4^2=16$ .

Add up the squares:  $4+1+16=21$ .

Extract the root of the sum:  $SQ(21)= 4.58$  lites true distance.

(Note: We must apologize for the absence of a radical symbol on our typewriter.)

This is the technique applied to determine any true distance. Let us say a ship at 45, -87, 372 is going to make a jump to 64, -745, 9.

$[45-64]^2 = 361$ .  $[-87-(-745)]^2 = 432,964$   $[372-9]^2 = 131,769$

$361+432,964+131,769 = 751.7$  lites true distance.

It doesn't matter what order you subtract the co-ordinates from each other, or what order you add them up in. The only thing that matters is that you subtract the Ordinate from the Ordinate, the Abcissa from the Abcissa, and the Declination from the Declination.

#### 01102. THE STAR MAP

Now that you know the means of recording the location of a star, and plotting the distance the Players must travel in N-drive to get there, you can begin to stock your campaign universe. The GM only needs to procure a sheet of graph paper, and a pencil. We have found 10 line to the inch to be the most handy size of graph, and we further recommend that the GM have two colors of pencil or pen in which to mark his stars. One color will indicate a positive Declination, the other a negative Declination. Note that the only numbers that need to be written on the graph proper are the Z-co-ordinates for a star, as the X and Y co-ordinates will be set by the point on the paper at which the star is marked.

Now mark the X-axis along one side of the paper, and the Y-axis along the adjacent leg of the paper. The graph is now laid in the plane of the paper. We have found that a scale where one small square of the graph paper is 2 lites on a side was the most compact without being on a microdot scale.

Now divide your map sheet into squares (you need not do so other than in your mind) laying a grid of squares over the graph paper with each square 20 lites on a side.

For purposes of keeping your maps straight, each sheet of graph paper is a "quadrant" and each 20 lite square is a "sector."

Each sector is not only 20 lites square, but also 100 lites in Declination above and below the X/Y plane.

With these facts in mind, and your pencil in hand, you can now begin to fill the sky with stars. Each sector will have 0-5 stars in it. Roll a 6-sided die and subtract 1 from the score to determine the exact number. You now take the pencil and put a randomly located number of dots in the sector you are stocking, trying to avoid any repetition of pattern, unless you are creative enough to want to design constellations. Each of these dots corresponds to a value of X and Y on the graph lines running along the sides of the quadrant map sheet. Don't forget to put your home-system dead center in the sheet, at 0, 0.

To determine Declination take percentile dice, and a 6-sided control die. The control die is to indicate a positive Declination (on an even roll) or a negative (on an odd roll). The score rolled on the percentile dice will be the actual Declination co-ordinate.

Eg. A GM has placed two stars in a sector, at 4,17 and 18,20. He rolls for Declination, rolling the three correct dice, a 4,36 and a 3, 92. The first star is therefore at co-ordinates 4,17,36, and the second star is at 18,20,-92.

Once a sufficient number of sectors has been filled with stars (about half a quadrant to start, depending on your campaign scenario), the GM may turn to stocking his stars with planets and the often attendant phenomenon of intelligent life.

#### 01110. SYSTEM GENERATION

While it is the fervent hope of the authors that every GM will realize his favorite SF novel in the planets he creates, not every system can be populated by a starfaring culture, or the poor Player-characters will never get any resources to sell, and will thus go broke real quick. Thus, the following sections are designed to permit random generation of stars, planets, and the beings that may live on the far worlds of the universe.

The order in which this process is carried out runs roughly like this.

1. Roll to determine the number of stars in the system.
2. Roll to determine the spectral class of the star(s) in the system, and to see if planets are present.
3. If no planets are indicated, roll to see if there are any asteroids or other debris. If there are planets, roll to determine the number.
4. Determine the orbital range of the planets.
5. Roll to determine if any of the planets are actually an asteroid belt.
6. Determine the Planetary structure of each planet.
7. For Terrestrial worlds:  
Roll for diameter. Roll for density. Determine the Thermal-Ecology Index. Roll for atmosphere. Roll for atmospheric pressure. Determine planetary surface temperature. Roll for percentage of free water on planets within proper temperature range.
8. For Jovian worlds: Roll for diameter, density, gravity, and determine temperature.
9. Roll for each planet to determine if there is life or not, and if it is intelligent.
10. Roll for each world to determine if there are any valuable resources.
11. For worlds with life: Roll for life-complexity level. Determine form of life.
12. If life is intelligent: Roll for Technological Development level, Cultural Organization, Social Organization, Society Strength, unique Social Quirks, Trade Bonuses, and Ethics.
13. Determine Xenophobia Factor of culture.
14. Make up a brief scenario concerning the state of the culture.

These are the bare outlines of system building. A GM must never hesitate to exercise his privilege of saying it "ain't necessarily so." The game is based on the premise that every situation is a new adventure. We can provide the tables, but the GM and his zest for creating new worlds and playing the role of the entire planetary population is the heart and soul of a campaign.

#### 01111. SYSTEM RECORD SHEET

The GM should keep a notebook, loose-leaf for preference, of the sheets on which he has recorded his system data. It is best to keep this with a separate section for each sector of the map, so that no fumbling occurs when a Player moves into a new part of space, surveying as he goes.

#### 01120. STELLAR TYPES

The number and type of stars in a system are the first element of system building. To determine the number of stars in a system, roll two 6-sided dice.

TABLE 01120.1: NUMBER OF STARS

Die Roll	Result	A system with more than one star will have no planets. The multi-star systems DO have the same chances as a planetless single star system for the presence of asteroid belts or nebular matter, which can have rich resources.
2 or 12	Three stars in system.	
3,4,10,or 11	Two stars in system.	
5-9	One star in system.	

Once the number of stars has been determined, the GM will roll percentile dice to see what spectral type the star(s) is (are). Note the "Planets Score" column at the end of this table. If a single star system's spectral class is determined and the percentile dice score that does so equals the scores indicated in this column, then the star will have planets.

TABLE 01120.2: STELLAR TYPE

Die Roll	Type	Color	Planet Score
(Main Sequence Stars)			

01-05	O	Blue	05
06-15	B	Blue-white	10, 15
16-30	A	White	16, 20, 24, 28
31-45	F	Yellow-white	33, 36, 39, 42, 45
46-60	G	Yellow	48, 51, 54, 57, 60
61-70	K	Orange	63, 66, 69
71-80	M	Red-orange	72, 75, 78

81-85: Giant stars. Roll percentile dice again.

01-15	O	08
16-30	B	16, 24
31-50	A	32, 40, 48
51-70	K	54, 60, 66
71-00	M	72, 78, 84, 90, 96

86-90: Supergiant stars. Roll percentile dice again.

01-40	K	20, 40
41-00	M	60, 80, 00

91-95: Subdwarf stars. Roll percentile dice again.

01-50	White	No planets.
51-00	Red	75, 00



96-00: Specials. Roll percentile dice again.

01-05	CT System
06-10	Protostar
11-50	S Type
51-90	N Type
91-94	Nova
95-97	Supernova
98-99	Neutron Star
00	Black Hole



The meaning of everything but the "Specials" on this table can be looked up in any basic book on astronomy. But the "Specials" do require a bit of explanation.

A CT System is a star system in which everything is made of CT. The GM will re-roll on the table to determine the stellar type and presence of planets, ignoring rolls over 95. A CT System can have everything a Terrene system does, including intelligent life.

CT stars are somewhat unstable, and there is a 20% chance that a ship normalizing within 10 AU of such a star will cause a Nova, qv. below.

Protostars are very cool (by stellar standards) masses of dust and gas that are just coalescing into a star. They may have planets, in which case there is a higher chance of finding radioactive ores on such worlds than on older planets.

S and N Type Stars are very cool stars giving off heavy elements at a prodigious rate. A planet orbiting an S or N star has a higher density, and thus a higher chance of resources.

Novae and Supernovae are exploding stars. A ship coming within 10 AU of such a phenomenon will be exposed to 1-100 RIF from a Nova, or 10-1000 RIF from a Supernova, each mt of proximity. The GM should keep track of such stars, as the assumption is they have not yet been seen as novae on Newson III. A ship some lites closer would detect the current condition of the star. Assign a date of explosion to the star, and if a ship gets within a range of the light travelling since the nova, inform the Players of the phenomenon.

Neutron Stars are post-nova, dying stars, and any vessel within 1 AU will have to react as if they were encountering a Quantum Black Hole.

Black Holes here are of stellar mass. Their influence has a range of .5 lites. There is no rescue from such traps, if the ship does not escape.

#### 01130. PLANETARY SYSTEMS AND DEBRIS

If a stars or stars are devoid of planets, they may yet have some orbital detritus. Roll two 6-sided dice.

Roll	Result	If a star does have planets, there is a flat 25% chance that one of them is an asteroid belt instead of an intact world. The GM will randomly locate such a belt in the stars planetary family.
5-9	Nothing in system.	
3,4,10,11	Asteroid belt 11-20 AU out.	
2,12	Nebular matter belt 11-20 AU out.	

If a system has planets, the number will depend on the type of star involved.

Main Sequence, Giant, and Supergiant stars all have 2-12 planets.

Subdwarfs have 2-7 planets.

Protostars have 1-3 planets.

S or N stars have 1-6 planets.

#### 01131. ORBITAL RANGE

The Orbital range for a planet is determined by the type of star it orbits, and the number of the planet counting out from the star.

TABLE 01131.1: ORBITAL RANGE CHART

Planet Number	Stellar Type: O	B	A	F	G	K	M	N8S	PROTOSTAR & RED SUBDWARF
1	1.1	.8	.6	.4	.4	.4	.3	.8	.2
2	1.9	1.4	1.0	.8	.7	.6	.5	1.5	.3
3	2.7	2.0	1.4	1.2	1.0	.8	.7	2.2	.4
4	4.3	3.2	2.2	2.0	1.6	1.2	1.1	3.3	.6
5	7.5	5.6	3.8	3.6	2.8	2.0	1.9	5.7	1.0
6	13.9	10.4	7.0	6.8	5.2	3.6	2.8	2.0	1.8
7	26.7	20.0	13.4	13.2	10.0	6.8	6.7	19.9	3.4
8	52.3	39.2	26.2	26.0	19.6	13.2	13.1	38.7	6.6
9	103.5	78.6	51.8	51.6	38.8	26.0	25.9	77.5	13.0
10	204.8	154.4	103.0	102.8	77.2	51.6	51.5	152.9	25.8
11	410.7	308.0	205.4	205.2	154.0	102.8	102.7	307.0	51.4
12	820.3	615.2	410.2	410.0	307.6	205.2	205.1	612.7	102.6

## 01132. PLANETARY TYPE

There are two types of planet: Terrestrial worlds, composed of a solid body of rock and metals with a molten core; and Jovian worlds, giant worlds with atmospheres thousands of km in depth, surrounding a core of ice and solid metal.

To determine the structure of a given world, consult the following table.

TABLE 01132.1: PLANETARY STRUCTURE TABLE

Planet Number	Stellar Type:								PROTOSTAR & RED DWARF	A= Terrestrial world. B= Roll a 6-sided die. On a roll of 1-3, the planet is a Terrestrial world. On a roll of 4-6, the planet is a Jovian world. C= Jovian world.
	O	B	A	F	G	K	M	N&S		
1	A	A	A	A	A	A	A	A	A	A
2	A	A	A	A	A	A	A	A	B	
3	A	A	A	A	A	A	A	A	B	
4	A	A	A	B	B	B	B	B	B	
5	B	B	B	B	B	B	B	B	B	
6	B	B	B	C	C	C	C	C	B	
7	C	C	C	C	C	C	C	C	C	
8	C	C	C	B	B	B	B	B	B	
9	B	B	B	B	B	B	B	B	A	
10	B	B	B	B	B	B	B	B	A	
11	B	B	B	A	A	A	A	A	A	
12	A	A	A	A	A	A	A	A	A	

## 01140. TERRESTROID WORLDS

It is the Terrestrial world that is of primary interest to the Player. Here, he may not only find accessible resources of great value, but also that most valuable of discoveries, an uninhabited world suitable for colonization by the Human or Trilax species, for which the bounty is rich indeed.

To determine the DIAMETER of a Terrestrial planet, roll three 6-sided dice, and multiply the score rolled by 1000 km.

To determine the DENSITY of a Terrestrial world, roll three 6-sided dice and consult the table below. Note that the planets of S type stars will add 2 points to the core rolled on the dice, TABLE 01140.1: PLANETARY DENSITY and the planets of N type stars will have a bonus of +4 to the die roll. This is added to the DIE ROLL, not the actual density of the world.

Die Roll	Density	Density and diameter will determine the gravity of a Terrestrial world, and the Density will also be the basis for determining if the planet has exploitable mineral resources.
3	2	
4-6	3	
7-8	4	
9-11	5	
12-13	6	
14-15	7	
16	8	
17	9	
18 or more	10	

Having determined the Density of a planet, cross-reference it against the Diameter on this table to derive the planetary gravity.

TABLE 01140.2: GRAVITY OF TERRESTROID WORLDS IN g's

Density	Diameter in 1000's of km:							
	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18
2	.1	.1	.2	.3	.5	.6	.8	1.0
3	.1	.1	.2	.4	.6	.8	1.0	1.2
4	.1	.2	.3	.6	.8	1.0	1.5	2.0
5	.1	.2	.4	.8	1.0	1.5	2.0	2.5
6	.2	.3	.5	1.0	1.5	2.0	2.5	3.0
7	.2	.6	1.0	1.5	2.0	2.5	3.0	3.5
8	.8	1.0	1.5	2.0	2.5	3.0	3.5	4.0
9	.9	1.5	2.0	2.5	3.0	3.5	4.0	4.5
10	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0

## 01141. THE THERMAL ECOLOGY INDEX AND PLANETARY CHEMISTRY

We now come to the determination of such variables as atmosphere, pressure, etc. The basis for such calculations is the Thermal-Ecology Index, or TEI, or a planet. To determine the TEI subtract the orbital number (planet number) of the world you are dealing with from the appropriate constant for its star.

Stellar Type	TEI Constant	Stellar Type	TEI Constant
O	5	N	-1
B	4	S	-2
A	3	Protostar	-3
F	2	Red Subdwarf	-3
G	1	For Giants add	+2
K	0	For Supergiants add	+3
M	-1		

Eg. The third planet of a G type star has a TEI of -2. The fourth planet of an O type Giant has a TEI of  $[5+3]-4 = 8-4 = 4$ .

The first application of the TEI is the determination of planetary atmosphere. Roll percentile dice and consult the correct column on the following table.

TABLE 01141.1: PLANETARY ATMOSPHERE DETERMINATION

Atmosphere	TEI:				
	0 or more	-1 to -4	-5 to -7	-8 to -9	-10 or less
Inert Gas	01-02	01-05	01-10	01-10	01-05
Oxygen-Nitrogen		06-20	11-15		
Methane		21-25	16-30		
Ammonia		26-28	31-38	11-25	06-10
Chlorine		29-35	39-42		
Fluorine		36-42	43-46		
Sulphur-nitrogen	03-08	43-50	47-52	26-30	
Acid	09-10	51-55	53-57		
CO <sub>2</sub>	11-15	56-60	58-60		
Biotic soup		61-63	61-63		
Metallic Vapor	16-50				
Vacuum	51-95	64-90	64-99	31-89	31-89
Gaseous Bromine	96-99	91-99			
Radon	00	00	00	90	90
Liquid Halogens				91-00	91-00

Atmospheric pressure is a figure derived from the combined influence of chance and gravity. First, determine the overall density figure for the planet by rolling a 10-sided die and multiplying the score rolled by the planet's gravity. This can result in a figure as low as .1, or a figure as high as 50. A 6-sided die is now rolled to determine if the atmosphere is especially dense or not. On a roll of 1, divide the score generated before by 10. On a roll of 6, multiply it by 100. On any other roll, let it stay as it is.

A score in pressure of 10 is equivalent to 1 Terran atmosphere of pressure, as measured at sea level.

A Terrestrial world with a pressure of, say, 5000, would resemble Venus, a baked and corrosive surface under the eternal weight of that tremendous atmosphere.

Of course, if the atmosphere table indicates a vacuum on the planet, no pressure roll is made.

On any world with a TEI of -1 to -4, and any atmosphere with a pressure of 5 to 500, there is a 75% chance of free water in the environment. If this roll comes up, then the GM will roll percentage dice, their score indicating the percentage of the planet's surface that will be covered in water. Any water on such a world may harbor life, breathing a mixture of water with the planet's atmosphere is suspension. Keep this in mind when the question of inhabited worlds comes up.

#### 01150. JOVIAN WORLDS

The great gas giants are less complex than their puny neighbors.

The DIAMETER of a Jovian world will be  $2-20 \times 10,000$  km. (ie. 20,000-200,000 km)

The DENSITY will be derived from the roll of a 6-sided die, as will the gravity. Roll separately to determine the two factors.

Die	Any Jovian world with a TEI of more than -8 will have a Methane-ammonia atmosphere. Any Jovian world with a TEI of -8 or less will have an Ammonia atmosphere.		
1	.7	2.5	
2	.8	3.0	
3	.9	3.0	
4	1.0	3.5	
5	1.2	4.0	
6	1.4	5.0	

Atmospheric pressure on Jovian worlds really does not have to be determined, as they are so high that no practical use attaches to knowing the exact figure. Nothing but a Jove Suit can stand up to the conditions obtaining on the surface of one of these worlds.

#### 01160. PLANETARY TEMPERATURE RANGES

The surface temperature of a planet is a function of the TEI and atmospheric pressure. The Base Temperature is derived by the famous "black body" formula, warped to fit the science(?) in the campaign. The formula for Base Temperature is  $277^{\circ}\text{K}/\text{SQ}(\text{Orbital Range in AU})$ . Eg. The base figure for the fourth planet of a B type star would be  $277/\text{SQ}(4.3) = 277/2.07 = 133.8^{\circ}\text{K}$ .

The base figure is multiplied by the following constants, based on the type of the star.

Stellar type:	O	B	A	F	G	M	N	S	Giants	Supergiants	Red Dwarf	Protostar
	4	3	2	1.5	1	.5	.3	.3	Add 1 to	Add 2 to the	.1	.1

Thus, the example given, for the fourth planet of a B type star: the Base Temperature is 133.8°K. For a B type star, you multiply by 3, for a surface temperature of 401.4°K, or 128.4° Centigrade. A somewhat warm climate, to say the least.

Atmospheric pressure can also increase the surface temperature. For 10 points of pressure, add 1° to the temperature.

To take another example, Terra's own evening star, Venus, is the second planet of a G type star.  $277^{\circ}\text{K}/\text{SQ}(.7) = 277^{\circ}\text{K}/.83 = 331^{\circ}\text{K}$ . With a postulated pressure of 5000, add 500 to the temperature for a final figure of 831°K, which is tolerably close to the current theory.

#### 01160. LIFE

How often, and in what strange forms, has life emerged from the structured chaos of the Universe? In this campaign, it has happened with some frequency. On each planet of a system, there is a 20% chance that a planet will have some form of life on it. Roll a 10-sided die, and on a 1 or 2, consult the life-form complexity chart below.

TABLE 01160.1: LIFE-FORM COMPLEXITY CHART

Die	Roll	Result
1		Bio-soup world. DNA analogues in suspension.
2-4		Low orders of life. Early plant forms, simple animals. No intelligence.
5-7		Animal life in many forms. No intelligent life-forms.
8-9		Intelligent life. Determine level of civilization.
0		Extinct intelligent life-form. Determine level of civilization and state of relics.

See the "Dead World Quirk" in the following section for details on how this last sort of life level may be gamed.

It is really not necessary to generate the next set of figures unless you are dealing with an intelligent species. At that, the GM may decide not to use this random "build-an-alien" system, but to insert a lost colony of known life-forms from the days of the Empire on the planet. Should a random life-form be desired, the following tables will construct it according to the Life-Form Classification Code now given.

The Code is a series of five letters, a given letter in a given position having a specific meaning.

The first letter defines the general biologic nature of the life-form.

The second letter defines their atmosphere content.

The third letter gives the Base Element Type.

The fourth letter gives their general temperature range.

The fifth and final letter gives a rough description of their physical structure.

TABLE 01160.2: LIFE-FORM CLASSIFICATION CODE

Code	Biological Type	Atmosphere	Base Element	Temperature Range	Physical Structure
A	Unicellular	Oxygen-nitrogen	Carbon	1-50°K	Amorphous
B	Fungoid	Chlorine	Silicon	50-100°K	Limbless
C	Sessile Vegetable	Fluorine	Copper	100-150°K	Polymanous
D	Motile Vegetable	Methane	Iron	150-200°K	Monomanous Biped
E	Piscoid	Methane-ammonia	Germanium	200-250°K	Bimanous Biped
F	Molluscoïd	Ammonia	Plutonium	250-275°K	Trimanous Biped
G	Cephalopoid	Sulphur-nitrogen	Potassium	275-325°K	Polymanous Biped
H	Amphibian	Acid	Boron	325-350°K	Monomanous Triped
I	Cetoid	Inert Gases	Phosphorus	350-400°K	Bimanous Triped
J	Saurian	CO <sub>2</sub>	Non-material	400-450°K	Trimanous Triped
K	Reptilian	Biotic Soup		450-500°K	Polymanous Triped
L	Avian (flying)	Metallic Vapor		500-550°K	Monomanous Polyped
M	Avian (flightless)	Gaseous Bromine		550-600°K	Bimanous Polyped
N	Mammalian	Radon		600-700°K	Trimanous Polyped
O	Insectoid	Water-oxygen		700-800°K	Polymanous Polyped
P	Annelidoid	Water-inert gas		800-1000°K	Multi-bodied
Q	Lepidopteroid	Water-methane		Solar Surface	Non-material Body
R	Mineral	Water-ammonia		Solar Core	
S	Metallic	Water-chlorine		1-250°K	
T	Crystalline	Water-fluorine		250-500°K	
U	Energy	Water-sulphur		500-1000°K	
V	Hive Mind	Water-other		1-Solar Core	
W	Hyper-spatial	Liquid Halogens			
X	Body	Vacuum			
Y		Energy-eater			
Z					

The letter Z is used for all cases where the normal applications of the code do not fit.

There are literally millions of possible combinations. Rather than trying to explain the workings of the Code in depth, let us take a few illuminating examples, and leave it to the GM and Players to hammer out the refinements.

Humans: Warm-blooded, viviparous, oxygen-breathing, Carbon-based bipeds, with two hands.

Encodes as: NAAGE.

Trilax: Warm-blooded, oviparous, oxy-carbon metabolism, with three arms and three legs.

Encodes as: MAAGJ. Or hadn't we mentioned the Avian ancestry?

Silicoid: Vacuum-dwelling energy eaters, made of crystalline Silicon, with no legs and two tentacles, living on ultra-hot planets in trans-Mercurial orbits. Encodes as: U(XY)BPC.

Stellons: Space-dwelling energy beings capable of surviving almost anywhere.

Encodes as: UZJVA.

Terran Dolphins: IAAGB; See the differences?

Terran Sharks: EOAGB

Space really does not permit as full an explanation as we could wish. Try classifying a few of your favorite Aliens from the classics of Science Fiction, and you will soon get the hang of it.

Random Alien-construction has a number of its data already provided, as the atmosphere and temperature range of the planet are known. To determine Base Element, roll percentile dice and consult the following table.

TABLE 01160.3: BASE ELEMENT DETERMINATION

Base Element	0 or more	-1to-4	-5to-7	-8to-9	-10 or less
Carbon	01-10	01-50	01-30	01-10	01-10
Silicon	11-45	51-65	31-50	11-25	11-20
Copper	46-55	66-75	51-55	26-30	21-25
Iron	56-65	76-85	56-60	31-35	26-30
Germanium	66-70	86-90	61-65	36-65	31-50
Plutonium	71-75	91-95	66-70	66-70	51-55
Potassium	76-85		71-80	71-85	56-75
Boron	86-95	96-99	81-85	86-90	76-80
Phosphorus	96-99		86-89	91-99	81-99
Non-material	00	00	00	00	00

A GM rolling to determine the life form for a planet with an Inert Gas atmosphere, a temperature of 482° K, and a TEI of 2, would roll on the first column of the table. Scoring a 62, his encoding of the life-form now reads:

-IDK-.

To fill in the blanks, read on.

There are three, general classifications of Base Element for use in the next decision. Group A consists of Carbon, Silicon, Potassium, Boron, Phosphorus. Group B is Iron, Copper, and Germanium. Group C consists of the non-material beings. Roll percentile dice, and consult the proper column. The Letter next to the score indicates the first-position element of the Code, the Biological Type.

TABLE 01160.4: BIOLOGICAL TYPE

Group A	Group B	Group C
A:01-02	A:01	U:01-85
B:03-05	B:02	V:86-95
C:06-07	C:03	W:96-00
D:08-10	D:04	
E:11-13	E:05	
F:14-15	F:06	
G:16-18	G:07	
H:19-23	H:08	
I:24-27	I:09	
J:28-29	J:10	
K:30-34	K:11	
L:35-37	L:12	
M:38-41	M:13	
N:42-48	N:14	
O:49-53	O:15	
P:54-56	P:16	
Q:57-59	Q:17	
R:60-62	R:18-34	
T:63-65	S:35-43	
V:66-95	T:44-60	
W:96-00	V:61-95	
	W:96-00	

The final question, that of Physical Structure, is so infinite in its possible manifestations that the GM really can pick at random. The only exceptions are the final two classifications. Letter P, Multi-bodied, applies only to a Hive-Mind. The final element, Non-material Body, is applicable only to Energy life-forms. So let us say the GM rolls 1-15 to fill in that last blank on his life-form. Scoring a 12, he counts 12 down the list, and finds that it is a monomanoous polyped, a life-form with more than three legs and only one manipulating member. The full Code for the life-form is thus seen to be RIDKL.

Let us say the GM is rolling to complete the being begun in the last example, the -IDK-. As it is an Iron based life-form, the GM will roll in column two of this table, the Group B column. Rolling a 29, he determines that the life-form is a Mineral being, and he may deduce it will resemble a mass of ferrous rock. There are several such beings in the literature of Science Fiction, and appearing in at least one popular TV series dealing with space exploration.

A note here on the V classification: Hive Mind. A Hive Mind may be composed of any type of life-form. If such a roll occurs, record it, and re-roll for the structure of the individual members of the Hive.

A perfect example from Terran biology is the Ant Nest, as opposed to the ant. An Ant Nest would encode: VAAGP.

An ant would encode: OAAGM.

The usual means of writing a full encoding for the life-form in such a case is (VAAGP)OAAGM. This describes the full phenomenon in terms of the Code.

The only limit to the ranges of life in the campaign Universe is the imagination of the GM.

#### 01170. PLANETARY CULTURES

Any intelligent life-form can develop a technology and culture equal to the Empire's. At the GM's option, the civilization may surpass the Empire, but care must be taken to avoid an unbeatable race of galaxy-conquerors.

The first step in determining the culture of a planet is the determination of the Technological Development Level, or Tech Level. The GM will roll a 30-sided die.

TABLE 01170.1: TECH LEVEL CHART

Die	Result
1	Level A. As Newson III, a fully developed interstellar culture with N-drive and Empire technology readily available.
2	Level B. A less developed world with interstellar technology. Usually Empire level.
3-4	Level C. A frontier world, or one just achieving Empire type technology.
5-7	Level D. A world with free use of fusion power. 21st century Terra is an example. The culture will have space flight, but NOT star flight, unless they try sublight travel.
8-9	Level E. Late 20th century Terran type technology. Mostly fission power. System space flight only.
10-12	Level F. Pre-atomic, late industrial world. Terra in the 1950's.
13-15	Level G. Early industrial revolution. Simple processes used in technology. No energy processes except chemical reactions (steam, etc.)
16-19	Level H. Simple machines and chemical processes. The equivalent of the Gunpowder Age.
20-23	Level I. Level principle. The early uses of mechanics. Mediaeval technology.
24-27	Level J. Use of refined natural materials. The Metals Age. Terran calendar 2000 BC-200 AD, approximately.
28-29	Level K. Use of natural substances, like bone or flint.
30	Level L. Pre-technological. The equivalent of pre-tool using Man on Terra.

The GM will have an opportunity to stretch himself determining the ability of some cultures on this scale. A world of Silicoids at level H or even I might already have harnessed electricity, or even produced energy weapons in some crude form. The application will fit the race. In our own campaign, there is a race on a gas giant world who make swords out of Ice V. A cephalopodic race in a Level I culture with militaristic overtones, we call them the "Samurai Cephalopods."

Once the Tech Level is established, the GM will roll to determine the Cultural Organization of the civilization. This is the form of government prevalent on the planet, and varies by Tech level. For Tech Levels A-F, roll a 24-sided die. For G-L, roll a 20-sided die.

TABLE 01170.2: CULTURAL ORGANIZATION

Cultural	Tech Level:	A	B	C	D	E	F	G	H	I	J	K	L
Tribal									1	1	1-2	1-5	1-7
Hereditary Monarchy									2-4	2-4	3-4	6	8
Tyranny	1	1-2	1	1	1	1	1-4	5	5	5	7	9	
Oligarchy	2-4	3-5	2-3	2-4	2-3	2-4	5-8	6-7	6	6	9-12	10	
Greek Democracy	5-7	6	4	5				8	7-9	7-8	13	11	
Anarchy		5-6	6					9	10	9	14-19	12-19	
Parliamentary Feudal	8	7-8	7	7					10-11	11	10		
Western Feudalism			8-9						12-13	12	11		
Eastern Feudalism	10	9-10	10-11	8	4				14-15	13-14	12-13		
Oriental Dictatorship				12	5	5	9-10	16	15-17	14-16			
Confederation	11-13	11-13	13-14	9-11	6-8	6-8	11-13	17	18	17-18	20	20	
Cantons	14-15	14	15	12-13	9-11				18-20	19-20			
Industrial Feudal	16-17	15	16	14-16	12-13	9-11							
Industrial Dictator	18	16-17	17	17	14-16	12-14							
Republic	19	18-19	18-19	18-19	17-19	15-17	14-17						
Totalitarian	20-21	20-21	20-22	20	20	18							
Socialist-Statism	22-23	22	23	21-23	21-23	19-21	18-20						
Fascism	24	23-24	24	24	24	22-24	21-24						

Eg. A planetary culture with a Tech Level of D, will have a government by Confederation on a roll of 11, rolling a 24-sided die.

#### Descriptions of Cultural Organizations:

A Tribal culture is self-explanatory. Small groups of the same blood or territory.

A Hereditary Monarchy has a supreme head of state who accedes to power by right of birth.

A Tyranny has a single ruler, who came to power by force of arms.

An Oligarchy is a ruling council which elects its own members, and is thus self-perpetuating.

A Greek Democracy is a full democracy, with the population voting on all legislation.

An Anarchy is.

Parliamentary Feudal rule is maintained by a council of feudal magnates, such as forced

John I of England to accept the Magna Carta. A ruling House of Lords.

Western Feudalism is a system of fiefs deriving from a powerful, single ruler.  
Eastern Feudalism is the system of Mediaeval Japan, co-equal feudal lords in conflict.  
Oriental Dictatorship is a system where all power derives from a single man.  
A Confederation is a loose union of small groups.  
Cantons are a union of Confederations.

Industrial Feudalism is described in the History of the Combine.  
Industrial Dictatorship is control of the means of production by a single ruler.  
A Republic is a system of elected parliamentarians.

Totalitarianism is a system under which the interests of the state are identified with the desires of the ruler, and the populace must serve the state.

Social-statism propounds the utilitarian principle: Greatest Good for Greatest Number.  
Fascism is totalitarianism in which the interests of the state are those of an interest group or groups instead of a single ruler.

Having established this facet of planetary civilization, the GM now determines the Social Organization and Society Strength of the culture.

**TABLE 01170.3: SOCIAL ORGANIZATION** The Social Organization is the central element of the planet's society. It may be a relationship to progenitor, and note that for asexual races this will simply be ancestor worship with no gender orientation. The Clan organization will be centered on the blood relationships of the populace, and the Caste organization implies that social standing and importance is derived from the profession or class of the people. A Valor-honor organization places a high premium on courage and prowess, and the Trade organization is concerned with the acquisition of wealth. Thus, if a planet has a Hereditary Monarchy, and its Social Organization is Matriarchal, the ruler will be a queen, passing the title in the female line of descent. The various combinations are many, and the GM may add such other elements as he desires for a given scenario.

The Society Strength is determined by rolling a 6-sided die. A roll of 1 indicates a society in the throes of a crumbling of old values. Such societies are often having revolutions. The higher the roll the higher the stability of the culture. A roll of 6 indicates a society so stable that it is fanatical, and a second die is rolled to determine the particular area of this fanaticism.

**Die** **Result** **Notes**  
**Roll** **Result** **Notes**  
1 Patriarchy. planet's society. It may be a relationship to progenitor, and note that for asexual races this will simply be ancestor worship with no gender orientation. The Clan organization will be centered on the blood relationships of the populace, and the Caste organization implies that social standing and importance is derived from the profession or class of the people. A Valor-honor organization places a high premium on courage and prowess, and the Trade organization is concerned with the acquisition of wealth. Thus, if a planet has a Hereditary Monarchy, and its Social Organization is Matriarchal, the ruler will be a queen, passing the title in the female line of descent. The various combinations are many, and the GM may add such other elements as he desires for a given scenario.  
2 Matriarchy. 3 Clan 4 Caste 5 Valor-honor. 6 Trade.

The Society Strength is determined by rolling a 6-sided die. A roll of 1 indicates a society in the throes of a crumbling of old values. Such societies are often having revolutions. The higher the roll the higher the stability of the culture. A roll of 6 indicates a society so stable that it is fanatical, and a second die is rolled to determine the particular area of this fanaticism.

**Die** **Result** **Notes**  
**Roll** **Result** **Notes**  
1 Pacifism. life, such as the Players. They will be easy meat for conquerors, though the GM can give them some non-violent means of defense that will knock invaders for a loop, if he so desires.  
2 Ethical fanatics. 3 Atheism. 4 Militarism. 5 Religious fanatics. 6 Xenophobes. Ethical fanatics will be all-around honest chaps, but the ethics of their culture, as determined by the Social Organization and government, will have the force of taboos, and transgressors will be attacked.

Atheists will kill missionaries. This may include over-loud worshippers of the almighty Credit. Militarists will be a tough bunch in a fight, and if they are from a Valor-honor organization, they will be fearless and cunning fighters.

Religious fanatics will be very ready to try to convert explorers, often at gunpoint. Xenophobes will simply try to kill anyone else.

The Size of a community is up to the GM. Generally, the higher the Tech Level the larger the community. Note the letters to the right of the community sizes listed. These indicate the Tech levels at which the community size generally is found.

**TABLE 01170.4: COMMUNITY SIZE** The GM may determine the size for the whole culture ("They all live in cities.") or for the area where the Players decide to try a contact. If the GM wishes, he can offer the Players a choice of community sizes, so that they can try landing near a village, or in the middle of the local equivalent of Times Square.

**Village** J-L **City-state** B-D, H-K **Geographical Region** B-J **Continent** A-B, D-I **Hemisphere** A-F **Planetary** A-E The Ethical Strength of a culture is a measure of how they will deal with the explorers, especially in terms of keeping a bargain. Roll a 6-sided die, and record the score. A score of 1 indicates a near non-existent set of ethics for members of the culture. A 6 indicates unshakable honesty. Whenever a deal is concluded, roll a 6-sided die. A roll less than the Culture's Ethical Strength indicates that the agreement will be kept. A roll greater than or equal to the score indicates that it will be broken. This can be any deal ranging from an offer of safe shelter for the night to a treaty with the Combine.

The GM must finally determine the area of Trade in which the inhabitants are most anxious to engage. Roll a 6-sided die.

TABLE 01170.5: TRADE BONUS

Roll	Trade Bonus
1	Rare Heavy Metals.
2	Rare Crystal substances.
3	Rare Power Materials.
4	Slaves.
5	Technological Knowledge.
6	Services by explorers.

The use of this table will give the GM a basis for establishing a medium of exchange between the Players and cultures who do not use Empire technology. In Empire type cultures, 1 ERG = 1 CK, all the time.

## 01180. HIVE MIND CULTURES

A hive race will have the same Technological Level, Ethics, and Trade Bonusses as any other race. To determine other factors, roll a 6-sided die twice to determine the Prime Drive and Tolerance Factor of the hive.

Die	Prime	Tolerance	
Roll	Drive	Factor	
1	Expand	Reject all aliens.	The Prime Drive is the equivalent of all the Social factors for non-hive races. As all beings
2-3	Enrich	Reject non-hive life.	in a hive race are facets of the same individual, no government as such exists.
4-5	Educate	Accept other hives.	The tolerance factor determines how the hive
6	Protect	Accept other life.	will receive alien contact. As a rule, hives are intensely hostile to outside life-forms. The GM will add any other factors he desires to the psychology of the race, to create his scenario.

The size of the hive is a direct function of the Tech Level. Roll percentile dice.

TABLE 01180.1: HIVE SIZE

Size	Tech Level:	A-D	E-G	H-I	J-L
Planetary		01-85	01-50	01-25	01-10
Hemisphere		86-00	51-75	26-50	11-20
Continent			76-00	51-80	21-50
Geographic Region				81-95	51-75
Home Territory				96-00	76-00

Consider the effects this can have on a planetary scenario. Neighboring hives with a Reject Alien Tolerance, or a Prime-Drive of Expand will always be at war. This condition can cause them to overcome their resistance to contact, and hire an expedition as mercenaries. This is just one of the many possible variants.

## 01190. ALIEN XENOPHOBIA FACTOR

The final determination to be made by the GM is the xenophobia factor inherent in a culture. For non-hive races, the GM rolls a die to determine the general level of xenophobia. This will be a 6-sided die. A roll of 1 indicates no xenophobia, complete openness to contact. A 6 means a high factor of xenophobia.

Add the Social Strength and Ethics scores for the culture. If the Xenophobia factor roll was a 1, add double this amount to the Reaction Dice scores for contact with the culture. If the Xeno factor was 2, add the simple total of Society Strength and Ethics. The Reaction Dice roll is unmodified if a 3-4 was rolled for Xenophobia Factor. If a 5 was rolled, subtract the Strength+Ethics figure, and for a 6, subtract double the figure.

Certain cultural factors (Pacifism, xenophobia) will modify this process. according to the GM's scenario for that planet.

Hive races will react according to their Tolerance factors.

## 01192. QUIRKS

The GM must avoid sameness in planet building. The best to do this is to invent a small scenario for each world, recording it on the System Record Sheet, so that every planet has its own capacity for providing unique adventure.

To aid in this end, we now give a list of some "Quirks" which the GM can use to vary the statistics generated by the rolling of dice.

Planet with no load animals. This will lead to slavery or ultra-automation.

Planet with no materials for technology. A high culture with no technology beyond level H.

Planet with taboo on weapons beyond "human" reach, but with ability to beat Empire weapons.

Ruins of a Forerunner Culture, possibly with working artifacts.

Fanatic Code Duello.

Functional "Gods" and Wizards."

Dead world. Roll a 6-sided die. 1-2= Bio-catastrophe; 3-4=War; 5-6= Eco-catastrophe as cause. Ruins will be in a state of preservation where 1=totally preserved and 6=rubble. Recent contact with aliens. Hostile contact raises xenophobia factor.

Plague that attacks all life but natives of planet.

Relapsed culture, a pack of barbarians armed with Empire type weapons.

With these as guides, and a plentiful supply of his favorite novels, the GM will be in a position to create a campaign universe of high adventure and unpredictable phenomena.

## 01200. MISCELLANEOUS RULES

This final set of rules is, we will admit, terrible editing. But for material developed after the final draft of the rules was written, some means of cataloguing had to be found, and a last catch all chapter was the solution. Some of these rules will tie in with material in other sections of this book, others will be self-sufficient modules. We hope they will add to your campaign pleasure.

### 01201. LEVELS AND EXPERIENCE POINTS

As is abundantly clear by now, characters advance in their expertise and game-standing by going up in something called levels. These represent accumulated Experience Points, points gained by characters for certain actions in the campaign. Experience point totals are kept on the Character Record Sheet, and the current level of a character depends on his Experience score.

TABLE 01201.1: LEVELS OF EXPERIENCE

Level	Necessary Experience Score
1	0
2	5000
3	10,000
4	20,000
5	40,000
6	60,000
7	100,000
8	150,000
9	200,000
10	300,000

Each additional Level requires another 100,000 Experience points.

On beginning the campaign, a character has 0 Experience. As he does more and more in the game, his score will grow. When he crosses a break-point (5000,10,000,etc.) he is said to have attained that level.

Experience is gained in many ways, but two methods stand out as the greatest point gainers.

For every HOUR a character spends on an expedition, he gains 1 Experience point. The GM may restrict this in any way he wishes, to prevent abuse of this rule, but the philosophy behind it is that every hour spent in space or exploring a new world will teach the character more about space travel, and that is the whole idea behind Experience as a gaming concept.

The other source of Experience is credit spent on special training. Anytime the character is in port, he may gain Experience points by buying them at a rate of 1 point per CR. The following restrictions apply.

The character may only buy 50% of the Experience points he needs to reach the next break point in experience. That is, a first level character could buy only 2500 points. A second level character would also be restricted to 2500 points. A third level character, needing 10,000 points to reach the fourth level break point of 20,000, could buy 5,000 points. This may be done in one fell swoop, or broken down into several small purchases. Any combination is allowed, as long as the total for that level's points bought does not exceed the 50% maximum.

Other sources of experience are:

**COMBAT:** Combat experience is awarded on the basis of HOW LONG a fight goes on. In personal combat, only characters actively fighting receive Experience. In ship combat, only those on an action station previously cleared by the GM will receive Experience. This will at least include all riggers active in the fight.

For Ship Combat against another vessel: 20 points per mt

For Ship Combat against a Monster: 10 points per monster per mt.

For Personal Combat: 10 points per mt.

For fighting a Boarding Action: 10 points per mt.

For winning any combat by killing/destroying/forcing the opponent to surrender: 200 points.

For winning any combat by forcing the opponent to retreat: 100.

For losing any combat: 50 points (now you know what not to do).

#### EXPLORATION:

For travelling to a system the ship has never been to before: 50 points.

For avoiding a Navigation Hazard: 10 points to all characters at action stations.

For each new planet surveyed from orbit: 20 points.

For each new planet explored on ground: 50 points to ground crew upon landing.

For each intelligent life-form found: If friendly relations are established: 200 points.

If hostile contact occurs: 75 points.

If no contact is made: 20 points.

#### OTHER SOURCES:

Mutates, Technics, and Biotechs receive 2 points for every Power point they expend.

**Heroism:** If, in the opinion of the GM, a character risks his life to save another, or in any way distinguishes himself in a heroic manner for the safety of the ship, the GM will award a bonus of up to 1000 Experience points. This award is soley at the option of the GM.

**Saving Throws:** Each time a character makes a successful ST, he will receive 10 points.

01210. CREDIT, RESOURCES, AND LOANS

Each Terrestroid planet has a chance of containing valuable resources that are economically exploitable by the Player-characters.

TABLE 01210.1: TERRESTROID PLANETARY RESOURCES

Density	Probability of deposit existing, and number of deposits:					Size of each Deposit
	Heavy Metals	Petrochemicals	Radioactives	Crystals		
2	05%: 1	10%: 1-2	05%: 1	10%: 1-2		1-3 SCL
3	05%: 1	15%: 1-3	05%: 1-2	15%: 1-3		1-3 SCL
4	10%: 1-3	20%: 1-6	10%: 1-2	20%: 1-3		1-3 SCL
5	15%: 1-6	25%: 1-6	10%: 1-3	25%: 1-3		1-6 SCL
6	20%: 2-7	30%: 2-7	15%: 1-6	35%: 1-6		1-6 SCL
7	25%: 2-7	35%: 1-10	15%: 1-6	40%: 2-7		1-6 SCL
8	30%: 1-10	35%: 1-10	20%: 1-6	50%: 2-7		2-7 SCL
9	40%: 1-10	40%: 1-10	20%: 2-7	60%: 1-10		2-7 SCL
10	60%: 1-10	50%: 1-10	30%: 1-10	75%: 1-10		1-10 SCL

**Radioactives:** The planets of a protostar will have an additional 20% chance of having deposits of radioactive oxes. A planet with a Radon atmosphere will have 1-100 such deposits ALL the time, each deposit of 1-6 SCL.

**S and N systems:** Besides the higher density, the planets of S and N type stars will have an additional 20% chance of having deposits of Heavy Metals and Crystals.

Other resources are:

**Jovian Atmosphere:** There is a flat 40% chance that a Jovian world will have valuable chemical radicals in the atmosphere. This may be scoop mined. These resources are inexhaustible.

**Organic Compounds:** Terrestroid worlds with a Life Complexity Score of less than 5 have a 20% chance of yielding unlimited amounts of valuable organic compounds. These may be mined with a Fluid Refining Plant.

**Vegetable Resources:** A terrestroid world with a Life Complexity score of 5-7 has a chance of 20% of yielding useful vegetable materials. Such resources need not be brought back by the holdful. A sample for the botanists of the Cartels' FOOD division will be enough, requiring .1 SCL of HU(p) space for samples from one planet.

**Animal Specimens:** A specimen of animal from a new planet may (10%) be worth money.

The going price for these materials is:

Heavy Metals	(1-6) x 200 CR per SCL.	Organic Compounds	(1-6) x 50 CR per SCL.
Petrochemicals	(1-6) x 100 CR per SCL.	Vegetable Resources	(1-100) x 100 CR per sample of new type.
Radioactives	(1-10) x 1000 CR per SCL.	Animal Specimen	1-100 CR each.
Crystals	(1-10) x 300 CR per SCL.	Nebular Matter	(1-6) x 1000 CR per SCL.
Atmosphere Scoop	(1-6) x 50 CR per SCL.	CT	100,000 CR per SCL.

A system may have resources available off the planets as well. Asteroid belts and belts of Nebular Matter may be mined, if the necessary equipment, as listed in section 0936, is on the ship. Nebular matter is scoop mined at the rate given for the Scoop Mining gear. Asteroids are mined by taking up a holding orbit in the asteroid belt, and scanning the passing rocks for mineral worth. Rolling as if for an encounter, the GM will determine the finds. A rock of value will show up on a basis of 1% chance of a find per hour. Thus, rolling a 23 tells the GM that a valuable find will occur 23 hours after entering the search area. A second roll is then made, indicating the interval until the next find. This activity does not count as a planetary orbit, and the ship is open to all normal realspace encounters.

An asteroid find will be .1 to 1 SCL in size, and the content will be either Heavy Metal (50%), Radioactives (25%), or Crystal (25%). Meteor swarms may be mined in the same manner, but the finds will be .01 to .1 SCL in size.

The final prize on the list for systems is a world colonizable by the Combine races. Such a planet must have no intelligent natives, but must have a Life Complexity score of 5-7. For Humans or Trilax, such a world must have a gravity of .5 to 3 g; atmospheric pressure of 7 to 15; temperature of 270-300°K. For Silicoids, a planet must be in the first or second orbital path of an O or B type star, with no atmosphere, and a temperature of 700-1000°K. Gravity may not exceed 5 g on such a planet.

The bounty for a colonizable world is 50,000 CR.

But for the character who has not been blessed with fortune in his expedition, or who lacks the initial credit due one of higher birth, there is another source of funds: Loans.

Any citizen of the Combine who is not in debt has the right to apply for a government loan. These loans are of 1-6 thousand credits, and are payable in one year at 10% interest. A defaulter will be indentured to the government for 1 year, and then restored to full citizenship with a clean credit rating.

Loans are available from the Caste Banks to members of the Caste. The loan will be for 2-20 thousand credits, payable in one year at 50% interest. Defaulters will be indentured to the caste for 1.5 years.

The Mercantile banks will make loans to adventurers only with collateral. An inheritance will be accepted for a loan to the full value of the possible inheritance. A ship will be accepted as collateral at a value of 1000 CR per SU. A character has 5 months to pay such a loan at 20% monthly interest, or his collateral will be confiscated. This means he loses his inheritance, ship, or whatever.

A character may put himself up as collateral. This will receive a loan value of 10-60 thousand credits, payable under the same terms as the other Mercantile loans, BUT if the character cannot pay, he will be repossessed, and his organs used for transplants. His brain will be used for making cyborgs to control automated factories, after a quick lobotomy. The bank may also put a lien on any clones the character has left. There is an 80% chance of this. If the bank does not do so, the character may be regrown, and re-enter play.

#### 01220. DISEASE AND DANGERS, SHOCK AND ITS SYMPTOMS

*N-shock:* Exposure to N-space can cause N-shock. If the victim does not make his PSI ST, he will succumb to this dread condition, which is the bane of interstellar travellers.

For the first hour of N-shock, the victim will be in one of the states of insanity listed later in this section. He will then collapse, in a coma, and begin to die. He will lose 1-10 Hit Points per hour that he is uncured, until he is healed or dead. This can lead to some interesting races against time, as the Psycho-integrator must effect a cure before the physical damage can be reversed. Naturally, the use of Powers, with their much swifter response time, will be the treatment of choice in cases of N-shock.

*Gravity Shock:* If a player collapses with Grav-shock, he will begin to die at a rate of three dice of damage per hour, until he is cured or dead. The autodoc or manual medical system will reduce the damage sustained each hour by 50%. When the cure is effected, the lost Hit Points must be restored as normal damage.

*Vacuum and Vacuum Shock:* When a breathing character is exposed to a vacuum, he must make a Vitality ST. If he makes it, he will be conscious and able to function for 1 second for each point of Vitality he has. He must remove himself from the evacuated area in this time. If he is still exposed at the end of that period, he will die.

If he did not make his Vitality ST, the immediate effects of decompression have placed him in Vacuum Shock. This is the main danger to troops fighting in a vacuum, for they may not save on some occasion when their suit takes a hit, before the self-repair mechanisms can seal the hole next mt. A character in Vacuum Shock loses all his current Hit Points, and goes into coma. He will die if treatment is not started within 1 hour, but will always survive if treatment is received.

*Poison and Drugs:* A character exposed to a drug with a poisonous or tranquilizing effect must roll a Vitality ST. Against a tranquilizer, if he saves, there will be no effect from the drug. If he does not, he will lose consciousness for the indicated time. If no indication exists, assume it will hold him unconscious for 10-100 minutes.

Against poison, if he saves, he will lose 50% of his current Hit Points, but be otherwise unharmed. If he does not save, the character will die.

*Insanity:* When a condition of insanity is called for, the GM will roll a 6-sided die to determine what form it will take.

1. *Psychopathic dementia:* The victim will attack any life-form in the vicinity with insane ferocity, as is only fitting. He will not use any weapons but his hands, though if he were in, say, Power Armor, this would be quite enough. He must be rendered unconscious or otherwise restrained to stop.

2. *Catatonia:* The victim will go catatonic, immobile, unresponsive.

3. *Paradise Syndrome:* The victim will enter a hallucinatory state, where all is beauty.

4. *Paranoia:* The victim will become surly and suspicious. There is a 1 in 6 chance each mt that he will revert to the psychopathic form of insanity and attack, but he will have all his senses and cunning, and will be able to use all weapons.

5. *Regression:* The character will revert to infancy. There is a 1 in 6 chance that he will go back to pre-natal level, and thus effectively become catatonic.

6. *Hebephrenia:* The victim will act as if he had an IQ of 0. He will behave as if he were brain damaged.

*Radiation and Radiation Sickness:* When exposed to radiation, two factors must be taken into account. First, radiation does direct damage. Divide the Radiation Intensity Factors (RIF) to which the character is exposed that mt by the character's Vitality. The result will be the number of points of damage the character will lose in that mt of exposure.

Exposure to radiation may cause Radiation Sickness. Exposure to 1-50 RIF in a mt will not cause Radiation Sickness. Exposure to 51-75 RIF causes first degree Radiation Sickness; 76-90 causes second degree; 91-100 causes third degree; over 100 RIF exposure in a single mt will cause fourth degree Radiation Sickness.

First degree Radiation sickness will cause vomiting and fever, beginning 1-10 hours after exposure, and incapacitating the subject for one day. After this episode ends, there are no further effects.

Second degree Radiation sickness acts exactly as does first degree, but 1-10 days after the fever episode, the character will become ill for 1 week, and when he has recovered, he will have lost 1 point of Vitality permanently.

Third degree Radiation sickness acts as do the first two degrees, but 1-10 days after the onset of the initial fever episode, the character will fall into coma. He must make his Vitality ST. If he saves, he will recover, losing 2 Vitality points permanently. If he does not save, he dies.

Fourth degree Radiation Sickness is different. The character will enter a coma immediately after the fever episode. If he does not make his Vitality ST, he will die. If he does, he will recover in 1-10 days, but will have lost 3 Vitality points and 50% of his current Hit Points permanently.

Treatment for Radiation Sickness by normal medical means must be begun before the onset of the fever episode. Powers used to cure Radiation Sickness must be applied before the onset of the second episode of the particular degree of sickness. Measures taken too late will not effect the course of the disease. A cure applied at the correct time will heal the victim with no further damage.

#### 01230. TECHNOLOGICAL REPAIRS AND RESEARCH

When a unit has shutdown, or a SU has been hulled, if the overkill is less than or equal to 100 points of damage, then repairs can be effected by characters with the skills to make them, and an IQ score allowing such repairs to be done.

Consult the timetable to see how often "repair rolls" may be made. Continue to roll as often as allowed and desired, totalling the scores each time and recording this running total. Each repair roll will require 1-10 ERG of power.

TABLE 01230.1: REPAIR ROLL TIMETABLE

Overkill	STRUCTURE	SYSTEM	
1-10	1 per minute	1 per mt	permitted in a time span when repairing either STRUCTURE or SYSTEM damage at a given level of
11-30	1 per 10 min.	1 per min.	overkill. Technics may make rolls at intervals
31-50	1 per 50 min.	1 per 10 min.	of 50% of the time given.
51-100	1 per hour	1 per hour	To determine when a given device has been repaired, total the running score of the repair rolls made by the workers on that device.

TABLE 01230.2: REPAIR ROLL EFFECTS

Total of

Rolls	Result
1-49	No effect.
50-85	Device starts to work. Hull sealed. Can sustain 1 point of damage.
86-90	Device/hull has 50% of normal Hit Points.
91 or more	Device completely repaired.

Repair roll modifiers:

Using Technical Computer	+10
Using Repair Servo	+20

Engineering Computer shut down -10.

Research to deduce the function of an Alien device is performed in the same way. A non-Technic will roll a 10-sided die. A Technic will roll a 20-sided die. One roll per day is permitted, and each roll requires a power expenditure from the ship Energy Status of 2-20 ERG. When the total score reaches 85 or more, the function and method of using the device will be known.

Research roll modifiers:

Using Technical Computer:	+10.	Using Technical Lab:	+10.	For every point of IQ over 14:
If Analysis Power has been used on device:	+5.			Technics add 2.
If device uses Empire Technology:	+5.			non-Technic add 1.

#### 01240. ALIEN DEVICES

In the derelicts found floating in space, or the ruins of ancient civilizations on other worlds, or in any other situation that the GM feels disposed to leave a base from some advanced civilization, there is the chance that the explorers will find some article(s) of technological treasure with abilities beyond normal Empire devices.

A Forerunner Ship has a 40% chance of such treasure.

An Alien Ship has a 25% chance.

An Empire Ship has a 10% chance of Technological Devices, and a 30% chance of still having 1-30 thousand ERG in its Energy Status.

A Beacon has a 5% chance of such treasure. Empire beacons have a 20% chance of having 1-10 thousand ERG in their power stores.

TABLE 01240.1: NUMBER OF DEVICES

Die Roll		The GM will roll two 6-sided dice to determine how many devices are on a derelict, or in a set of ruins. If ruins are well preserved, he should add 1-6 devices, depending on the state of preservation.
2 or 12	Three devices.	
3 or 11	Two devices.	
4-10	One device.	He now determines what devices will be found.

TABLE 01240.2: TECHNOLOGICAL TREASURE

Die Roll	Die Roll	Die Roll	
1	Blaster X1	16	SME mk. 10
2	Blaster X2	17	WRE mk. 1 to 6
3	Blaster X3	18	SDR mk. 1 to 10
4	Blaster M2	19	EGM mk. 1 to 10
5	Energy Capsule IP	20	AAF mk. 2
6	Power Unit M	21	VET mk. 1
7	Power Unit T	22	LER mk. 10
8	Power Unit B	23	Psaser mk. 2
9	Power Store M	24	Psaser mk. 3
10	Power Store B	25	Psaser mk. 4
11	Power Store T	26	Psionic Scrambler
12	Screen Q3	27	Autopsi Transporter
13	Screen N9	28	Memory Capsule
14	RCM mk. 100	29	Hyper-N Teleradio
15	ARS mk. 5	30	N-gun

**Blasters-** The X1 adds 50% to its penetration score, the X2 adds 100%, and the X3 triples the score rolled. These three take standard millislugs, and consume power at the normal rate.

The M2 is usable by Mutates. It does not use millislugs, but requires a Blip Power to fire a shot in any pattern of fire. It is all other respects as a normal Blaster.

**Energy Capsule-** An Empire type millislug casing that will never be used up. It can be fitted in any device normally using millislug fuel cells, to provide permanent power.

**Power Units and Power Stores-** Small headsets, providing extra Power points for the Classes using them. M units provide power for Mutates, T units for Technics, and B units for Biotechs. A Power Unit will have a permanent charge of 2-20 Power points. This is always available to the character wearing it. Power Stores will have 1-100 points of Power in them, which will be used up normally by the character. That is, 10 points from the Store reduces its supply by 10 points. They cannot be recharged.

**Screen-** These are personal screen units, with built-in power packs. A power pack will last for 1-10 hours of continuous use, and then burn out, destroying the screen unit with NO chance of repair by any means. A Q3 unit provides 3 dice each of armor and screen, but is NOT cumulative with other defenses of normal type (Powers and Bionics are acceptable). An N9 renders the user immune to the effects of ALL forms of energy: weapons, radiation, heat, etc.

**RCM mk. 100-** A small device, hooked up to any computer, it will allow the user to generate 1 Reality Curve effect, and then the unit will disintegrate. The device requires 100 ERG to operate.

**ARS mk. 5-** A device to be hooked up to a ship's DU, it will reduce the RIF of any radiation impinging on the ship by 50%, as long as the ship's screens are up. If the DU should be hulled the unit will be totally destroyed.

**SME-** A ship "Maneuver Enhancer." Hooked up to the Astrogation Computer, it will add +2 to the vessel's GO-rigger bonus, even if no rigger is on station. If the computer shuts down, the unit is destroyed.

**WRE-** "Weapon Reaction Enhancer." Similar in all ways to the SME, but hooked up to the Fire-control computer, to add +2 to the ship's weapon's hit score rolls.

**SDR-** "Ship Defense Realizer." The GM will roll to see if this is a mark 1 to 10. A mark 1 increases the ship's screen energy 10%, a mark 2 by 20%, etc. Hooks up to the Engineering Computer, under the same rules as the previous two devices.

**EGM-** "Energy Generation Module." Similar in all respects to the above SDR, but it increases all energy generated on the vessel by the 10% "mark" increments.

**AAF-** "Anti-acceleration Field." Hooked up to the Engineering Computer, it modifies the action of the Q-drive, so that ship quasi-acceleration will double in efficiency. Thus, 1 g changes the speed by 2 centics/sec; 4 g by 4 centics/sec; 9 g by 6 centics/sec, etc. If the computer shuts down, the unit is destroyed.

**VET-** "Vessel Emergency Transporter." Hooks up to the Astrogation Computer, and allows the ship to teleport, on command and instantaneously, to any desired co-ordinates, with 100% chance of success. The device works once and then vanishes.

**LER-** "Life Energy Restorer." Allows ship's autodoc to perform revivifications at a cost of 100 ERG each. It will work 10 times and then burn out.

*Psasers*- Short for Psionic Laser. Such a device is activated for 1 mt by a Blip. It will then modify the effect of any Psionic Power fed through it on the following mt. A mark 2 will double the range and effect of the Power, and the mark three will triple it. A mark 4 will increase the effect by a factor of 10.

*Psionic Scrambler*- Activated by a Blip for 1 hour, this device will jam ALL Psionic activity in a radius of 1000 km.

*Autopsi Transporter*- Acts as a Transporter Sender Unit, but requires NO RECEIVER, and can transmit living matter. It will work 10 times, as a sender or receiver, at a range of up to 10 dets, as long as the location of the distant target zone is known. It requires a Blip to send or receive. After 10 uses, it will vanish.

*Memory Capsule*- A specially treated dose of RNA-gamma 7, a broad band drug usable by any life-form. The dose will give the character taking it 1 randomly chosen Class Power of one of the three Powered Classes. He will be able to use this Power once only. A member of the Class to which the Power belongs who uses the capsule will have a 10% chance of permanently gaining the Power. There is a 20% chance that the drug has decayed into a lethal poison, allowing no ST.

*Hyper-N Teleradio*- A form of N-radio usable by any telepath to communicate on N-radio frequencies with no time lag at all. Hook up to Astrogation Computer. If the computer shuts down, the radio will be destroyed.

*N-gun*- Aimed as a handgun, this weapon exposes any being it hits to N-space vibrations, causing N-shock if they do not make their ST. It can fire 2-20 shots and cannot be recharged.

#### 01250. MOVEMENT

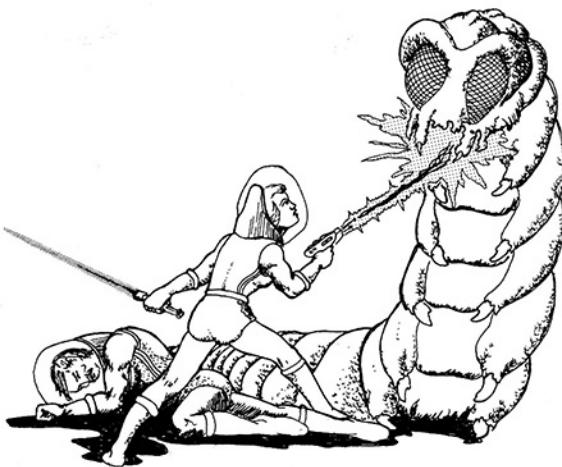
*Ship Movement*- In N-drive, ships move at a rate of 1 hk/hr, or 1 lite/hr in realspace terms. Q-drive movement is detailed in section 0811.

In atmosphere, a ship can fly at 4000 kph, if it can maneuver at all.

*Character Movement*- Normal movement = [Effective Speed/10] x 1 meter per second.

Double this if character is running.

A vehicle or Power Armor or similar device going 1 kph is travelling .1 meter per sec.



## 01260. INTERSTELLAR COMMUNICATION

Interstellar communication is carried on via one of two media.

N-radio is a form of radio using radiations propagated in N-space at the same velocity as a starship can attain: 1 lite per hour, or 10,000 times the speed of light. It is the only form of radio usable in N-space under any circumstances. But even the awesome range of N-radio can pale before the distances involved in interstellar communication. The effective range for this device is only about 100 lites, with a time lag at extreme range of 10 days each way.

The fastest normal means of communication is the N-space Message Torpedo, a message rocket capable of storing recorded audio-visual, sensor, and computer data. These devices cost 10 CR each, and require a charge of 100 ERG to use.

Upon firing off a message torp, the ship feeds the energy into the missile, kicking it into a "higher" continuum of hyperspace, where it will attain a velocity of 100 lites/hour. The torp may be programmed to emerge at any desired co-ordinates.

Upon emerging from hyperdrive, the torp will broadcast a beacon for pick-up, and, if it is picked up in a Combine system, will be handled by the postal authorities. (Don't panic! These are much more efficient in the Combine than the primitive systems of the pre-space cultures.)

A torp may be addressed to any desired character, but may go astray on two counts:

If the character has no address of record in the target system, there is only a 20% chance that the torp will be filed in the dead message office, never to be seen again.

There is a percentage chance, based on the range of the message in lites, that the torp will succumb to some vagary of hyperspace, and will never reach the destination.

TABLE 01260.1 N-SPACE MESSAGE TORP LOSS

Range in lites	Chance of loss
1-25	05%
26-50	15%
51-70	25%
71-85	40%
86-100	50%
100-150	75%
151-200	80%
201 or more	85%

The use of multiple torps for long-range messages is often adopted as a partial solution to the difficulties presented by these probabilities. N-space Message Torpedoes are usable only once, and up to 100 of them may be stored in a standard HU.

## 01270. SHIP TO PLANET COMBAT

A starship entering a system populated by spacefaring, or technologically advanced beings, will receive several immediate indications of this. The communications modules in the Astrotagion Computer will detect any communications on the radio or N-radio bands. The Technical Computer will detect any traffic of space craft. Etcetera.

Any world with Tech Level of A, B, or C, will have space craft of Empire type, by definition. A world of Tech Level D has an 80% chance of having interplanetary flight, but only a 5% chance of any Slower-Than-Light interstellar vessels. Such ships may (20%) be equipped with Q-drive. Ships without such a drive are really helpless against Empire type vessels, unless an ambush occurs which brings the Empire vessel within firing range. A world of Tech Level E has only a 10% chance of having an interplanetary fleet, and such a culture will not have the Q-drive.

An A Class world can muster 1500 SU of fleet against an intruder.

A B Level world has 1000 SU at its disposal.

A C Level world has 500 SU.

A D Class world can loft 100 SU.

The GM may divide these strengths any way he chooses. Thus, a B Level culture will have 1000-SU battleships, or a fleet of smaller vessels. The GM may develop his options further, by determining the amount of SU allocated to ARMED vessels, and the number of SU not usable in a fight. Roll percentile dice to indicate the percentage of SU which are Warships or armed Explorers. These SU will be "built" into ships according to the rules governing Ship Encounters.

Planet based defenses are worked like this:

A Ship cannot mount an attack with any energy weapons from a range greater than 20 km in an atmosphere denser than 5. In atmospheres of density 3-5, an attack from 100 km is permitted, and in thinner atmospheres than that, the ship can stand off at full range, 10 dets, and pound on the planet.

Planetary defenses have much greater range, striking at 10 det range from the planetary surface no matter what the atmosphere is. All planetary defense hits do damage as an Energy Cannon. Each planet operating such a defense system is divided into octants (demi-hemispheres), and each octant can deliver an attack against the space it faces. If an octant is neutralized, it may be landed on with no effective resistance from the other defense zones.

The danger a ship faces from such opposition is based on the Tech Level of the planet, and the range at which the ship is standing off.

TABLE 01270.1: PLANETARY DEFENSE DATA

Tech Level	Ship range:	10 det	100 km	20 km	Effect of hit
A		60%	75%	90%	1-10 hits of 1-100 ERG.
B		50%	60%	70%	1-6 hits of 1-60 ERG.
C		30%	40%	60%	1-3 hits of 1-20 ERG.
D		10%	30%	50%	1-3 hits of 1-10 ERG.
E		05%	10%	25%	1-3 hits of 1-6 ERG.

The table is used thus: The ship range from a planet of the indicated Tech Level determines the percentage chance of the ship suffering the hits shown. These are assumed to be the shots that penetrated the screen!

Eg. A 10-SU ship is bombarding a planet of sufficient Tech Level to return fire. The ship is able to stand off at 100 km, and the planet is Tech Level C. The ship has a 40% chance each mt of combat of taking hits as specified. In mt 1, the GM rolls a 63, and the ship escapes harm. In mt 2, the GM rolls a 13, and the ship takes hits. Locating the damage randomly, he finds that the first hit did 12 points of damage to a HU, and the second struck the CU, doing 4 points. The GO-rigger was wounded, but no other serious damage was done.

Each octant of a defended world can sustain a given number of ERG of damage before its defenses are knocked out. An A or B Level world can take 1000 ERG per octant; a C Level can take 500; a D Level can take 250; and an E Level, 100 ERG of damage.

The efficiency of the attacks by a ship on an octant vary by weapons used. Energy weapons will do damage as in ship combat, but subject to a modifying roll on the percentile dice. Missiles are different. A Missile will have a chance of not being intercepted, and if it is not, it will do its full damage.

To determine the energy loss in beam weapon due to diffusion, screens, etc, roll percentile dice. The attack will do the percentage of ERG shown in damage. Thus, a 100 ERG barrage is fired. The GM rolls 57. 57 ERG will actually do effective damage to the defense octant.

Missile effect vary by Tech Level. Level A or B worlds will intercept a missile on a roll of 1-4 on a 6-sided die. Level C worlds intercept on a roll of 1-3 in 6. Level D worlds intercept on a roll of 1-2 in 6. Level E worlds have only a 1 in 6 chance of interception.

Eg. A ship has launched 10 missiles, of 50 ERG each, at a planet. It has a Tech Level of C. For each missile the GM rolls a 6-sided die. Four of these ten rolls score a 3 or less, indicating interception. The other 6 missiles hit their target, doing a total of 300 ERG damage.

Once the octant has taken 100% damage, it will not be able to rebuild itself for 1-10 weeks. If the entire planet's defense systems are out (all 8 octants knocked out) the planet is helpless, and cannot begin to rebuild, figuring the ancillary destruction by bombardment of industry and military capability, for 1-10 months.

Note that dropping a planetkiller on a world will always work. The only defense in such a case is the destruction of the bomb-laden vessel before it can close to 10 det firing range.

#### 01280. UNARMED COMBAT- DAMAGE

These rules are applied in conjunction with those on page 91, to adjudicate damage inflicted in Unarmed Combat. Unarmed combat damage is similar to that done by projectile weapons or non-energy handweapons: screen does not affect it at all but armor blocks it partially or entirely.

Unarmed blows do damage based on the effective Physical Power of the attacker, at a constant Damage Factor of 1. Penetration dice are 3-sided dice, and the blow gets one die per 10 points of effective PP, rounding fractions to the nearest whole number.

Eg. A being with an effective Power of 24 does 2.4 3-sided dice of Penetration, or, rounding to the nearest number, 2 dice (2-6 points).

#### 01281. EFFECTS OF POWERED ARMORS

Certain suits of armor: Power Armor, Exoskeletons, Jove Suits, magnify the Physical Power of the user by a factor of 100. To reflect the awesome impact of such augmented blows, add the roll of percentile dice to the Penetration roll of attackers wearing these units.

## 01282. UNEQUAL ARMOR

A bare fist will not accomplish much when punching out a heavily armored foe. Thus, the "equal armor rule" is promulgated. To strike effectively against a target wearing armor, the attacker must be clad in armor with a greater or equal number of dice of armor compared to his target. Ie., to attack a foe in armor with two dice of protection, a character must be in armor with two or more dice of protection.

Beings of great Physical Power can circumvent this to a degree. When attacking a target clad in superior armor, the attacker must subtract two of his Penetration dice for every die of Armor by which his target is superior. The remainder is the number of 3-sided dice which will be rolled to try and penetrate the target's armor.

eg. A Character with PP raised to 67 by low gravity has a base of 7 dice. He is unarmored and strikes at a foe in 2 dice armor. He loses 4 dice of Penetration, leaving 3 3-sided dice to try and beat the 2 6-sided dice of defense his foe has.

## 01283. KRANG: SPACE KARATE

The martial arts as developed in the Combine are subsumed under one, great system of unarmed combat called "Krang." It is taught in different forms to the various citizens of the Combine, based on forms that existed in the Empire (which suggests that other Imperial survivor colonies will have their form of Krang as well). This is learned as are other Skills (section 530), with a maximum score of 100 points. Add this figure to the effective PP of the user to determine the Penetration effect of his blows. The initial score in Krang is Physical Power+ Speed. Bonus: Warrior.

### BONUS FOR THE BUYERS OF OUR SECOND PRINTING

Here are our answers to some of the most commonly asked questions about SO. *Where do ship screens come from?* Screen generators are an integral part of each DU. Thus, as long as a DU is functional, it can generate a 10-sided die of screen each mt. Should the Engineering Computer go down, with no electronic or organic backup available, the ship can generate no screens, no matter how many DU are left.

*What are those platforms that the Warriors are flying on on the splash page of the rulebook?* Those are Grav-stands, something we left out of the first edition (oops). They use 1 centiSlug for 1 hour's operation, used mostly for raids and short scouting hops, with a maximum speed of 100 km/hr. The rider operates them with his Rigger plugs, and the platform has a small grav-field to keep him in place. They cost 500 CK.

*How many doses of drugs can the Personal Medikit hold?* Five.

*What are the stats on the Needle Rifle?* Another piece of invisible gear (sorry about that), the Needle Rifle as pictured on p. 46 is identical to the Needle Gun but has a range of Short: 20 m/ Med: 50 m/ Long: 100 m/ Ext: 200 m. It is a single shot weapon and costs 50 CK with a mass of 3 kg.

*How do you apply the "number of actions per mt" to combat and other detailed action situations?* Firing a weapon is one action. If two (or three) weapons are held by the firer, he may fire all of them as one action. The character with the most actions/mt acts first, simultaneously with equally fast characters. eg. A Trilax with 3 actions is in a gunfight with a human with 2 actions. The Trilax fires first, then the human, then the trilax, then the human, and the trilax again. The sequence (in the order based on number of actions) is 3-2-1 and 3-2-3. Thus, if A, B, and C are shooting it out, their sequence of fire (positing that A is fastest and C slowest) is A-B-C and A-B-A.

The GM will determine how many separate actions a given task (getting into a space suit, entering a bounce tube, etc.) takes. A 12 action task will take 12 mt for a character with one action per mt, but only 4 mt for a character with three actions per mt.